Immersive Ideals / Critical Distances

**A Study of the Affinity Between Artistic Ideologies Based in Virtual Reality
and Previous Immersive Idioms**

by

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Abstract

My research into Virtual Reality technology and its central property of *immersion* has indicated that immersion in Virtual Reality (VR) electronic systems is a significant key to the understanding of contemporary culture as well as considerable aspects of previous culture as detected in the histories of philosophy and the visual arts. The fundamental change in aesthetic perception engendered by immersion, a perception which is connected to the ideal of *total-immersion* in virtual space, identifies certain shifts in ontology which are relevant to a better understanding of the human being. This understanding was achieved through a broad inquiry into the histories of Virtual Reality, philosophy, and the visual arts and has lead to the formulation of an *aesthetic theory of immersive consciousness* indicative of *immersive culture*.

The primary subject of this discourse is *immersion* then: an experience which will be identified within the dissertation as the indispensable characteristic of Virtual Reality. The understanding of immersion arrived at here will be used to fashion a synchronous theory of art particularly informed by encounters and concepts of immersion into virtuality. To sufficiently address this subject in a scholarly fashion, I have researched, found and accumulated aesthetic and philosophic examples of immersive tendencies, as found within the histories of art and philosophy, which subsequently contributed towards the articulation of what I have come to call *immersive consciousness*. As a result of formulating such an immersive consciousness, a good deal of the basis for the questioning of the Western ontological tradition has been found in the Western tradition itself when we look with new eyes and ask new uncertain questions. Moreover, this immersive consciousness will be used to propose some abstract questions encircling today's electronic-based culture.

Through the structuring of the argument within the thesis - and overtly within the conclusion - I have articulated a non-teleological creative strategy which provides the basis for an unconstraining integration of noologies (ways of semblancing the thinking process). This strategy provides a means of exemplifying - and for honoring - various methods of thinking. This structuring strategy is consistent with the 'hacker ethic' as defined by Steven Levy, as a demand that access to computers - and anything which might teach us something about the way the world works - should be unlimited and total. To follow this strategy, this dissertation has set out to understand how topical conceptions of virtual immersion connect to pre-existing systems of thought as revealed in art as they have extended out of antecedent ontological self-understandings, historical human self-understandings which have evidenced themselves in the elaboration of technological objectives. To do this I have forged a certain rhizomatic paternity/maternity for Virtual Reality within this dissertation by joining choice immersive examples of simulacra technology into mental connections with the relevant examples culled from the histories of art, architecture, information-technology, sex, myth, space, consciousness and philosophy.

Contents

Prolegomena: An Outline of the Rhetorical Strategy, Structure and Elaboration of the Thesis' Arguments

What is real is the becoming itself, the block of becoming, not supposedly fixed terms through which that which becomes passes.
-Gilles Deleuze and Félix Guattari, *A Thousand Plateaus*

The emergence of cyberspace makes more pressing certain questions that artists have been posing for more than a century. These questions directly modify the "frame": the work and its limits, the conventions of exhibition, reception, reproduction, distribution, interpretation, and the different forms of distinction brought about by them.
-Pierre Lévy, Aesthetics of Cyberspace

When everything is connected to everything in a distributed network, everything happens at once.
-Kevin Kelly, *Out of Control*

...'consciousness' in the function of self-reflexivity should be operating within the elements of the work (proposition) of art itself.
-Joseph Kosuth, *Within the Context: Modernism and Critical Practice*

...meaning is a contest between past history, the current system, and future change...
-Richard Bolton, *Calling All Codes*

This dissertation identifies artistic and philosophical positions, strategies and practices which substantially contribute evidence towards the development of an aesthetic theory of immersive consciousness within various historical periods (including present developments involving Virtual Reality (VR) technology). These positions, strategies and practices of immersion will provide my thesis with the historical evidence needed to propose a convincing theory of Immersive Art based on conditions of immersive consciousness.

The dissertation's aim is to open a space for art theory which constitutes an alternative, though not necessarily a competitor, to the frontal manner in which most visual art and art theory is generally practised. As such, its strategic goal is less focused upon delivering to the reader a sealed cultural product of recognition, and more upon calling the reader into an immersive state of process which is based on the attributes of continuous spanning (*distentio*). This emphasis on continuous spanning - which itself is indicative of the immersive aesthetic procedure - lends a focus to thought which delivers a sense of continuity over time (*extentio animi*), as opposed to readily available - and thus fixed - intellectual strategies. This is particularly so in that the starting point of this intellectual investigation is the immersive position from within: *intus*. A position which necessitates a broad-spanning focus for thought.

Key unaccustomed concepts encountered here are: *immersion, immersionability, immersive ideals, ideal beholdings, omnijectivity, viractuality, viewpant, total-immersion, total-art, spatial summation, holonogic models, envelope vision, cognitive-seeing, aoristic excess, synthetic-immersive-creation, logocentric*

apparatus, allocentric mirror world perspective, expanding FOVs, janusian connectivity, the technological sublime, rhizomatic hyper-totalizations, total-data-works, peripheral visuality, hyper-being, cocooning magnitude, expanding magnitude, hyper-cognition, spherical thinking, homospatiality, immersive consciousness, and immersive culture

My active presupposition on commencing this inquiry into immersion was that there have been manifested, during certain moments in time, ideas of immersion which approach what we know today as the virtual. These moments also are suggestive of disembodied experiences and expectations notable to virtuality and particularly to Virtual Reality. In elaborating the thesis I have identified within various historical periods, including contemporary developments involving Virtual Reality technology, aesthetic and philosophical positions, strategies, and practices which have substantially contributed towards the development of a theory of aesthetic immersion. Thereby I have clarified salient aesthetic features of immersive experience. Moreover, I have created a productive association of aesthetic knowledge which may be identified as the basis of an immersive culture and therefore strengthened art's position in opposition to the strictly commercial and/or military applications of Virtual Reality. This has been achieved under the retroactive influence of immersive Virtual Reality technology.

The thesis' argument will show that immersive spherical thinking, as stimulated by the immersive spherical perspective, opens up a territory of signification and possibility for the creation of hybrid and deterritorialised meanings. Meaning in art and in life then advances by seeing more clearly the underlying assumptions of excess inherent in the immersive outlook, by facing up to the radical implications of those assumptions, and by purging itself from conventional ways of thinking.

The method used within this dissertation has been be to reflect on the insights Virtual Reality suggests to the traditional Western history of unified being (which indeed engenders extraordinarily deep conflicts) and this has entailed a review of past and present approaches towards ontology and an analysis of a variety of artistic maneuvers. Within the dissertation I have non-teleologically synthesised these questions and examples of ontology into an interrelated theoretical model for immersive consciousness in art by clarifying an underlying philosophy of immersive significance. I have thus outlined an integrative immersive philosophy by tracing the immersive impetus through its various expressions so as to examine the immersive philosophy from all possible sides. Of principal interest has been the discussion of *subject/object* cognition.

To a large extent, this thesis contains a theory of immersive reconciliation where once apparent conflicting ideas and intellectual positions are mitigated in interplay. Most notably, a philosophical interplay will be conducted between the philosophic positions which address ideals, aspects of phenomenology, ontology and idealism, with that of Gilles Deleuze and Félix Guattari's epistemology based on the model of the rhizome.

Specifically, I will present here a rapprochement of the apparent opposition between the use of ideals, phenomenology, ontology and idealism with the rhizome by designating phenomenology, ontology and idealism as active motes (among all other imaginable motes) of connection within the rhizome model of epistemology. In so doing, I will challenge the intellectual point that for Deleuze/Guattari phenomenology, ontology and idealism are fundamentally opposed to the rhizome by insisting that nothing is fundamentally opposed to the rhizome, but that everything within intellectual history is immersed in and connected to it. Within this thesis, then, I will regard the history of phenomenology, ontology and idealism as being included within the intellectual rhizome, particularly in light of the rhizomatizing experience of total-immersion within total-art (i.e. the lost-but-connected umbrageous mentality encouraged by entry into virtual aesthetic worlds): our main point of departure.

The thesis is divided into three sections. All three sections make interplaying synthetic application of a variety of intellectual strains in the interests of providing the foundation for a strategy of immersive discovery. However, each section has its particular emphasis. In terms of methodology, Section A is a combination of both theoretical/speculative and fact-based/historical research which accounts the beginning of Virtual Reality and certain historical developments in philosophy which I found salient to the larger investigation into the basis of a noology (the study of images of thought) salient to experiences and understandings of the primary feature of Virtual Reality: *immersion*. The key concept of *omnijectivity* (the metaphysical concept stemming from the discoveries of quantum physics which teaches us that mind (previously considered the subjective realm) and matter (previously considered as the objective realm) are inextricably linked) will reconcile the relativist ("subjective") style found in Section A with the more absolutist ("objective") style of Section B of the thesis - as omnijectivity is possible only with the conflation of polarities; a stance which recognizes the mutual interpenetration that unites the apparent opposites of subjectivity and objectivity.

Section B is primarily exemplary of the noology of immersionability hinted at in Section A and propounded in Section C: *spherical thinking*. The thesis' argument will indicate how spherical thinking/art supersedes the tabular space laid out by classical thought. Most of these examples are drawn from the history of art, though other events found relevant from other fields are cited as well. This non-teleological noology makes use of both the rhizomatic nature (multiplicitious/heterogeneous) of the thought process typical of the art experience and the gesamtkunstwerk totalization typical of Virtual Reality, which paradoxically promotes it. These supposed opposing tendencies are reconciled by the notion I put forward of the *hyper-total*: a notion of an immersive orb of connecting vectors which suggest an enveloping mental space that allows unaccustomed creative situations and sensations to connect and tolerantly co-exist in janusian fashion.

Given our heightening condition of connectivity, the heterogeneous, multiplicitous, spreading and non-hierarchical nature of the epistemological rhizome come together under the hyper (i.e. connected) effect of the

hyper-total. I will first exemplify this notion of the hyper-total with the physically contained (but optically boundless) palimpsestesque, all-over, wall-paper-like image spread found in the Apse of Lascaux in BIII. Later, in BV, I will speak of a *visual hyper-totality*: a distinct visual-cognitive proclivity which addresses the multiplicitious/heterogeneous impetus within the gesamtkunstwerk total. I will define this visual hyper-totality as being produced by an all-over, elaborate, spread out distribution of visual incident which calls upon the optic procedure of spatial summation; a process which unconsciously totalizes the visual excess encountered. This visual hyper-totality will prepare the basis for an *holonic vision-cognition* which is essential to the *continuous but coheren*t quality essential to immersive art. Then, still later in BXXIV, I will refer to the hyper-total as a *summational but all-over net-condition/awareness of plurality in hyper-homogeneity; a supplementary order of diversity within orders of hyper-totality*. This condition will relate to what I call the *hyper-cognitive* in respect to my pre-conclusions, pre-conclusions which lead to the resulting noology of spherical thinking.

The hyper-cognitive is where the particular (now updated by electronic connectivity) is seen as part of an accrual total system by virtue of its being connected to everything else. The strategy of hyper-anything includes principles of networked connections and electronic links which give multiple choices of passages to follow and continually new branching possibilities. The total-hyper-being model for a new connected noology (especially when placing emphasis on tabulating an evasive omni-perceptual orb) is the self-re-programmable internal function which explicitly offers a furtherance in envisioning internal, anti-hierarchical models of our patterns of thought to ourselves.

This self-connected strategic approach is based on the premise that behind all of today's immersive VR-art (what I will term in the dissertation as *VE°art)*, either representational or abstract, is the hypothetical exploration of the introspective rhizomatizing world of the imagination under the influence of today's high-frequency, electronic/computerised environment. Moreover, since it is difficult making sense of today's swirling, phantasmagorical media society, the general proposition behind electronic-based art may best be to look for a paradoxical summation of this uncertainty by taking advantage of today's superficial image saturation; a saturation so dense that it fails to communicate anything particular at all upon which we can concur - except perhaps its overall incomprehensible sense of ripe delirium as the reproduction system pulses with higher and higher, faster and faster flows of digital data to the point of near hysteria.

Perhaps the result of this ripe information abundance is that the greater the amount of information that flows, the greater the non-teleological uncertainty which is produced. So, the tremendous load of imagery/sound/text information digitally produced and reproduced all round us today ultimately seems to make less, not more, conventional teleological sense.

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If accepted, this supposition, it seems to me, plays into the history of abstract art which teaches us that art may refuse to recognise all thought as existing in the form of purposeful representation, and that by scanning the spread of representation art may formulate an understanding of the laws that provide representation with its organizational basis. As a result, in my view, it is electronic-based art's onus to see what unconventional, paradoxical, summational sense - in terms of the rhizomatizing world of the imagination - it might make of all this based on an appropriately decadent reading of our paradoxically material-based (yet electronically activated) social media environment.

Perhaps such a basically abstract, open, and thus paradoxical, summation would begin with the presumption that an information-loaded nuclear weapon has already exploded, showering us with bits of radioactive-like information bytes, thus drastically changing the way in which we perceive and act - even in our private subconscious dream worlds. It is this internal, subconscious, paradoxical drama - this subconscious contradictory tension - which I found essential in developing the rhetorical strategy of this thesis' argument and as a subject specifically suitable for electronic-based art theory. This subject, and the rhetorical strategy needed to explore it, especially interested me in that encounters with immersive computer simulation, one may assume, might create an opportunity for personal transgression and for a vertiginous ecstasy of thought. Hence exceling the assumed determinism of the technological-based phenomenon inherent (supposedly) in our post-industrial information society.

Indeed, it seems to me that as human psychic energies are stifled and/or bypassed by certain controlling aspects of mass informational technology, such a personally transgressive ecstatic phenomena will most likely increasingly break out in forms of spherical thinking/art. Similarly, simulation technology (when used in the creation of electronic-based art) will promote an indispensable alienation from the socially constructed self necessary for the outburst of such ecstatic experiences/acts. Inversely, electronic technology will enable the contemporary artist to express ecstatic reactions in ways never before possible. Thus, this ecstatic counteraction might provide a phantasmal defiance aimed against the controlling world's blandness. This aesthetic philosophy might provide, then, a fundamental antithesis to the authoritarian, mechanical, simulated rigidities of the controlling technical world. Indeed, this goal drove the rhetorical strategy of my thesis.

The emergence of the spectral/spherical theoretical project I have outlined above will, I hope, contribute to the surpassing of the field of non-electronic thought representations by inventing a spherical thinking/art in which what matters is no longer only identities, or logos, or distinctive characters, but rather lush, phantasmagorical interpretations developed on the basis of hyper-total inclusion. Such dynamic, abstract, spherical thinking/forms (and their connections) - all these will be presented to our gaze only in an already pre-connected vivacious spherical state, already articulated in that insinuated spherical thinking that is linking them in an immersive discourse which is both non-teleologically oriented and intellectually responsible.
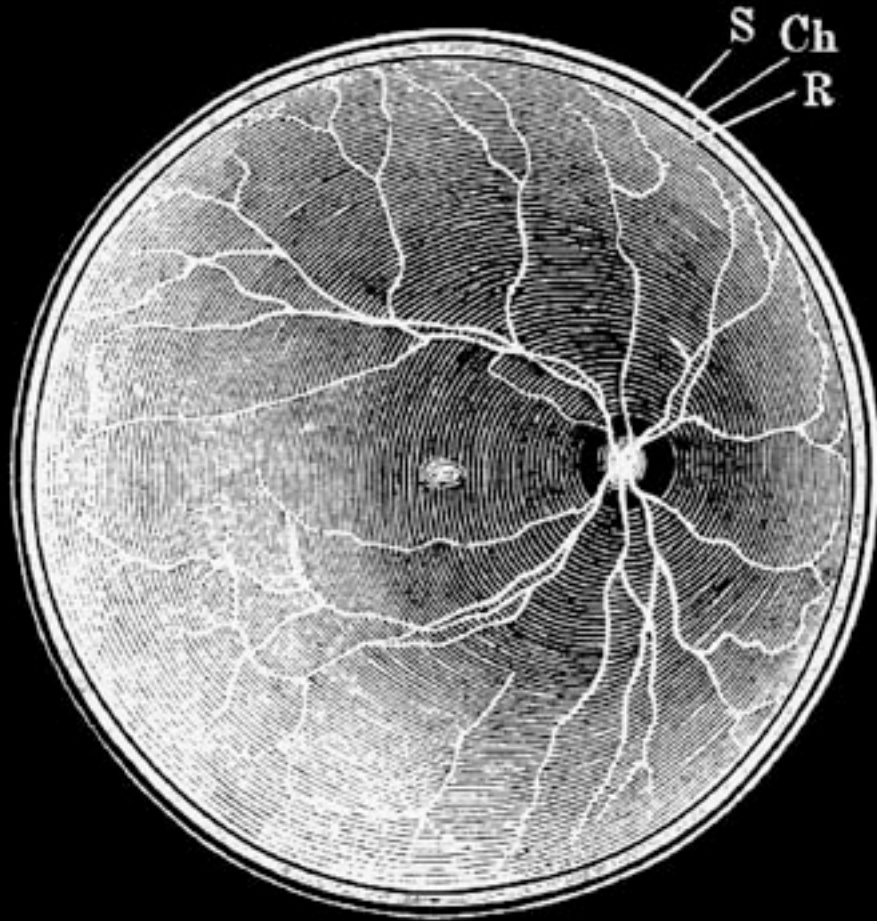
Introduction: Frame and Excess

TO THE REAR IN FRONT OF ON TOP OF UNDERNEATH ALL AROUND

Claude Thibaut: *Isn't this radical uncertainty brought about by Virtual Reality likely to challenge man's vision of himself and the world?*
Jean Baudrillard: *Certainly, because it is the system of representation that is at issue. The image that he has of himself is virtualized. One is no longer in front of the mirror; one is in the screen, which is entirely different.*
-from Philosophy Discussion with Jean Baudrillard: Interview by Claude Thibaut, March 6, 1996

Space is an ambiguous field where positions change, where viewpoint becomes scene, seer becomes object, and where depth is the very reversibility of dimensions that unfold with the movements of the body.
-Allen Weiss, *Mirrors of Infinity: The French Formal Garden and 17th Century Metaphysics*

In the realm of the affective imponderable, the image provided by my nerves takes the form of the highest intellectuality, which I refuse to strip of its quality of intellectuality.
- Antonin Artaud, *Manifesto In Clear Language*

To the process of the dissociation of man and body, Virtual Reality brings a new variation, another way for the body to disappear.
-David Le Breton, *The Body in the Modern Imagination*

Transparency is the property of the eyeball, projected outward as luminous space, interpreting quanta of energy in terms of the gelatinous fibers in the head.
-Alan Watts, *The Joyous Cosmology*

The evolution of art is something internal, something philosophical and is not a visual phenomenon.
-Lucio Fontana, *from his last interview*

Following, the reader will find an extensive proem to *Immersive Ideals / Critical Distances,* a generously illustrated synthetic exploration of art histories, cultural ideologies and metaphysical ontologies based on the principal defining characteristic of Virtual Reality (VR): *immersion*. The primary explanatory goal of the research conducted here into *immersive ideals* will be to enthuse art theory by submitting it to a complex dialogical cross-examination which hinges on the concept of *immersionability* so as to define an historical and current philosophic sense of immersive visualisation. Through this exploration I shall seek to define the main attributes of what I will designate as immersive culture and its ideational background and paradigmatic implications as related to art theory.

The resulting *aesthetic theory of immersion* will not merely be about VR however (even though with VR immersion attains a rare acuity) but about its antecedent philosophical concepts which immersive virtual technology retrospectively re-emphasises; a web of concepts which are themselves associated with other concepts corresponding to other technological and metaphysical conditions. The criteria for including and exploring the divers art historical examples and their context which appear in Section B, will be whether they contribute towards flushing out a satisfactory *aesthetic theory of immersive consciousness* and advance the formation of an association of artworks and assemblage of philosophic ideas which can be designated as

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indicative of *immersive culture*. But I will show more than *which* art strategies give rise to aesthetic immersive experience *when*. I will also give an account, as full as possible, of *how* and *why* these experiences occur. The *how* question will be initially addressed in Section A; the section which addresses the inquiry into immersive technology and psychology along with background philosophical theories which will be useful in determining the *why* question. By nonreductively synthesising the *which*, *when* and *how* of aesthetic immersionability, an extensive explanatory theory of aesthetic immersive consciousness and its possible functions will be suggested in Section C with a number of theoretical *whys*.

Immersive Ideals / Critical Distances is then an interdisciplinary study of Virtual Reality's "key feature", immersion (Heim, 1998, p. 54) and virtual immersion's foreshadowing sources, ideal topos, and ensuing influences as applicable to art theory in the formation of a general philosophic immersive theory of culture. The philosophic rhizomatic theory of Gilles Deleuze (1925-1995) and Félix Guattari (1930-1992), at a general level, supports such an interdisciplinarian connectivist approach towards theorising immersive experience, as rhizomatic theory encourages philosophic non-linear and non-restrictive interdisciplinary thinking and hence reinterpretation, which in this case will proceed from the point of view (not a point in fact anymore, but an orb) of *virtual immersion*. (Deleuze & Guattari, 1987) A *rhizome* literally is a root-like plant stem that forms a large entwined spherical zone of small roots which criss-cross. In the philosophical writings of Deleuze and Guattari the term is used as a metaphor for an epistemology (that in philosophy which is concerned with theories of knowledge) that spreads in all directions simultaneously. (Deleuze & Guattari, 1994, p. 7) More specifically, Deleuze and Guattari define the rhizome as that which is "reducible to neither the One or the multiple. (...) It has neither beginning nor end, but always a middle (milieu) from which it grows and which it overspills. It constitutes linear multiplicities with n dimensions having neither subject nor object... ." (Deleuze & Guattari, 1987, p. 21)

Concerning the metaphorical tropes of this exploration, I immediately want to say that even as I have proposed in the title of my investigation what looks to be a binary opposition between immersion and distance, I don't conceive of this opposition as a simple binarism, but rather it is far more gradient, dialectical, and phenomenological than that. The emphasis taken here will be on treating the histories of art and philosophy as multi-layered, heterogeneous, idealistic constructions; as operative assemblages of connections and frequencies which once linked elucidate various chimerical *disembodied* (Mitchell, W. J., pp. 43-44) relationships between the protoplasmic body-image and spatial conceptions (what Jean-Louis Boissier sees as the consequence of "all interactive situations" which he maintains "entail a virtualisation of the body by the production that they imply in the fluctuating data of digitalisation" (Boissier, 1994b, p. 2)) within a generalised ideal sense of immersionability which manifested in art and philosophy over time. This approach is consistent with Gilles Deleuze's awareness that every condition includes a history of its ideal events. (Deleuze, 1990) However, I will accord top primacy to *enthused participatory notions of artistically mediated*

awareness within this study and not retreat into an easy extolling polemical stance concerning the necessity for critical distance, even as I appreciate the intellectually productive and cognition-raising abilities of critical distance.

To endeavour an understanding of immersive propensity in relationship to our effort to discern an extensive pattern of inferred passions which may together suggest a number of immersive ideals requires, I believe, the judicious use of the process of Deleuzian/Guattarian nomadic thinking. (Deleuze & Guattari, 1986) Accordingly, Deleuzian/Guattarian immersive descriptions would be composed of variously formed segments, stratas, and lines of flight which involve territorialising as well as deterritorialising spacio/psychic activities. (Deleuze & Guattari, 1983, p. 2) Even so, I acknowledge in advance that all methods, explanations, and theories (including the nomadic) inevitably distance consciousness from its first sense of full and total participation. This acknowledgement will remain a particularly important point of consideration in this dissertation, as ideas of spacio/psychic critical distance and non-distanced (non-spatial) disembodied fusion rub up against each other and influence the psychic space required for reflection on the thorny concept of *aesthetic immersion* (which entails a lack of distance) as the atmospheric gulf between the immersant and the immersive aesthetic environment is ideally dissolved in VR's exemplary standard and goal of perfect functionality: *total-immersion*.

Total-immersion, that state of virtual being which is considered the holy grail of the VR industry, can be characterised as a total lack of psychic distance between the immersant's body-image and the immersive environment (accompanied by a "feeling of plunging into another world"). (Heim, 1998, p. 18) Total-immersion is implied *complete presence* (Barfield & Weghorst) within the insinuated space of a virtual surrounding where everything within that sphere relates necessarily to the proposed "reality" of that world's cyberspace and where the immersant is seemingly altogether disconnected from exterior physical space. As such, total-immersion promotes a conflated but promiscuous ontological feeling (awareness/consciousness) where aesthetic cognition of the limits of the aesthetic environment attain the actual state of "the generally non-mathematizable subjective world of consciousness" (Shear, p. 194) itself: *non-spatiality*. (McGinn, pp. 220-223) This ideal standard of total conflation, a standard which the VR industry itself has established for VR, will carry a good deal of the explanatory burden in the formation of a theory of aesthetic immersive consciousness.

A rhizomatic recombinant mythos based on ideals of total-immersion detected in art and philosophy which explores certain hypothetical states of semi-disembodiment (i.e., semi-deprivation of normal cognitive body-image; or what Mark Pesce identified as what occurs in the mind when the self, via technological extensions, removes itself from itself (Pesce, 1993)) needs to weave the strands of art historical immersive manifestations *sub specie immersivis* (from the point of view of immersion). By doing so, probable questions will be raised

around immersion concerning totalising idealisms (all assertions of totalities in this text are recognised as cognitive unification operations) and their imaginative effects on the ways we today model the world in art. In this respect, this dissertation is informed by an idea adapted from the Swiss art historian Heinrich Wölfflin's (1864-1945) *Principles of Art History* in which Wölfflin argued for a classification of styles based on historical modes of *ideal imaginative beholding*. Beginning with the aesthetic theories of his teacher Jacob Burckhardt (1818-1897), particularly Burckhardt's doctrine of equivalents in art (whereby visual and ideal values are seen as interchangeable), Wölfflin developed the concept of an *ideal imaginative beholding* which defines the formal disposition of an era's style in tandem with his theory of *prefigurations,* which postulated intuitive method as inclusive in art. (Wölfflin, 1915)

Accordingly, we will be studying *imaginative and intuitive ideals of total-immersion* both from my point of view as a practising artist and as an art theoretician. Hence, besides preparing the reader for bounces back and forth between the first and the third person voice in the text, I shall establish straight away my fundamental contention that all art is conceptual and imaginative because art only exists conceptually (Kosuth), and that it participates in the imaginative metaphysical realm of externalised fabulation (Scholes), a notion which I find consistent with Georg Wilhelm Friedrich Hegel's (1770-1831) concept of art as idea rendered sensible. (Hegel, 1979) In this view, art is a fabrication, an imaginative beholding which makes us realise exactness through the powers of intuitive caprice. (Picasso) It seems to me however that one must take this basic understanding a bit further and maintain that art is utterly dependent upon, and is in fact, *metaphysics*: the philosophical study of the basic concepts of existence which include epistemology, ontology, and aesthetics as inaugurated by Aristotle's (384-322 BC) commentators. Or to put it the other way around, as the German philosopher Friedrich Wilhelm Josef von Schelling (1775-1854) did, "Without metaphysics, not only is there no philosophy, but no art". (Schenk, p. 184) For the idealist philosophers, the school to which Schelling belonged and for whom Hegel is considered the culmination (Aiken, p. 71), metaphysics is not a sort of magical super-physics but rather *ideology* itself. (Aiken, p. 115) Art's philosophical/metaphysical (and hence hypothetical) ideological underpinnings may not often be stated explicitly within the work however as, more times than not, art smoothly participates in the dominant metaphysics and ideology of the culture in which it appears. (Eagleton) Therefore the critical distance gained from a congregation of explicit metaphysical/ideological conceptions are fundamental to the understanding of *immersive art* (i.e., *art which attempts to include everything of perceptual worth within its domain ambiently but coherently and accordantly in an overall enveloping totality that is concerted, continuous, and without overly evident frame or border*), just as they are with all art, as art is never transparent but always stems from concealed and forgotten theory-laden processes of idealisation. (Wolff, 1993, p. 105)

So to begin I shall identify that in the schematised ideological aesthetics of virtual immersion the immersant discovers an *all-over, metaphysical* and *indeterminate algorithmic depth* (the basis of any computer program

is an algorithm, a prescribed set of rules that define the parameters of a solution to a problem (Knuth)) and I can say forthwith that this is VR's *raison d'être* as it concerns art and art's discursive influence on our states of consciousness, which is only a start. Next we need to define what we mean by *consciousness*. This is not an uncomplicated matter, for as the philosopher and specialist in consciousness studies Dr. David Chalmers says in his seminal essay "Facing up to the Problem of Consciousness": "there is nothing that we know more intimately than conscious experience, but there is nothing harder to define". (Chalmers, 1995, p. 200)

Fundamental psychology breaks consciousness into two essential categories: the state of awareness and the subjective aspect of neurological activity (i.e., the impression of self so produced, whatever its actual cause). (O'Doherty, E. F.) There are sub-categories and variations of these however. For example, some researchers define consciousness as *the totality of experience at any given instant*, as opposed to *mind*, which is the sum of all past moments of consciousness. (Metzinger) Schelling, in agreement with Immanuel Kant (1724-1804), maintained that the only thing which we can have direct knowledge of is our consciousness. (Schelling, 1988) However, consciousness, in Aldous Huxley's (1894-1963) view, (as influenced by William James's (1842-1910) study *The Varieties of Religious Experience: A Study in Human Nature* (James)) is mainly an abridgement application which allows us to construct a coherent world view based on selective oblivion. (Huxley, Aldous, 1970, p. 22) Lately, Brian Massumi, Research Fellow at the Humanities Research Centre of the Australian National University, author, and a prominent English translator of Deleuze and Guattari, upheld Huxley's/James's "subtractive" understanding of consciousness by seeing both will and consciousness as "limitative, derived functions which reduce a complexity too rich to be functionally expressed". (Massumi, 1995, p. 90)

Dr. John Lilly, by using cognitive psychology's computational model of the mind, defined consciousness as the human biocomputer's "self-metaprogrammer". The biocomputer's programming, according to Lilly, is that set of internally consistent instructions which prepare, send, store, process, and select signal information in and out of the biocomputational activity of the brain, most of which can be adjusted through a self-metaprogramming process initiated by the self-metaprogrammer. (Lilly, 1974, pp. 138-139) According to Deleuze, consciousness is "the passage, or rather the awareness of the passage, from less potent totalities to more potent ones, and vise versa." (Deleuze, 1984, p. 21) This hypothesis receives support from Thomas Metzinger when he writes in *Conscious Experience* that "...holism is a higher-order property of consciousness" and that "this global unity of consciousness seems to be the most general phenomenological characteristic of conscious experience...". (Metzinger, p. 30) Hence the 19th century German philosopher Johann Gottlieb Fichte's (1762-1814) theorised "unity of consciousness" in which "all the opposites are united" (Fichte, 1889, p. 84) is confirmed by Metzinger's findings. Dr. Chalmers, in his book *The Conscious Mind,* also confirms Fichte's theory by putting forth a notably unaccustomed elucidation of consciousness by discarding the dominant reductionist inclinations of modern science (with its experiential template that

selectively filters and shapes awareness (Poincaré)). Chalmers established that previous cognitive neuroscience did not explain how subjective experience emanates from neural processes in the brain (an organic assemblage which consists of an estimated 13 billion neurons). For Chalmers, consciousness is to be circumscribed as "the phenomena of experience" (Chalmers, 1995, p. 201) which must be conceived *as a totality*: an irreducible manifestation that subsists at a basic stratum which cannot be conceived of as the aggregate of simpler corporeal parts. (Chalmers, 1996)

a view of the brain

When we bring together and cross-link the above concepts of consciousness we see that consciousness, basically, is the *awareness and appreciation of the feeling of being*. Indeed Chalmers states that "there is a direct correspondence between consciousness and awareness". (Chalmers, 1995, p. 212) This ontological definition of awareness as consciousness (an ontological, therefore essentially a metaphysical definition) will establish initial understandings into immersive consciousness and its place in constituting a supplementary art history in accordance with Deleuze's alternative history of philosophy. (Douglass, pp. 47-48) However, the preferred decisive point in understanding total-immersion in the context of art is its facilitation of a more potent *conscious-totality* in the creative art audience produced by merging the audience's perceptual circuitry seemingly with the artwork. In this light it might be possible to define immersive states of consciousness as *conditions and orders of conscious awareness in which perception-cognition (i.e., visual awareness linked to the process of forming intelligence) is found to consist of <u>more</u> than everyday (non-conceptual) vision* (Ivins, 1975) *typically reveals, by merging it with some manifestation suggestive of a transcendent more*. This condition may be thought of as a bypassing of habitual processes of spatial thinking (Howard & Templeton) through an assiduously expanded macro-vision/intelligence based on conditions of excess which provides the immersant with an unfilled sense of internal union with unrealisable breadth through implicative art.

By *states of immersive consciousness* I mean, then, our miscellaneous neurological/ontological sense of the gradient unity of sentient self in internal rapport with its surrounding milieu (Wilson, E. O., 1998); that visual/mental property of atmospheric self-attentive awareness, cognisance and feeling, that allows us to

experience a sense of nexus with our ostensibly unified surroundings, albeit laced with vicissitudes. I have observed (in myself) that immersive states of consciousness tend towards unconstrainment while being based on a routine sense of shifting-self (immersed in degrees) within the ambient biosphere which is experienced when self-attentive.

In that my usage of the term, *immersive consciousness* corresponds to *an aesthetic moment's totality of experience when viewer and view coalesce*, immersive consciousness' metaphysical depth is not a pre or non post-modern (Sarup) metaphysical depth free from consciousness of its diverse objectives and results and pluralistic influences (plurality and diversity are essential to Post-Modernism (Jencks, p. 6)) as according to Theodor Adorno (1903-1969) in his *Aesthetic Theory,* art and aesthetics must not try to erase fractures through integration but rather to "preserve in the aesthetic whole the traces of those elements which may have resisted integration". (Adorno, 1984, p. 271) Consequently, as the reader will soon see, *Immersive Ideals / Critical Distances* contains traces of a wide number of diverse cultural, philosophical and theoretical concepts along with numerous extant art examples which I found useful in drawing out the sense in which immersive cultural traits (and the various pluralistic states of immersive consciousness which accompany them) are especially pertinent as I have been able to identify them and their background ideals over the span of time.

An understanding of this immersed, self-attentive shifting-self requires a surpassing of the limiting tropes of logical positivist empiricism (Mach, 1914) however, as immersive consciousness starts in the non-delineating darkness of closed but debonair eyes. This buoyant, dark, non-delineation, as Dr. John Lilly's report "The Effect of Sensory Deprivation on Consciousness" shows, provides a wide range of self-attentive potentialities for immersive consciousness which run counter to the dictates of logical positivism. (Lilly, 1962) Logical positivism was the early-20th century philosophical movement which emerged from the Vienna Circle group of philosophically minded scientists and logicians organised around Moritz Schlick (1882-1936) as influenced by the anti-subjectivist, positivist, empirical philosophy of the Austrian physicist and philosopher Ernst Mach (1838-1916). Logical positivism was based in opposition to the idealist philosophy of Hegel and hence stressed the exclusive value of logic and positivism (Comte) over self-attentiveness. Schlick and the Vienna Circle's other members; Otto Neurath (1882-1945), Kurt Gödel (1906-1978) and Rudolf Carnap (1891-1970) maintained that only verifiable statements (verified by observation or empirical data) were meaningful. Statements about art were nonsense to them. (Stewart, p. 85)

A consideration of this self-attentive, immersed, shifting-self is post logical positivist also in that it accepts various theories of consciousness which discuss consciousness as being emergent rather than representational. (Churchland, 1986) Sigmund Freud (1856-1939) (who we must remember was a theorist who rooted his theories in anecdotal evidence and whose writing was literary) identified an artist as one who offers insights into such an emergent consciousness as it emerged from within the unconscious realm. (Ellenberger)

Moreover, Martin Heidegger (1889-1976) maintained that *being,* which we shall study here, is the most unconscious of concepts because we are thoroughly immersed in it. (Heidegger, 1962) Siegfried Zielinski, foremost theoretician of media at the Köln Academy of Media and Ph.D. in philosophy, proposes that consciousness is our most unconscious interface, as it is "where world/worlds/reality/realities are formulated" (Hoekendijk, p. 3), an observation which compliments Fichte's contention that "all reality is in consciousness". (Fichte, 1889, p. 84)

The terminology *consciousness* means verbatim *with knowingness* and stems from the Latin verb *scire* (which means *to know),* as does the word *science*. But that is not all there is to it as applied to art. For consciousness in art seems to be ultimately like a web woven in the mind/body, of various silken-strands spun forth from interlacing states of unconscious desire (Meier) which semi-automatically control the paradigmatic creation and reception of art. (Lilly, 1974, p. xviii) This definition coincides with R. G. Collingwood's definition of consciousness, in paradigmatic art terms, as that which is a "kind of thought which stands closest to sensation or mere feeling" as "transformed into imagination". (Collingwood, p. 223) Paradigmatic consciousness has emerged in the 20th century due largely to the philosophical work of the American philosopher Thomas Kuhn who has argued that scientific "progress" does not simply occur in stages based on neutral observations but that all observation is theory-laden. For Kuhn, the history of science (and I would argue art as well) is characterised by revolutions in outlook. (Stewart, p. 93) Indeed unconscious desires shape the paradigms which contour intentional expressions in art through the subtle powers of sublimation when the sexual desires of the libido are turned into cultural ones via the mediation of the artist's ego. (Freud, 1958) The question of how Freudian unconscious desires are manifest in conscious cultural production and interpretation, will be one of our minor themes here throughout. This is a non-problematic working assumption in that even those who maintain that art is fundamentally a materialistic, social, and conscious product (Wolff, 1993, p. 1) acknowledge that the role and function of art is located in its power to change consciousness. (Wolff, 1993, p. 92)

We may begin then by establishing that bi-conscious visual acumen involves a spectral feedback between the perceiving agent and the *broad consciously and unconsciously perceived atmospheric aesthetic surroundings*. Ergo, with total-immersion as a model for how we may procure bi-conscious visual aptitude and awareness in its fullest intensity, we shall carefully check peripheral vision (Marr) in relationship to the spatial experience of virtual immersion (Henry & Furness) as military investigations have shown that intensified peripheral perceptions lead to sharpened psycho-motor reactions in human beings and hence to a more comprehensive cognisance of their rapport with their total surroundings. (Psotka, Davison & Lewis) It is salient that human vision operates through a co-operation between the more conscious foveal area at the centre of the visual field (which takes in information concerning shape and pattern via an enormous amount of rapid eye movements (Carpenter)) in union with the surrounding, more unconscious, *peripheral retina* (which gathers atmospheric

information on the *total scope of the space* one is within). (Rheingold, p. 207) The central fovea is made up entirely of cone photoreceptors and is the part of the eye that detects fine detail and is specialised for light adapted *photopic* viewing conditions. Although cones exist throughout the retina, they are by far most concentrated in the fovea. Foveal cones are specialised for finer acuity as each foveal cone has a dedicated channel to a ganglion cell and, as a result, does not have to share inputs with other receptors. This allows for small receptive fields, providing fine acuity. (Piantaneda, Boma & Gille)
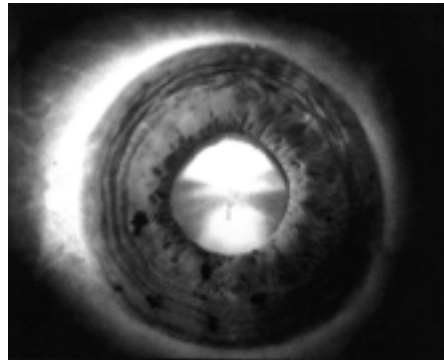
human iris

The peripheral retina is attentive to changes in the total environment, signalling to the foveal area where to focus within the entirety of space. (Rheingold, p. 207) This peripheral retina is populated mostly with rod-receptors, along with a small proportion of cones. Rods, though absent in the fovea, number approximately 120 million in the retina compared to about 6 million cones. Thus there are approximately 120 million sensors in the retina and only 6 million channels into the brain from the retina. (Youngblood, p. 46) Rods are specialised for viewing dim illuminations but do not code colour or fine detail. Rather, rod inputs link with neighbouring rod and cone inputs to one ganglion cell in a (more unconscious) process called *spatial summation.* (Piantaneda, Boma & Gille) Spatial summation results in larger receptive fields attentive to the space which "surrounds the body, is before and behind, past and future, where one is both seer and object seen." (Weiss, p. 34)

All that will be said concerning immersive perception, cognition, and interpretation will indirectly infer back to this atmospheric process called *spatial summation* with its process of understanding enlarged receptive fields. And in terms of this summative sense influencing an immersive cognitive-visuality, it is reasonable to make use of the *holonogic schematic model* of Arthur Koestler in that no set or frame of perceptions may be viewed in isolation or as a single part of a finite perceptual collection within a synthetic holonogic model. (Koestler, 1967, p. 48) This cognitive-visual model is applicable to immersive (unframed hence expanded) visual intelligence in that, as the artist Carolee Schneemann has written, "Vision is not fact, but an aggregate of sensations". (Schneemann, 1968, p. 12) Victor Burgin supports Schneemann's claim when he writes that "seeing is not an activity divorced from the rest of consciousness; any account of visual art which is adequate

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to the facts of our actual experience must allow for the imbrication of the visual with other aspects of thought". (Burgin, p. 53) Thus an holonogic model of cognitive-vision would be appropriate when analyzing virtual immersion, in that when immersed inside the *mise en scène* of a *Virtual Environment* (VE), view-point/ego-center simultaneously implodes and explodes (and *vice versa*) as observation is deprived of its habitual perceptive boundaries. According to Koestler's *holon* concept (established in *Beyond Reductionism* and in *The Ghost in the Machine* (Koestler, 1967, pp. 45-58)) instead of cutting up immersive perceptual wholes into discrete focal parts, immersion should be scrutinised and understood using *synthetic sub-whole sets* found within the ambient atmospheric spectrum of immersive perception's entirety. It is the exposé of the *synthetic atmospheric phenomenology* of such holonertic sight (dependent on the *linked and amassed sum-total of views*) which will concern us here as even though our scopic information is largely determined by the way our eyes work horizontally implanted in the front of our face (cross-blending visual fields), our interpretations of that visual data are far from intractable. (Haber & Hershenson) We are equipped with eyes with dominant frontal properties which look straight on of course, but in holonogic cognitive-perception there is also aware attendant fringes to sight which seep in peripherally. (Cutting)
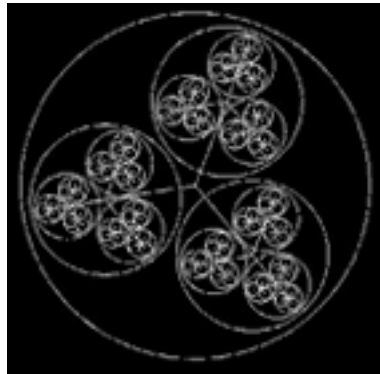
holonic schematic

Such an approach is consistent with, and indeed epitomises, the ideals of hermeneutics, as in hermeneutics the central notion is that we cannot grasp the meaning of a portion of a work until we understand the whole, even though one cannot understand the whole until one understands the parts which make it up. (Caputo, 1987) However, hermeneutics is not merely a paradox, since hermeneutics indicates that any feat of interpretation occurs through time, with adjustments and modifications being made to one's comprehension of both the parts and the whole in a circular manner, until some type of resolution is attained. (Gadamer, 1976)

Useful here also in grasping the workings of the holonogic/hermeneutic model is the influence of Aaron Gurvitch and his *gestalt psychology* which was developed in order to formulate a phenomenology that recognised the relation of the dynamic field that encompasses both foreground and background perceptual moments to more rigorously define the nature of perception. (Koffka) Gestalt theory's precepts emphasise that

the whole of anything is greater than its parts. Indeed it emphasises that the attributes of the whole of anything are not deducible from analysis of the parts in isolation. Instead gestalt studies make use of the methods of phenomenology, the description of direct psychological experience with no restrictions on what is permissible in the description. Gestalt psychology sought to encompass the qualities of form, meaning, and value that prevailing psychologists had either ignored or thought to fall outside the confines of science. (Horgan) Moreover, gestalt psychology emerged in part as an attempt to add a humanistic dimension to what was considered a barren approach to the scientific study of mental life. In the field of art theory, Ernst Hans Gombrich's conceptual involvement with gestalt ideas of vision (Kanizsa) is evidenced in his books *Art and Illusion: A Study in the Psychology of Pictorial Representation* and *The Image and the Eye: Further Studies in the Psychology of Pictorial Representation;* books which articulated the relativity of vision in terms of visual art.

Such an extensively engrossed holonogic/hermeneutic approach towards cognitive sight, as outlined above, would be in opposition to what Donald Lowe in his *History of Bourgeois Perception* identifies as the "bourgeois perceptual field" (Lowe, pp. 18-23); a visual mode which he characterizes as fundamentally "linear" (Lowe, p. 109), "nonreflexive" (Lowe, p. 26), and "objective" (Lowe, p. 18). In that our adult creativity derives primarily from our conspicuous potential for abstraction (which characterises our genus) and in our craving and manipulation of abstractions (Worringer), what is at stake here is the adult acceptance (or rejection) of our *entire atmospheric impressions* as our genuine optical-field of conscious creative interest; an abstract optical-field which calls on the retina's tremendous expansive qualities of which the descriptions of the scientist and the doctor have not done suitable justice. Early on in the 20th century Marcel Proust (1871-1922) in his masterpiece *Remembrance of Things Past,* links such a craving to sense and understand the entire field of atmospheric impressions (through intimate observations) with the compunction to penetrate exterior matter in order to understand the precision of the sensuality behind the aesthetic. (Proust) Still, this ephemeral aesthetic-vision has only been addressed by the rare visual artist, such as Wassily Kandinsky (1866-1944) when he spoke of this field's *felt scopic atmosphere* as a space's *stimmung*. (Kandinsky, p. 2)

One way to better apprehend the ambient optical field's *felt scopic atmosphere* is to think of it in terms of a study of *cognitive-visual acoustics*. This is equitable in that sight itself is nothing other than a continuous pattern of perpetually changing light-data recorded on the retina which we humans process through the aggregated internal acts of discerning. To understand cognitive-vision as being non-inflected with subtle properties akin the acoustic properties of echo, range, pitch, timbre, and tone is to discern all visual moments as being indiscriminately equal, and as flat. Cognitive-perceiving is continuously allocated by tones of recognition, ranges of totality, and distributed visual echoes as humans produce a full interpretation of the plethoric information which hits their retinas in order to assign it cultural meaning. (Brennan & Jay) More precisely, such an acoustic-like cognitive-visuality would involve the equivalent to what in acoustics is called

envelope. Envelope, in musical sound, involves the onset, growth, and decay of a sound. Growth consists of the rate of increase of a sound to steady-state intensity. Duration refers to the steady-state of a sound at its maximum intensity, and decay is the rate at which it fades to silence. Envelope is an important element of *timbre*, the distinctive quality, or tone colour, of a sound. Every musical instrument has its characteristic attack, growth, duration, and decay pattern. My supposition is that so do aesthetic visual moments (but not in terms of time; in terms of peripheral spatial intelligence) when holonogicly self-attended to.

By studying such an *envelope vision* in terms of immersion, in a sense this thesis participates in the recent investigations of visuality into what Martin Jay has called the "ocular character of all Western culture" and the "Cartesian perspectivalism that dominates the modern era" (Brennan & Jay, 1996, p. 31), a Cartesian perspectivalism which, according to Hal Foster, separates subject from object, "rendering the first transcendental and the second inert". (Foster, 1988, p. x) Such investigations include Guy Debord's critique of the Society of the Spectacle (Debord, 1983), Jacqueline Rose's investigation into the sexuality of the objectifying, male, patriarchal gaze (Rose), and Michel Foucault's (1926-1984) analysis of the panopticon paradigm. (Foucault, 1979) For example, according to Foucault the major effect of the panopticon (a circular prison designed by the British philosopher Jeremy Bentham (1748-1832) based on his principles of "happiness calculus") is to induce in the prison inmate (and by extension anyone) a state of consciousness that assures the automatic functioning of power. (Foucault, 1979, p. 201)

It must be remembered here that in philosophy synthetic statements are those statements judged to be true or false in relationship to the world (but which are not necessary ones), as opposed to analytical truths, which are necessary, and hence cannot be otherwise. In philosophy it is important to make this distinction between synthetic and analytical statements. Only when we acknowledge that this investigation partakes in synthetic activity might we enter the concept of *holonogic cognitive-vision* into consideration, and only if we understand holonogic cognitive-vision to be a synthetic *psychological thought-vision* without any one particular vector but rather a plethora of them united into one *void of the suppositional central vanishing-point which the horizon-line had previously established*.

The synthetic notion being pursued here then, is of an atmospheric and holonogic cognitive-vision constituted by what goes on in and behind the head as much as by what is in front of it.
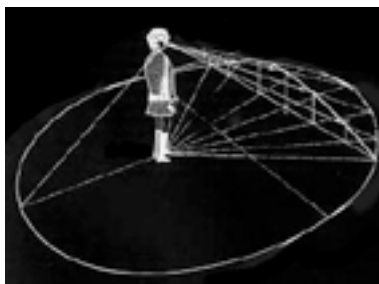
Hence it is a synthetic cognitive-vision in accordance with Immanuel Kant's dictate that philosophy ought to investigate how we understand our world. (Lyotard, 1994) Tim McFadden in his text "Notes on the Structure of Cyberspace and the Ballistic Actors Model" in Michael Benedikt's *Cyberspace: The First Steps* (Benedikt, 1991, pp. 335-362) adapted the concept of the holon's ambiguous relationships in the early-1990s as a model for understanding the synthetic configuration of cyberspace in that holons, like cyberspace, have both synthetic cohesion and separateness as their structural elements. (McFadden) I find that the model holds true and is valuably useful in conceptualising the complexity of ambient immersive optics in virtuality. Christine Buci-Glucksmann recognised and termed this ubiquitous perspective the *Icarian gaze* in her book *The Cartographic Eye.* (Buci-Glucksmann) This notion as well compliments Roy Ascott's synthetic awareness of what he calls *cyberception*, as articulated in his essay "The Architecture of Cyberception". According to Ascott, "cyberception involves a convergence of conceptual and perceptual processes in which the connectivity of telematic networks plays a formative role. " (Ascott, 1994)

Certainly it is true that hidden in us, and in connected computer space, there is something so large, so astounding, and so pregnant with the darkness of infinite space (Rucker, 1984) that it excites and frightens us and thus returns us to the experimental and to a state of stimulating desire and perceptual restlessness. But more specifically, how any one space *feels* is the aim of any immersive simulation, and the most complex discernment to gauge. When people commonly speak of "getting the feel" for a new place, I believe they are referring to their unconscious holonogic-visual analysis of said space, as any feeling of an environment is established by unconscious exchanges of immersive information. Unconscious particularly in art because there are clearly no objective mimetic values attributable to the felt qualities of art's space, for as Jane Harrison tells us in *Ancient Art and Ritual*, art is not mimesis (Bogue, 1991, pp. 77-78), but rather mimesis comes from art's emotional expressions. (Harrison, p. 21) Too, László Moholy-Nagy (1895-1946) points out that "every cultural period has its own conception of space, but it takes time for people consciously to realise it". (Moholy-Nagy, 1947, p. 56) We must additionally recognise that ideal immersive consciousness (the silk of the peripheral unconsciousness) takes place not only over time but within the emotional brain and that much of immersive consciousness is supra-sensible. Therefore it is appropriate that metaphysical (ideological) ideals in rapport with their externalisation in art will throw this dissertation through its entire trajectory.

Concerning virtual space, all that we consciously know is that cyberspace is a total abstraction (Pesce, Kennard & Parisi) which is constructed, in philosophical terms, as a *universality without totality*. (Lévy) Gilles Deleuze gives us a further explanation via the French author Marcel Proust in his book *Bergsonism* by defining the *virtual* as that which is "real without being actual, ideal without being abstract". (Deleuze, 1988, p. 96) Ensuing Deleuze, Pierre Lévy in *Becoming Virtual: Reality in the Digital Age* defines virtuality as a complex of trends, tendencies, constraints, goals and forces linked to a creative problem solving process. (Lévy) Brian Massumi, another Deleuzian in conspicuous agreement with Lévy, defines the virtual as a "pressing crowd of incipiencies and tendencies" which produce "a realm of potential". But for Massumi the virtual is also "a lived paradox where what are normally opposites coexist, coalesce, and connect...". (Massumi, 1995, p. 91)

There is no physical protoplasmic body evident in VR's virtual space, merely an attention-vector that responds to spatial cues. (Balsamo) In this respect the virtual body conforms to the technical "inhuman" abstract body which Charles Wentinck describes as a body which has "no contact with the surrounding atmosphere". (Wentinck, p. 157) An immersant moves in virtual space by *shifting a felt interest* such that an impression of movement is conveyed. How our states of feeling and interest and consciousness are variegated by experiences within the total abstraction of cyberspace will be of prime interest as we look to see how abstract ideas and ideals impact upon the motivational theories and practical employment of artists in the past and now.

Section A. The Sensuous Being/Non-Being of Immersive Consciousness

Where there is simple information processing there is simple experience, and where there is complex information processing, there is complex experience.
-David Chalmers, *Facing up to the Problems of Consciousness*

Metaphor is most potent when the transferred schema effects a new and notable organisation rather than a mere relabeling of an old one.
-Nelson Goodman, *Languages of Art*

One no longer can specialise in a single discipline and hope truthfully to express a clear picture of its relationships in the environment.
-Gene Youngblood, *Expanded Cinema*

Immersive Ideals / Critical Distances is a Janus proposition inasmuch as Janus is the two-faced Roman God who faces both directions simultaneously. Janus is similar to the ancient Egyptian God Aker, a two human-headed deity who surveys the western and eastern gates of *duat* (the underworld). As Janus has eyes on both sides of his head, a Janus-like model would be able to see on every side in immersive/holonogic space. Hence he is the symbol for dehabituation, open-mindedness, and for taking an even-handed view, as Janus was able to look backward into the past as well as forward into the future. Moreover he represents a question that has two sides to it. The month of January is named after him.

The reason that I have chosen Janus as the guiding presence of this inquiry is that the one-directional explanatory mode of cause and effect does not fully pertain to my argument in *Immersive Ideals / Critical Distances* as I will not put forward arguments which purport to explain one phenomenon as the monolithic result of another in a one-to-one relationship. Rather I will put forward discursive suggestions, as is the province of culture. Moreover, in janusian thinking "opposites and antitheses are proposed as being *simultaneously* valid". (Rothenberg, p. 258) This appreciation of valid antithetical simultanaities shall be useful in reaching nonreductive synthetic conclusions concerning the whirr of information processing which takes place within an aesthetic immersive environment.

Janusian constructs integrate opposites and antitheses and in this respect differ greatly from typical dualistic thinking; the tendency to formulate concepts in terms of two exhaustive categories. Dualistic causality, bolstered by the seductive powers of linear narration (hence appearing clearer in terms of its authoritative explanatory closure) appears unsophisticated to me in the realm of culture. Indeed, particularly in the realm of culture, the *post hoc ergo propter hoc* (after this, therefore because of this) logical error of assumed causality is notoriously ticklish. Thus in order to author an explanatory yet non-reified investigation free from the deceptive certainties of conjectural cause and effect, and instrumentally place the emphasis on immersive capacity, I find it necessary to examine this immersive tendency from two directions at once: one direction

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starting with an inquiry into the larger philosophical and technical concepts (what might be referred to as the metaphysics and technological ideology surrounding the details) (Section A); and from the other direction, through the examination of specific artistic events and details (Section B). This dual method will search for a dynamic equilibrium of equivalents, not a disanalogous mechanical cause and effect historicism, which often thwarts the radical newness of artistic enterprise in an effort to historicise and make what is radically new familiar and comfortable by placing art into a smooth, evolutionary continuum where vanguard art is made to seem to have evolved out of the past, thereby mitigating its newness by homogenising differences into a false perception of sameness. In this sense then, this study strives to be an addition to the developing field of cultural analysis through its multiform and interdisciplinary aesthetic approach to cultural immersive phenomena, located in a medley of media with a view towards exposing previously unarticulated immersive cultural promulgations and by re-emphasising immersive cultural promulgations that have atrophied.

AI: Theoretical and Linguistic Orientation Based in Extended Awareness

Perception is a nascent logos...
-Maurice Merleau-Ponty, *The Primacy of Perception*

It cannot be stressed too often that absolute value only arises from artistic, subconscious or superconscious creation.
-Kasimir Malevich, *The Non-Objective World*

The interpretation of emotional feelings and emotional understanding is the problem of art. Art anticipates psychic evolution and divines its future forms.
-Ouspensky, P. D., *Tertium Organum*

Virtual Reality (VR) is the name for the current suite of electronic applications that psychologically immerses one in a computer-generated polygonal Virtual Environment (VE) where a privileged stationary focal point is not generally circumscribed. (Burdea & Coiffet) As such it offers for reflection a rich variety of peripheral, psychological, philosophical, social and artistic issues for investigation and extrapolation.

The actual term *Virtual Reality* has been attributed to Jaron Lanier, a term he first used to describe the emergence of immersive, interactive simulations. By definition then, Virtual Reality entails a substantive mingling of movement and presentation in a dynamic continuum, hence it is an artistic devise rather different from the separation effected by the frame/proscenium's relationship to art, with which we are fully accustomed.

To date, the emergence of VR as a medium has occurred over the last thirty years or so. Ivan Sutherland, as early as 1965, set forth an explicit program for putting *humans in the centre of the information loop* in a speech to the members of the International Federation of Information Processing. (Rheingold, p. 38) Also in 1965, Sutherland described what he called *The Ultimate Display,* a display which included interactive graphics and force-feedback devices, as well as audio, smell and taste (Sutherland); and in 1966 Sutherland and his colleagues began research on a prototype of VR which was co-sponsored by the Advanced Research Projects Agency (ARPA) and the Office of Naval Research. In 1968 Sutherland published a paper which combined head-mounted displays and television-based technologies with computers which were programmed to track the viewer and updated a landscape graphic-display to correctly reflect new viewing positions. In 1968 Sutherland built a see-through helmet at the MIT Draper Lab in Cambridge using two displays which were visible from a pair of half-silvered mirrors, which provided the viewer with stereoscopic computer-graphic images overlaid onto the real world. In 1970 Sutherland moved to the University of Utah where he worked on vector-generated computer graphics and see-through technology. In his lab was Jim Clark, originator of Silicon Graphics, the company most associated with creating the puissant computers used in VR. Sutherland's work was subsequently extended into what we now think of as VR by Scott Foster, Scott Fisher,

Karl Sims, Thomas Furness, Jaron Lanier, Elizabeth Wenzel, Warren Robinett, Jim Clark, Don Vickers, Henry Fuchs, Fred Brooks, Dave Nagel, Alan Kay, John Walker, Eric Gullichsen, Susan Brennan, William and Meredith Bricken, Ann Marion, Michael Naimark, Brenda Laurel, and Steve Gans, among others. (Stone)

Ivan Sutherland's primitive 1970 HMD

The oxymoronic terminology of *Virtual Reality* is not without controversy. Zielinski thinks it now is recalcitrant "marketing jargon" (Hoekendijk, p. 7) while Michael Heim, though discontent with the term, believes it "sums up a century of technological innovation". (Heim, 1993, p. 124) MIT and NASA shun the term, preferring *Virtual Environment* (VE) and the VR Labs at the Universities of North Carolina and Washington use the term *virtual worlds.* It is for this reason of ambiguous non-conformity that I prefer to put forth my own phrase *synthetic-immersive-creation* in relationship to what has been habitually called Virtual Reality (especially for digitally mediated art which makes use of immersive synthetic spheres) as that term bypasses the question of verisimilitude in favour of a dialectical grasp of the interaction between immersion, synthesis, and creativity. Indeed Hegel's post-Kantian theory of dialectics in which opposing ideas are synthesised (Hegel, 1949) is a prominent feature of this understanding of VR immersion, an understanding which conceives of VR in terms closer to how Mark Pesce does; as *sensual computing*. (Pesce, 1994)

Synthetic-immersive-creations proceed from the orchestrated digitalisation of human sensory attributes and unifies and raises these particulars up to the level of a general *world*; hence it unites and interlocks previous sensual multiplicity into a synthesised creative totality. Such a process is consistent with the human ego, that aspect of the human biocomputer which Lilly identified as the "self-metaprogram" (Lilly, 1974, p. 139), an aspect which is particular and partial within its conscious totality. (Metzinger, p. 16)

Furthermore, what is *reality* (to my mind a particularly hackneyed, treacherous and marshy word)? (Hofmann, H.) Science has demonstrated that the term *reality* indicates no more than a perceived totality of indeterminacy (Heisenberg) which is both the ground of all things and the very process of thought-perception

itself. (Churchland, 1988) In this respect, the concept of *reality* already deserves the adjective *mythological*. (Barthes, 1993) In Roland Barthes's words, "myth is speech justified in excess". (Barthes, 1993, p. 130) But more than mythological, with its relatively singular connotation, reality unconditionally merits the adjective *polysemic*, a word which stems from the Greek phrase meaning *many signs*. Polysemic/mythological awareness of reality acknowledges the hypothetically infinite range of meanings in reality which result when determinacy is replaced by indeterminacy, an awareness which contradicts the verisimilitude thought to correspond to the assumed exactitude of naive naturalism. Indeed for Plato (427-348 BC) only ideals are real. (Barasch)

Maren Köpp in the 1996 Revue Virtuelle pamphlet publication entitled *Virtuality and Subjectivity s*ums up the inquiry admirably for me in polysemic/mythological terms when he states that "reality itself emerges from an assembling of subjectivities in permanent evolution". (Knowbotic Research KR+cF, Köpp & Zielinski, p.1) However, for Michael Heim, reality is grounded in our ultimately finite constraint: death. (Heim, 1993)

But for most of the world *reality* is the perspective of the *logocentric apparatus* (Lefèbvre, p. 407) associated with *frontality* which we have inherited from the Renaissance, even though Samuel Edgerton makes clear that today we are the exhausted descendants of the engendering of linear perspective (the so-called rules that determine the relative size of objects on a flat plane) and that "the magic of perspective illusion is gone". (Edgerton, p. 4) Still, what makes a world convincingly real to most people is that it adheres to the horizon-based, peremptory, three-dimensional space of our accustomed actions; what is basically Euclid's (AD 3rd century) superannuated idea of space. (Martin)
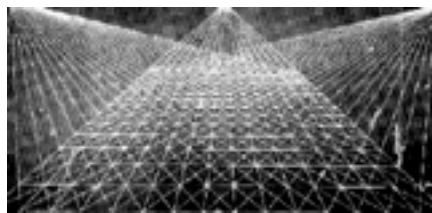
However, recently this basic Euclidean conception of space has been expanded to include the formation of *many-dimensional space*. Here the Euclidean concept of space is modified by enlarging the number of vectors which may be constructed within it from three to some much larger number (which is designated as *n*). Mathematicians designate this space as *n-dimensional Euclidean space*. Such a space implies the existence of a higher-dimensional geometry that mimics Euclidean geometry. (Clarke, p. 231) There also, however, is another proposed spatial reality called *curved-space*, a span in which *curved space/time* exists. Curved-space is "approximately Euclidean over very small regions, but over large regions all geometrical properties (...) break down". (Clarke, p. 232) Curvature is combined with Euclidean geometry with the increase of dimensions plotted. There are also a number of other generalised spaces which drop the Euclidean geometry

completely, most notably the *topological space model* and *fuzzy space*; where there exists only a concept of nearness. (Zadeh) I won't go into detail here about each of these spatial concepts of reality, but merely mention them so as to indicate the problematic assumption that Euclidean geometrical space is the only "real" one.

Also we must remember that throughout time there have been *consensual realities* that have proven to be nothing but vast daydreams; such as the conviction that the earth was at the centre of the universe. This geocentric view of reality was replaced by the heliocentric model which, in turn, was replaced with that of an a-centric panorama. It was only as of 1615 that Galileo (1564-1642), following the hypothesis of Nicolas Copernicus (1473-1543), was denounced by the Holy Tribunal's Inquisition for holding as true the proposition that the earth moves circuitously about the sun. (Drake) His propositions concerning the relative stability of the sun, and the motion of the earth, were condemned by the Theological Qualifiers as follows: "The proposition that the sun is in the centre of the world and immovable from its place is absurd, philosophically false, and formally heretical; because it is expressly contrary to Holy Scriptures. The proposition that the earth is not the centre of the universe, nor immovable, but that it moves, with a diurnal action, is also absurd, philosophically false, and, theologically considered, at least erroneous in faith." (Catholic Encyclopedia)

Ideas of reality shifted again when Albert Einstein (1879-1955) and then Max Planck (1858-1947) understood light as consisting of waves as well as particles. In his general theory of relativity Einstein astonished the world when he said that space and time are not disconnected entities, but are smoothly connected and part of a larger immersive whole which he called *the space/time continuum*. This conception of the macrocosm immerses everything in a continuum, notwithstanding the apparent perceptible detachment of things and living beings. Counterintuitively, according to Einstein/Planck, everything is immersed within a seamless continuation of everything else, all blending into each other, even as things still contain their own particular qualities inside of the voluminous whole. Thus the mentality of contradiction was directly introduced into the West's previously ultra-rational Aristotelian view of reality, that theory-laden idealism which is called rationalism. Rationalist philosophy believes that knowledge is exclusively gained by the use of reason. (Damasio) As a result contradiction and paradox had been prohibited since Aristotelian times to make way for logical thinking in pursuit of the ideal of arriving at a rational mastering vision of the world, a proficiency proved through rational argument alone. In contrast to rationalist philosophy, much art of the 20th century, glancing at the post-Einsteinian indeterminate scientific model of the universe, has attempted to address this new *reality of contradiction*. Hence especially for the technological adaptation of art which utilises a double notion called *Virtual Reality*, fresh notions of realism, materialism and idealism need to be examined (realism and materialism traditionally stand in an opposing relationship to idealism).

Moreover certain ideas and representations of *reality* today may not be the representational ideas of reality in a following era. (Putnam) This assertion has been indirectly advanced by the American philosopher Paul Feyerabend in that Feyerabend holds that the superiority of the modern scientific method should not be assumed. Feyerabend argues that what will count as knowledge in the future may have paradigms we cannot yet know and that we should not attempt to forbid future intellectual enterprises by attempting to define one dominant paradigm of knowledge. (Stewart, p. 93) One may even take currently idealised (theory-bound) situations as the real (as perhaps they almost inevitably are if we don't question them) and idealise them into the real. (Boyce) The Austrian philosopher Karl Popper (1902-1994) makes this point by being critical of the empiricist view that holds that we can objectively observe the world. Empiricism, as upheld by the English philosopher John Locke (1632-1704), is the belief that all knowledge comes from experience of the human senses, and not through rational induction. Empiricism was advanced by the French philosopher Denis Diderot (1713-1784) by collapsing it into rationalism during the Enlightenment. In his critique of empiricism, Popper argued that all observation is from one point of view (from which we induce generalisations) and hence coloured by that point's pregiven theory-laden assumptions. Popper supports this assertion by extending the argument of the Scottish empiricist philosopher David Hume (1711-1776) when Hume himself criticised the inductive scientific method as logically flawed. Hume maintained that all induction is partial (we cannot observe the universe in all places at all times) and hence inductive conclusions are not justified, even though we make them continually.

This confusion between the real and the ideal was furthered by the French film theorist André Bazin's (1918-1958) 1946 essay "The Myth of Total Cinema" where he perceptively introduced into theory the concept of *cinematic idealism*. Bazin identified this ideal as an *ideal realism*, notions usually at odds with each other. (Bazin, A.) On reflection one sees that they are not at odds and are in fact intermingled concepts applicable to far more than the cinema. Having been left in isolation, these concepts took on overly simplistic assumptions which no longer function to my mind.

Furthermore one might immediately ask just how convincing does a fabricated, implied representation have to be before it is considered "real"? (Putnam) The short answer is that it depends on the suggestivabily (consciousness) of the immersant (McLellan) because the immersive feeling is expressed not only in the structure of a work but is correspondingly located within the psychological effect the work invites in the recipient. Indeed, this psychological effect will forge the principle parameters used to formulate this study's explanatory account in its development of an extensive theory of immersive consciousness within immersive culture.

Still the basic understanding of VR (from which this study proceeds) is that Virtual Reality is a computer-generated simulation of a *world* (Heim, 1998, pp. 89-90), a world (like the non-simulated one) which is both

immersive and interactive. A *world*, in Heim's terms, is "a total environment for human involvement". (Heim, 1998, p. 222)

Ultimately, for me though, realism (especially in terms of virtuality) is just a non-signifying point of view (Rotman, p. 19), a constructed chronicle for the artist to employ or disregard at will. This stance conforms to the American philosopher Richard Rorty's argument that because the mind is constantly interpreting reality through different paradigms, the mind does not simply reflect the real world but rather inevitably distorts it. (Rorty)

In art, even a form of negation like *anti-art* (Richter) functions finally as a way of opening up our capacity for plurality (Eco, 1989) and expands what has heretofore been accepted as real. (Koyre) Hence the only consistent non-expansive definition of the term *reality* that works for me is the *irreversibility of time*. And it is here that I find the fullest agreement with Michael Heim's definition of reality, as it is true that death clearly conditions our sense of boundaries. Our prospects for an everlasting life are not so drastically different than they have ever been. This is not to say that we don't attempt imaginatively to supplant our fate and, indeed, it is just such lavish, bodiless desires for being as depicted in art which I will use as an intermittent theme in this study.

Also, however, art's sense of reality is intrinsically moulded by the psychology behind the technology involved in its production. (Malraux) But here we might consider Humphry Osmond and Bernard Aaronson's broad definition of technology as "the entire set of devices, whether mechanical, chemical, or linguistic, by which adaptations of individuals to their environments are enhanced." (Osmond & Aaronson, p. 1) Since VR's virtual immersion depends somewhat on the sanguine vividness of its display, its technical/psychological factors are closely related to the devices that lead to deferential notions of *realism in terms of representational convention.* (Larijani) Indeed a commonly expressed critique of VR worlds is that VEs often only plunge the immersant back into a "realistic" Renaissance-type perspectivism, and therefore, from the outlook of 20th century abstractionism, should be considered regressive. (Manovich, 1996) Certainly those who look only for realistic depiction in VEs (and there are many inasmuch as VR emerged from the electronic military-entertainment complex (Levidow & Robins)) overlook abstractionist art historical dimensions in favour of antiquated notions of essential copy, superficial verisimilitude, and recognisable order. (Baudrillard, 1983a) More the pity, as rather than with recognitions, one is apt to be more delighted and rewarded in VEs with an *unrealistic* sense of weightlessness, *unrealistic* sensations of vastness, feelings of transcendence of the mortal body and the gravity of earth, and by the *unrealistic* exciting ability to pass through walls, objects and bodies as if one were a sheer phantom. Yet certainly virtual immersion is the cognitive conviction (consciousness) that one is located inside the atmospheric spatial framework of a display, and this sense of

recognition/conviction is some sort of inner *haptic realism* (haptics is the generation of dynamic feedback information). (Carterette & Friedman)

Consequently issues of haptic realism and regressive realistic representation are more pertinent to the understanding of VR than uncritical notions of reality. I expect expanded notions of reality may however emerge out of a VR-art junction, as an expanding of the boundaries of reality (Koyre) have already inscribed 20th century art profoundly, as will be demonstrated. But even if the technical drive for "realistic" high-definition reproduction perseveres in the mainstream, it will be a long time (if ever) before we could awake inside a VE and be unable to tell that it was a faux actuality. At present there is the misfortune of sacrificing high-rendering *trompe l'oeil* detail for the speed needed to allow immersants to move their viewpoint throughout a world *in real time* (within one/tenth of a second; or that which is perceived as simultaneity). However for the sake of convention and understandability I will retain the common use of the phrase *Virtual Reality* if it means any cultural media where one is completely immersed in the data, where one feels transported to another sphere (and not just looking at one). (Bletter) Nevertheless, for the sake of discussion, the reader will, I hope, consider my somewhat more precise and formal redefinition of VR as synthetic-immersive-creation at encounters with the phrase VR and with the experiences this phrase refers to, for even the word *virtual* is defined as that which is being so in effect, although not in actual fact. (Lévy)

But regardless of what term is employed, what is evident to me is that with synthetic-immersive-creation we are embarking on a new precursoral phase of artistic awareness in which *total immersive involvement* is the primary characteristic. Everything examined here: the prehistoric painted cave, ornamentation, the history of the garden grotto, ancient fresco murals, embellished copulas and crypts, ocular panoramas, baroque niches, vanguard artistic experiments, spacious IMAX screens, and VEs *all share the connected sense of striving to attain the para-optical ideal of total-immersive presence by filling and appeasing peripheral vision and accommodating its fullest capacity in terms of spatial summation.*

Total-immersive presence (or what is called by some *telepresence*) in a VE is dependent on the versatility of that system's interface in allowing the immersant to create (through the suspension of disbelief) their own *mental sense of self-recognised placement within the faux orb*. (Barfield & Weghorst) Scott Fisher, founder of the Virtual Environment Workstation Project at NASA's Ames Research Centre, defines this occurrence as "the sense of being physically present in a remote or synthesised environment"; a sense which is "preconditioned" by "sensory immersion". (Fisher, p. 4) Jonathan Steuer, author of the essay "Defining Virtual Reality: Dimensions Determining Telepresence", defines telepresence thus: "telepresence is the extent to which one feels present in a mediated environment (...) this (mediated environment) can be either a temporally or spatially distant real environment (...) or an animated but non-existent virtual world synthesised by computer". (Steuer, p. 76) This understanding of presence in the virtual insists upon *an operative feeling*;

moreover, an operative feeling towards something that is not, most likely, fully visible. (Robinett, 1992) However *instrumental in effectuating total-immersion in a synthetic-immersive-creation is a large field-of-view* (FOV), interactivity, fast update-rate, stereoscopic image complexity and three-dimensional spatial audio input. (Pimentel & Teixeira, p. 105) There is also the far more complex task of analysing perceptual psychology and cognitive factors in understanding the quality of immersion experienced; hence a holistic technique is unavoidable inasmuch as the experience of immersion is *more than just the mere sum of its parts*. As such, it can be plausibly argued that the basis for immersive consciousness; total-immersion where the sense of self and environment are experienced as co-present and concurrent in an ambiguous experience of merger, can be described in terms of the previously mentioned fuzzy set theory. (Zadeh) This total-immersive "degenerate sense of space" (Clarke, p. 234) is fuzzy because there are various criteria for total-immersion which can be satisfied to varying degrees. *Total-immersion is a gradational value.*

Generally speaking however, immersive adjustment to a virtual space involves the paradoxical combination of imagination within self-imposed restrictions. More specifically, it is consequential to appreciate that there are many differences in how people feel and respond to this inherent paradox within an immersive virtual space. For example in their research paper "Cognitive Factors Associated with Immersion in Virtual Environments"*,* Dr. Joseph Psotka and Sharon Davison, in association with the U. S. Army Research Institute and the Catholic University, report that immersion is affected greatly by how claustrophobic the immersed subject is. The more claustrophobic the subject of immersion is, the less often they felt objects were still there when they turned their back on them and the more nauseous they felt. (Psotka & Davison) On the other hand a person's *feeling of belonging* helps ensure an immersive experience of quality and fend off simulator sickness (ranging in degree from feelings of unpleasantness, disorientation, and headaches to nausea and vomiting) generally do to *cue conflict* caused when the body tries to interpret conflicting clues being received by the senses. (Latham) This unpleasantness is referred to as *alternate world disorder,* a term which covers the complete range of displeasures, from mild headaches and disorientation to gnarly nausea.

Verily, immersion in a VE for many people is accompanied by mild alternate world disorder similar to motion sickness. 60 to 80% of subjects report such symptoms during and after immersion. (Ramsey) However research has determined that alternate world disorder is hardly ever felt with a field-of-view of less than 60 degrees (Howlett) and this is understandable when we consider other reports that find that immersion is only experienced when the FOV is greater than 60°. The results of the study "Effects of Field of View on Judgments of Self-Location" conducted by Dr. Psotka and Sonya Lewis under the auspices of the Research and Advanced Concepts Office at the U.S. Army Research Institute for the Behavioral and Social Sciences, indicate that self-location in a VE is substantially affected by the display's FOV. (Psotka & Lewis) Tested narrow fields of view, often about half the *normal FOV of 180 degrees*, led to distortions of the perceived space. (Psotka, Davison & Lewis) Multiple studies have shown that all subjects reported some level of initial unpleasantness on entering a wide FOV VE as subjects experienced elevated heart-rates in all extensive FOV VEs tested, *before, during and after* immersion. The surprising *before* aspect is particularly reminiscent of what Giorgio de Chirico (1888-1978) said concerning ominous feelings of something about to happen as being a characteristic of what he called *metaphysical art*. (de Chirico) At any rate, adrenaline levels were elevated in all subjects and salivary-cortisol levels were found to increase in response to spacious FOV immersions. Analysis of catacholamines and cortisol in urine revealed greater elevations in levels of adrenaline due to wide FOV immersion and heart-rates were found to be higher during and after such FOV immersions. Due to this research it is now accepted that high levels of circulating estrogen results in an enhanced susceptibility to alternate world disorder. Women in early stages of pregnancy who are carrying female babies are most susceptible to all manner of forms of alternate world disorder. (Ramsey)

In most cases, however, a full recovery of the normal state of bodily functions is achieved within 10 to 25 minutes after coming out of the immersion. Using a variety of questionnaires and interviews, subjects generally report a high level of delight independent of any adverse alternate world disorder effects experienced. (Ramsey)

Total-immersion seems to be facilitated by the ability to control attention and concentrate on the VE to the exclusion of the real world. (Barfield & Weghorst) When immersed in a VE the immersant receives stimuli from three sources concurrently: the virtual space created by computer-generated cues, physical body cues, and complex internal input from the conscious and unconscious mind. VE's spatial cues are determined by a computer which is capable of storing and manipulating groups of numbers represented in binary form. (Braun) It can perform mathematical operations on these numbers and it can send and receive these numbers to and from various peripheral devices such as disk-drives, head-mounted displays (HMDs), navigational interfaces and modems. People's psychological responses to the computer's output however are far more

complicated and indeterminate, as we have already seen. Given virtual immersion's operational three-fold dynamic and when we take into consideration the range of bodily and mental/emotional responses which are evoked, the ensuing assumption which I shall plunge into here is that the variable cognitive aspects and bodily responses engaged in effectuating total-immersion *inevitably modifies human consciousness,* at least temporarily.

an HMD

Immersed in a VE, the ontological distinctions between space and protoplasmic body commingle. Herein the immersant becomes an invisible algorithmic phantom extant by virtue of the electronic umbilical cord which transverses the dark frontier between the virtual and the vital. As total-immersion depends on the highest degree of consonance felt between the location of one's sense of unified conscious self (*egocenter*) (Newell) and space, it is my self-observation that the space of immersion involves not the mind alone, not the ganglion solely, but rather the solar plexus, the core of our dynamic unconsciousness and our sympathetic centre. This is relevant in that it has been shown that the essential precondition for understanding immersive VR is understanding the spatial representational systems that localise our *egocenter* within a virtual territory. (Franklin, Tversky & Coon) The location of one's egocenter in virtual space is of critical importance for immersion technology to work (Latham) and as such it forces us to reconsider the pre-ego state of the womb's buoyant darkness (commingling space and body) and the elemental pre-ego enchantment linked to suckling breast milk; what I consider the plexus, nexus and sexus of VR, in acknowledgement of Henry Miller's (1891-1980) work in this field of sensuality. Deep sensuality is relevant to the realm of VR as VR's basic first step is the disconnection of rationalised vision (Ivins, 1975) from the world. VR's HMDs first cut vision off from the customary biosphere. In a way this cutting off of vision in the creation of a supplementary virtual space reminds us of the Greek space of the *temenos:* the *place cut off from the common land* which is dedicated to the sacrosanct realm of the Gods and/or Goddesses. Indeed total-immersion in a synthetic-immersive-creation sometimes feels like one is floating in some sort of sacrosanct, womb-like, oceanic unity. By the phrase *oceanic unity* I am referring to Adrian Stokes's (1902-1972) use of this term in his own voluminous art

writings which were influenced by psychoanalytical criticism. It is characteristic, Stokes argues, for both artist and audience to have emotional deficits which can only be gratified by a replacement for the maternal breast (Stokes), which once gave generalised feelings of satisfaction, security, and comfort to the relatively unindividualised oceanic infant (Spitz) in the visual form of an exceeding of the FOV. Though not mentally directed, but surely directed, impelled from the dark primal unconscious ego-centre in the solar plexus, the new-born infant seeks out a nexus with the breast by opening a semi-blind mouth and groping through non-Euclidean space for the extenuated nipple. My hypothesis is that the function and affect of immersive art is compensatory in similar ways.

fragment from a gothic carving

In that the mature VE immersant positions her or his ego-centre within an emotional (Massumi equates emotion with subjective "qualified intensity" (Massumi, 1995, p. 87)) hypothetical (non-physical) vibratory space, VE immersion touches on two of the great motivational forces in human life: sex and metaphysics. And this is as it should be when discussing the aesthetic dimensions of synthetic-immersive-creation and art and how they modify human consciousness, for according to Sigmund Freud, metaphysical symbols and sexuality have a specifically close relationship. (Freud, 1952, p. 149) Hence we must keep in mind the close relationship between the metaphysical, the immersive, and the coital, for as Claus Oldenburg says, "the erotic (or the sexual) is the root of art, and its first impulse". (Oldenburg & Williams, p. 15)

Indeed when we realise that immersive space is not solely technologically visible and sensorial but emotional, sensual, and psychological (given our various levels of excitement in it) the relationship which it holds to our imagination deepens considerably. Verily it is inherently psychologically emotional in that total-immersion is a psychologically perceived unity between the ego-self and the womb-like proprioceptive VE. (Psotka & Davison, 1995) An immersant, once positioned inside of the necessary sensory input epidermis, appears to be, and is indeed, lost to the non-digital world and hence enters into a hypothetical state of reduced and regressive

consciousness. This disconnection into darkness dissolves mature consciousness and plunges the immersant down into her or his intricate psyche which contains premature subliminal emotional impressions. In this desirous darkness an immersant may enter into concourse with profound feelings of connectedness to an abstract milky ocean of oneness. According to Greenberg and Mitchell, a new-born child's mental life is full of such emotions concerning the mother's milk and her insides and that the child's first desire is to merge with all of the riches imagined in the mother's breasts and womb, including food, fecundity, and the father's penis. (Greenberg & Mitchell, pp. 124-125) From this desirous axis of the solar plexus (roughly the site of the detached umbilical cord) the new-born is drawn emotionally towards the breasts to re-establish the lost anterior oneness of the womb, almost like an electro-magnetic force flows in a circuit between the nerve-centre of the mother's nipples and the sucking mouth. Yet there is also a conspicuously widening gap between the mouth (the enlarging ego-centre) and the breasts and these two ego-hubs toggle back and forth as in an oscillating quiver. (Prose)

By contrast to these psychological operations, my general technical understanding of synthetic-immersive-creation is that it refers to an immersive and interactive experience generated by computer where a stored numeric data-field is displayed as apparent spaces and objects (generally) within the system's global illusionistic co-ordinates via polygons. (Ellis) The *polygon* is a surface made up of three vertices, like a triangle; the greater the complexity of the model, the higher the polygon count. Small computers can render models made up of only a few polygons many times per second, whereas faster ones can render millions of polygons per second. (For example the computer at the Human Interface Technology Lab at the University of Washington (HIT Lab) is a Silicon Graphics 320 VGX workstation which is rated at 1,000,000 polygons per second.)

Such systems of technology of course focus attention on certain kinds of relationships and particular ways of conceptualising those relationships. (Osmond & Aaronson) Digital/electronic VR technology atomises and abstractly schematises the analogic quality of experience into distinct numeric bits of information that are then transmitted serially into a total unifying system of pixel/polygonal presentations. "Total" because everything in it is based on numbers and on the logical systematic relationship between numbers. Hence this schema is always already *ipso facto* a coherent and highly consistent entity (as strings of computer code) (Braun), however incomplete from other points of view. (Manovich, 1996) Regardless, stored numeric information becomes roused to the level of illusion by moving numbers in and out of storage and effecting complicated calculations upon them. (Pimentel & Texeira, p. 11)

A virtual environment is immersive if the simulation is deemed *total* (or complete enough) for immersants to get the impression that they have been altogether transported into that proposed space. As Howard Rheingold recounts in his book *Virtual Reality*, on donning his first head-mounted display (HMD) in 1988 at

NASA/Ames Research Centre in Mountain View, California, "cyberspace was everywhere I looked, above me, below me, behind me. I wasn't just watching it. I was *in* it." (Rheingold, p. 133) Rather he should have said that it was *as if* he was in it. In VR, immersive virtuality is the reading of spatial indicators (or lack thereof) by the immersant who considers them *as if* they indicated dimensions of actual space. Commonly one sees/feels this *as if* transparency by wearing an HMD which permits the immersant to perceive an encircling optic simulation, painted electronically, that surrounds vision in apparent three-dimensions. In using the term simulation, which we will continue to use in its broad sense, it is worth noting here that its Latin root word *simile* means *as if*. Hence when we use the word we are speaking of something which is setting up an analogy and creating an equivalent trope. What is fascinating is that this root Latin word *simile* is derived from the older Indo-Germanic word *semilis* which means unity or the forming of a unity. And indeed a unity between the immersant and the *as if* scene is formed in total-immersion, in that as one moves one's head to look around the simulated scene it is instantaneously repainted in such a way that an illusion is created of the scene standing still while the immersant seems to be moving about. Those are the basic technological facts as related to vision. There is more to it than that, however, when one ponders these facts psychologically.

another HMD

According to Zielinski, the virtual "fulfils the function of consciousness" (Hoekendijk, p. 8), but to do so convincingly requires that body movements (such as turning of the head) elicit the system to reply in a way akin to our sensations in the non-artificial world. Total-immersive VR is a reificational technology then which allows the user to implausibly move through the computer screen into a three-dimensional artificial world (Negrotti) in that *reification* means to treat abstractions as though they were real. However, reified abstractions can be enriching affairs, and the move from experience to concept to theory is often necessary to understand their essential characteristics, which in VR's case means that its space is - if not constrained and limited by its programmed attributes - conceived of as a continuous and homogenous 360° vacuum. (Knuth)

In unconstrained immersive holonogic cognitive-vision there are no oblique vanishing-points, hence immersive holonogic cognitive-vision is synthetic ambient-macroperceptual because the peripheral expression of space it reveals is a synthetic occurrence which is not reducible to the natural limitations of the eyes. (Robinett, 1991) This is evident when we think of visual summation in terms of abstract space, in that abstract space is ordinarily conceived of as a continuous and homogenous void. And this is as it should be, for as Samuel Edgerton makes clear "linear perspective has been part and parcel of psyche and civilisation for too many centuries". (Edgerton, p. 4)
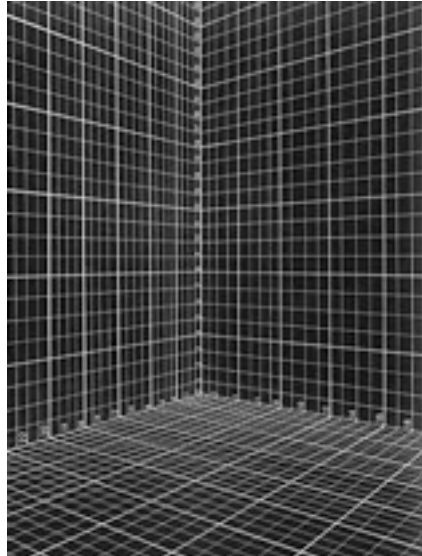
linear perspective schematic drawing

As the eyes navigate artistically-mediated immersive space, the path of their cross-blended drift is irregular and intermittent as nothing may be entirely taken in at a glance. In the sense that immersive holonogic cognitive-vision is the sum of a collection of spatial inferences, artistically-mediated immersive space offers the immersant an experiential range comparable to random access memory, which may or must undergo continual reconfigurations. While artistically-mediated immersion looks through the computer-generated electronic material component of the computer world into the synthetic modelled orb and experiences this environment as if from within the inside, interactivity exploits the formal materiality of the medium. Interactivity in synthetic-immersive applications is not solely the capability of navigating the VE, but is the capacity of the user to perform alterations in that environment. (Larijani) Moving the sensors and enjoying freedom of movement do not in themselves ensure an interactive alliance between a user and an environment however, even if the user derives sufficient satisfaction from the exploration of the surrounding domain which is intended to "engulf". (Heim, 1993, p. 126). Full interactivity entails unrestricted movement at will within the Virtual Environment, but also, most importantly, when actions taken within the VE create momentarily enduring consequences. (Ryan)

According to Jonathan Steuer, interactivity transparency requires dynamic simulations which utilise the tropes of *speed* (rate at which input can be assimilated), *range* (the number of possibilities for action at any given time), and *mapping* (the ability of a system to map its changes in the mediated environment. (Steuer, p. 86) The most important criterion is the speed of the update rate at which computers render the VE, the speed with which the computer can calculate and render each new views and positions. Seven frames per second is an important threshold, below which the intervention of conscious awareness is often inevitable. However, the performance of speed, I have noticed, works in both directions; as immersants generally adjust themselves down to a slower pace in their bodily motion than in the outside world, as swift movements can often create a feeling of queasiness and vertiginous unease.

In Virtual Environments immersion and interactivity do not usually operate in contention even though immersion may propose an intermittent intimidation to interactivity, but the converse does not hold true. The more interactive a Virtual Environment, the more ontologically immersive the experience. (Ryan) Thus there is nothing intrinsically incompatible between immersion and interactivity. Just as in real life the greater our autocracy, the more we feel a nexus with our milieu and hence our ego-centred ontology. As we know, ontology is a branch of philosophy concerned with what positively exists (actuality) as opposed to what appears to exist but does not (virtuality). As such ontology is the study of *being*, the most general concept imaginable. Everything that the world *is* may be said to fall under this most totalising of concepts. (Sartre, 1968) In modern ontology there was a significant shift in the way we understand *being* and pursue ontology through the fragmentation of previously integrated being (Heidegger, 1962) and more recent post-modern theories of reintegration of being through digital means have arisen. (Negroponte)

Immersive ontology, where the immersant is integrated within the transparency of space and thus selfhood is experienced as abstract capacity rather than existential identity, though not by any means an exclusive dominion of algorithmic VR (as my dissertation will show) is the leitmotif of VR, in my estimation. And as such *total-immersion epitomises the current ideal conception of being in cyberspace*. By *cyberspace* I refer not only to VE space but to the globally networked computer-generated informational realm (Benedikt) of which VE space is but a part; the sum-total of data-space (Walser) which constructs the entire shared matrix of all the world's networked computers. (Gibson, 1984) In total-cyberspace, onto which every connected computer is an entrance, geographical distance and audience appeal are irrelevant. (Benedikt) This total-informational space is the sum-total of digitised symbolic information, potentially the bulk of which constitutes the human intellectual/artistic enterprise; an enterprise which re-constructs what Robert Abbott calls "the world as information". (Abbott)

Salient here is that the function of the symbol is to (supposedly) intellectually transposition people momentarily to other realms of reality. Indeed one prime aspect of any ideology is its ability to relocate consciousness into an imagined world which allows a new means of constructing identity. (Larrain) The American philosopher Henry David Aiken distinguished one of the primary meanings of the word *ideology* (a word coined by the French empirical philosopher Destutt de Tracy (1754-1836)) as being an "ideal or abstract speculation" concerning "visionary theorising". (Aiken, p. 13) Massumi, however, defines it also as a "structure of belief" and in a cultural-theoretical way as "an interpellative subject positioning". (Massumi, 1995, p. 108) Thus we must always remember that the virtual is not ontologically "real", but rather a stimulating epistemological synthesis which involves ideal visionary theorising. From a philosophical point of view, such an epistemological synthesis is the operation by which *isolated elements are built up into a united whole of an ideal system* so that the outcome is something more than an unalloyed totality of disconnected factors. (Godin) This visionary formulation is familiar with respect to the fantastical aspects projected into the qualities of an idealised situation (as we know from many kinds of antediluvian religious metaphysics and their artistic transcendental expressions) but it is certainly dissimilar through the connectivity of the Internet and with synthetic-immersive-creation's technical ability to construct shared electronic immersive environments. Hence my working hypothesis on beginning this research into immersion, was that there have always been rapturous ideas of virtual immersion and disembodied experiences (Levin, M. D., 1985) encouraged by enclosing situations, where imaginative approaches have been aesthetically formulated to allow entry into anomalous ideal worlds (unchoked by quotidian concerns) accessible only through the symbolic imagination, and in some cases these models have been given ontological privilege. This dissertation set out to see how contemporary concepts and ideologies of virtual immersion relate to such pre-existing systems of thought, (as expressed in art) as they have expanded out of the human imagination and manifested themselves in the development and understanding of technological goals. (Roszak) Of prime concern is the ontological question of *subject/object* awareness and it is here that a dynamic reflection upon immersive implications must begin and end.

Recent contemporary thought has been concerned with the deliberation on the notion of the subject in order to question its traditionally privileged epistemological status. Epistemology is the study of what we can possibly know, the branch of philosophy concerned with how an observer may know, not with what is known thereby. Epistemology seeks to understand the origin, processes and limitations of observation including such operations as drawing distinctions, establishing relations, creating constructs and all the consequences for knowledge which result from communications between an observer and the observed and within a community of observers who may observe each other. (The Internet Encyclopedia of Philosophy) As such, it is highly relevant to the building of an immersive theory of art, as the epistemology of a theory considers the observer and the observed as parts of the same system and theory as an emergent property of the interaction process.

Relevant here is that under recent epistemological scrutiny is what Jacques Derrida has described as *logocentrism:* the once held distinctions between subjectivity and objectivity. (Carroll, 1987) Today these logocentric distinctions are breaking down under the pressure of immersive technologies. By identifying an individual's hyper-real presence (*hyper* means extended (Heim, 1998, p. 214)) in a vaporously technologically stored set of bits (Mitchell, W. J.), the modernist existential concept of the logocentric individual (Sartre, 1968) has been supplanted by the fabulated electronically produced simulacrum-persona. This quality of phantasmagorical replacement has formulated a new understanding of phallocratic existence which Gilles Deleuze and Félix Guattari have called *schizoid.* According to them, *being* is now inseparable from a technologically hallucinogenic/schizoid culture. (Deleuze & Guattari, 1987) With telematic connectivity (Ascott, 1994) this understanding of consciousness has become central to post-industrial hallucinogenic/schizoid society and now supplies this society with a rich metaphorical tool with which to understand itself in that the domain of the metaphor is constituted by an "unstable distinction between the literal and the figurative". (Culler, p. 207) In our current wired age, given our heightened condition of maximising data-flow, once fixed logocentric identities based on Euclidean spatial distinctions (McGinn, p. 229) are being transposed by malleable computational immersive configurations of self-awareness (Pylyshyn, 1988, pp. 210-211) as the borders of the conventional logocentric object/subject relationship computationally bleed (Kelly) within electronic immersive consciousness. Hence electronic immersion (with its insinuated inside-omni-everywhereness insight (Davies, 1997)) is becoming *the* pertinent concept for the recognition of being in hallucinogenic/schizoid culture. Thus within this dissertation I have found and accumulated aesthetic examples of non-logocentric immersive consciousness as detected within the histories of art and philosophy, so as to explore a set of deeper questions surrounding today's hallucinogenic/schizoid culture. In Section C I have synthesised these non-logocentric examples into an interconnected theoretical pattern by articulating their underlying principles of immersive significance. Such an account of immersive consciousness entailed more than mapping the characteristics of the history of spatial configurations, or the construction of an elaborate genealogical tree however, as immersive consciousness - as related to art - presupposes the acceptance of component metaphysical non-logocentric root aspirations. Though we can never fully explicate methods to guarantee discernment and attitudes of critical receptivity, the intent of my research is to set out to *define the unifying principles of immersion and trace these principles both backwards and forth* through these non-logocentric root aspirations. The intent is also to examine the diversity of immersive non-logocentric ideals in relationship to the various styles periodically expressing them which have been employed by artists sporadically, including, of course, the technologically acicular production of artistic synthetic-immersive-creation today.

Thus it is the principle of non-logocentric immersion as applied to culture which interests me, as I find electronically fabricated worlds only superficially connected to technological means and more properly concerned with *ideals of self-transcendence*. (Boller) To show this I will be exploring the insinuated claims to

attention that VR makes today, by following those claims both forward into a projected future and backward into a complex unclear past. This will be done without hardening the resultant explanations into replacements for the effort to understand the examined relevant data. Such an approach should nevertheless lead us to reach thoughtful conclusions via critical methodology produced through the use of theoretical and historical interpretations which may challenge prior understandings even if we shall sometimes be forced to engage in the tentative weighing of alternative hypotheses without always reaching circumscribed conclusions.

Moreover this entire process takes place in an intellectual climate in which the very scope of art has itself been radically altered by becoming conceptually cross-disciplinary. So although I am constructing a dynamic paternity/maternity for synthetic-immersive-creation by connecting privileged immersive components of its simulacra technology into association with the histories of art and philosophy, it is not in an effort to legitimatise and thereby authenticate the uniqueness or the radicality of VR's technical achievements by placing it in any narrow biased category. This seems to be in agreement with Sigmund Freud, as he too thought that the boundaries which make up the various territories of art historical knowledge needed to be transcended by their relation to the depth of mythic representation. (Freud, 1958)

Such an emergent reconception of art within which phenomenological problems of consciousness are forgrounded (a process which Clarke cites as "the exploration of mind from within" (Clarke, p. 233)) go far in attempting to develop immersive concepts owing to art's rhetorical manipulation of analogous spatial tropes, such as the prevalent use of spatial metaphors. When one takes an interpretative metaphorical view of art broader than the typical, somewhat fatuous, materialist/reductive explanations one soon detects that the concept of art itself is an *open concept*. The concept of art itself is *pantheoristic*. But in my use of the term (based on my activities as an artist) I understand art to be fundamentally *an extravagant activity expressing in a symbolic language the desire for joy*. For me, philosophy is a method of understanding and technology a method of doing art. I should establish that the pantheoristic definition of art which I am upholding here, and which I find requires reiteration as artists move increasingly from organic materials to the use of electronic and synthetic ones, is basically that supplied by Susanne Langer in her book *Feeling and Form* where she determines that "art is the creation of forms symbolic of human feeling". (Langer, 1953, p. 40) Furthermore, in answering the question of how art feels, Ms. Langer proposed that the symbolic space created in painting was not real but *virtual*. According to Michael Fried this ideal of virtual felt space seems to have been a motivational source of energy for the painter Gustave Courbet (1819-1877), as Fried says that Courbet repeatedly attempted "to transpose himself bodily into the painting" and that Courbet imagined himself "entering the picture physically and moving around in it." (Fried, p. 4)

Gustave Courbet, *The Origin of the World*

Also supporting my own definition of art is Jane Harrison's point that art is sublimated sacred/sexual ecstatic ritual. (Harrison, p. 123) By extension, art, by my broad definition, creates a sublimated image of the sacred/sexual world in which a system of functional signs play a less important role than the *embodiment of joyful feeling*. In this sense my definition of art follows both Clarke's definition (following ideas presented in Alexander's book *Space, Time, Deity* from 1920) of our mental space as being "enjoyed space" (as opposed to supposedly objective space, which in his terms is "contemplated space" (Clarke, p. 234)) and the general philosophy of utilitarianism as developed by Jeremy Bentham (and modified by the philosopher John Stuart Mill (1806-1873) (Mill, 1867)) which was principled on the judgement of actions according to the degree of the amount of pleasure they produced. (Stewart, p. 81) However the necessary inexactness of emotional sacred/sexual enjoyed states requires creations which *suggest* more than they directly say. Creations which call forth this suggestiveness of the complexity and instability of human feelings of enjoyment is what Ms. Langer calls a *symbol* or "any devise whereby we are enabled to make an abstraction". (Langer, 1953, p. 11) The artist's work then, which falls well outside of any considerations of technique, electronic or otherwise, is the creation of *unfamiliar emotive abstractions of enjoyment (abstractions of enjoyable space)*. The significant cognisant value of abstract artistic symbols is that they may confer flickering ideas which exceed the interpretant's former understandings with unaccustomed emotive possibilities and scintillating expressive values which may be characteristic of even deeper inner pathos and jubilant non-logocentric unfamiliarities. And this is as it should be, for the technique of art is to make our understanding of both perception (Rock, 1984) and history (de Landa, 1997) at first unfamiliar, particularly when attempting to increase our comprehension of, and neurological feeling for, data-space and its vast powers for handling complex and abstract information. (Mitchell, W. J.) Hence concerns within this dissertation will reflect a shift in the criterion of significance connected with the technology of Virtual Reality, away from that which is central to rationalist and pragmatic ways of thinking towards additional layers of aesthetic/metaphysical convergence. Thus the central issues of this thesis fall necessarily on, and between, ideas concerning consciousness, philosophy, space, art, joy, sexuality, myth, cognition, information-technology and metaphysical states of

placement and quintessence in the formation of a theory of immersive connectivity that, I believe, is important for artists and theorists today.

AII: Technological and Philosophical Features of Immersive Viewing

Few cultures have ever had as much of a vested interest in compartmentalised perception as technological society. Specialisation insists upon informing individuals deeply but narrowly.
-Robert Hunter, *The Storming of the Mind*

Technologies organize, select and focus the environment through various transformational structures.
-Don Ihde, *Technology and the Lifeworld: From Garden to Earth.*

The essence of technology is nothing technological.
-Martin Heidegger, *The Question Concerning Technology*

Perhaps the essence of VR ultimately lies not in technology but in art, perhaps art of the highest order.
-Michael Heim, *The Metaphysics of Virtual Reality*

A constant fluctuation, sideways and upward, radiant, all-sided, announces to man that he has taken possession, in so far as his human capacities and present conceptions allow, of imponderable, invisible, and yet omnipresent space.
-László Moholy-Nagy, *The New Vision*

As I have previously suggested, a key hypothesis of this dissertation, which I will attempt to validate within, is that our immersive expectations (as formulated by VR) have been pre-shaped by antecedent non-logocentric micro traditions. But to begin to formulate a better understand of how VR engenders art and art history with this fresh source of non-logocentric stimulus we must first understand VR and VEs better. Moreover, to appreciate the full importance of non-logocentric immersion in terms of art history, an awareness of the frequently fertile annals of philosophic history will invariably prove beneficial for those who wish to understand the larger context of non-logocentric ideals for (and in) immersive art pertaining to any given period. This is so inasmuch as an understanding of any era's target-values are often insinuated within philosophic theories prevalent in that society, theories which subsequently shape succeeding receptions and reconceptions of its art.

On the technical side we shall start with the first publication to break the news widely of the developments in computer interfacing which precipitated Virtual Reality, the October 1987 issue of *Scientific American*. (Hayward & Wollen, p. 180) This edition explained that in VR, computers generate what *looks like* three-dimensional environments (VEs) while sensors track the immersant's virtual movements in the simulated space. A tracker is any device that provides numeric co-ordinates to identify the current position and/or orientation of an immersant. The tracker is often attached to the immersant's head, but it can also be used to track the position of other parts of the body or the total body, using at times ultrasounds, infrared light, electromagnetic fields, and/or multiple cameras. For example today there exists the Dual Purkinje Image (DPI) Eyetracker, a research instrument manufactured by Fourward Optical Technologies that determines the direction of the gaze over a large two-dimensional visual field without any attachments to the eye. It operates with infrared light which is invisible to the subject and does not interfere with normal vision. The DPI

Eyetracker has a response time on the order of one millisecond. With such a rapid and unhampering link, an immersant feels a convincing ontological sense of being a dynamic agent inside a VE.

It is important to remember that in polygonal worlds the conventional rules of space and the impenetrability of matter need not apply. The restrictions of gravity and the restraining materiality of our familiar physical world may dissolve and one may be capable of drifting, wafting or slipping through a hyper-real space apparently detached from the physical restrictions of the material world. (Rheingold, 1991) While the computer software elucidates the character of the data represented visually as familiar spatial indicators (or lack thereof), *immersion* explains what makes the experience *feel* as if it were in correspondence with what resembles our experience of corporeality and spatial reality. How this issue is addressed in determining the quality of immersion is an aspect of the systems design. It may be designed to enhance supra-physical sensations or customary "real" (i.e., *naturalistic*) ones, (even as we know that nature *really* is a vast sea of waves and frequencies). (Miller, A.) As an example of the naturalistic type, at the University of North Carolina at Chapel Hill researchers have developed a treadmill which allows participants physically to walk with their heads in the virtual environment (each real step moves their viewpoint one virtual step). Thus immersants have the kinaesthetic feedback of physically walking added onto their virtual experience of reality.

We must be realistic here though about what we mean and expect when we employ the word *reality* unproblematicly in terms of VR, for the assumption that we will find *reality* within a VR simulated world is spurious and as such may lead to disappointments based on erroneous presuppositions. (Putnam) The French sociologist Jean Baudrillard points out that there are multiple realities which make up the *reality* of everyday life: the *real*, the *simulated* and the *hyper-real*. (Baudrillard, 1983a) Indeed, as formerly insinuated, the notion of *reality* is perhaps a concept subsisting only in its effulgent word. The multimedia artist and founder of Immersion Studios, Stacey Spiegel, defines reality as that which is "a constant flowing together of multi-layered simultaneous interactions with all things of the world, material and immaterial". (Hoekendijk, p. 4) Zielinski's definition of reality as that which "refers to those dimensions of world/worlds which we can formulate and understand and which have been (co)constructed by us" is germane too. (Hoekendijk, p. 7) In connection to ideas of reality in VR, Myron Krueger coined the term *artificial reality* in the mid-1970s to describe his interactive computer-generated responsive art environments. Krueger emphasised non-intrusive tracking systems (systems that emit numeric co-ordinates for the changing positions in that space) which track people with pattern recognition techniques and display them and the surroundings on large projection systems. As accomplished in his *Videoplace* project and his *Vivid Group*'s *Mandala System*, a computer system perceives and captures a participant's action in terms of the body's relationship to a VE and generates responses (usually imagery) that maintain the illusion that the actions are taking place within that world as a reality. (Krueger, 1982)

Consensual reality is also a useful term to remember here as it is the world (or a simulation of a world) as viewed and comprehended collectively by a society and hence supported as being *real*. (Walser) Indeed each era has its circumlocutions and its compliances; its privileges and placating obligations (Boyce), but for me the term *reality* indicates a perceptual totality of flux that is the ground of all plausible actions. However, for our purposes, to apprehend a world as real is to *feel surrounded by it* and to be able to *sally forth within it*. This surrounding mobile feature of "reality" will be regarded as the cornerstone of a general theory of aesthetic immersion.

A special feature of *cybernetic theories* (theories of feedback systems primarily based on the ideas of Norbert Wiener (1894-1964)) is that they explain processes in terms of the organisation of the system manifesting it (e.g., the circular causality of feedback-loops (Weiner, 1947)) which enables cybernetics to elucidate complex relationships from within. (Nichols) In looking at stand-alone VEs cybernetically, we see that in place of the totality of the *real world*, VEs offer a systematised (thus *total*) world via a sealed feedback-loop, making no recourse to exterior principles other than the continuing supply of electricity. But what concerns us even more here is the philosopher Warren McCulloch's adaptation of cybernetics in formulating a creative epistemology concerned with the self-communication within an observer's psyche and between the psyche and the surrounding environment. (Ashby) This is cybernetics' primary usefulness in studying the supposed subject/object polarity in terms of immersive experience, with its symbiosis betwixt space and immersant(s). Indeed this immersive feedback symbiosis is how VEs are recognised by the paradoxical cognomen: *virtual worlds*. (Boskovic)

What is important is that these virtual worlds refer to an immersive psycho/spatial experience which implies a *360 degree configured space constructed three-dimensionally* (Davies, 1998) when considered as the *collective optic-view* in terms of the *total eye-points possible* in a virtual world (particularly where there are multiple viewpoints attached to multiple sensors accumulated through a variety of continuous circular scanning movements). This latent 360° transcendency which surpasses the natural FOV of about 160° vertical by 180° horizontal (Kubovy & Pomerantz) inherent in hypothetical electronic worlds will be useful in developing an explanatory framework when discerning immersive ideal relations in the history of the mind even though HMDs today generally offer a FOV that is far under 180 degrees (often only 60 or 90 degrees). However researchers have discovered that a heightened sense of involvement in a VE comes with the widest possible FOV, even if the actual display allotted is much smaller. (Psotka & Lewis) Most all HMDs offer at least a 60° to 90° field of vision but computer scenes can be computed to fit into anything from 0 to 360 degrees FOV for any particular projection point. It is in acceptance of the fully expanded, *ideal 360 degree FOV* that this dissertation will base its postulates.
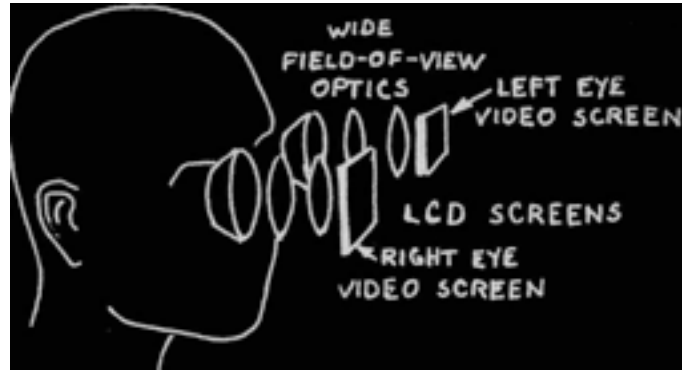
For me this spherical, ideal, all-over, 360° perspective was aptly demonstrated (on experiencing on a single-processor Silicon Graphics (SGI) VGX R4000 Reality Engine) a bewildering switch into what in VR is called the *allocentric mirror world*, the bird's-eye view (Buci-Glucksmann's Icarian gaze) of a virtual world. A *mirror world* (Gelernter, 1992) is a software concept developed by David Gelernter at Yale University "in which the computer creates real-time miniature maps that mirror the larger world in which the user is present". (Heim, 1998, p. 216)

From the allocentric mirror world I experienced, one can see all of the world (*including oneself*) while experiencing a fluidness of movement concerning yaw, pitch, roll, pan, zoom, and swivel. This allocentric occurrence was one first of disorientation and then of reorientation into a supra-perspectivisation, connected to joyful feelings of floating within an expanded hyper-space of colossal dimensions. Experiencing the hyper-space's vertiginous heights and deep abysses and vast widths through the penetration of apparent solid confines, entailed an experiential feeling of beatific disembodiment and placelessness. The 1993 Ars Electronica and Golden Nica award winning artists group Knowbotic Research KR+cF uses the term *non-locations* for such spatial experiences (Hoekendijk, pp. 3-8), terminology inspired by the concept of what is called *deterritorialisations* in the theories of Gilles Deleuze and Félix Guattari. (Bogue, 1989) Knowbotic Research KR+cF distinguish non-locations as "aggregates of multi-layered occurrences in physical and electronic space" which are "non-homogeneous, fragmented, incomplete" while being at the same time "continuous, hermetic and flowing". (Hoekendijk, p. 3)

My prismatic allocentric mirror episode was better understood and appreciated after reading a U. S. Army Research Institute for the Behavioral and Social Sciences research report which showed that a 360° VR virtual scene is biocularly seen (using Virtual Research's EyeGen 3; an HMD which combines visual displays with roughly 45° horizontal FOV) as curved in a parabolic or cylindrical space. When viewing a 360° scene it was felt to exist behind the head and to fill in the space behind the immersant. (Psotka & Ressler)

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another HMD

In virtuality the necessities and dictums which previously regimented actual perception and space can be abandoned. Certainly VE designers have the choice whether to leave the implied attenuated 360° virtual space endemic to the properties of VR alone, or to limit and constrict the space via renaissance perspective (Kubovy) (which is often the case); but principally I am operating under the basis that the analytic, reductivist, Cartesian window helped force the subject outside of the art experience, and that the capacity of the aesthetic 360° immersive arena redresses that expulsion by facilitating a nexus of dynamic psychological/perceptual explorations. Indeed once we fathom the allocentric mirrored 360° optic aspect of virtuality, we begin to distance ourselves from previous trite spatial conventions.

What physically we cannot distance ourselves from however, are our eye's intrinsic circuitry. In this respect a relevant intrinsic attribute of sight pertinent to immersion is *peripheral vision*.

The optic peripheral expanse runs from the edges of the retina, through the optic chasm to the thalamus and into the lateral geniculate from where it is distributed into the occipital cortex at the back of the brain. The individual's optic periphery is consequential to this consideration because it is through peripheral vision that VR optic images give the immersant the sense of immersion in rapport with the virtual world's geometric field-of-view (FOVg), the angle in degrees of the computed visual scene. Quantitative parametric studies have shown that the natural human FOV is approximately 160 by 180 degrees in its total range of vision, since our two eyes have overlapping 140° scopes. This range is calibrated by considering the two eyes' angle of convergence, the angle between the two eyes as sighted on a distant point. A feeling of immersion arises with a FOV greater than 60°. (Psotka, Davison & Lewis)

HMDs operate with the following characteristics: degree of FOV, contrast, resolution, weight, tracking implementation, and binaural stereo sound. Most often an HMD is combined with a head-tracker so that the space displayed changes as the head moves.

another HMD

At the onset of the 1960s, Morton Heilig devised what he called the *Telesphere Mask* and planned a *Stereoscopic Television Apparatus for Individual Use* (patent number 2,955,156 granted October 4th, 1960). But the first indisputable example of a multi-sensorial simulator was Heilig's *Sensorama Simulator*, first shown in 1962. The *Sensorama* was an extensive apparatus (part of Helig's larger plans for an *Experience Theater* which, among other things, included a head-mounted stereophonic television display) which utilised stereo-sound, odour, breeze and three-dimensional movie-loops to feign the impression of riding a motorcycle through Brooklyn. (Rheingold, 1991, p. 50) Since the late-1960s, computer scientists Frederick Brooks, Stephen Pizer, Henry Fuchs and others, advanced computer applications which would later develop into VR-HMD technology at the University of North Carolina at Chapel Hill. At the Wright-Patterson Air Force Base outside of Dayton, Ohio, Thomas Furness directed and developed for the United States Air Force the first fully-functional high-resolution HMD which was used to train fighter-pilots called the *Visually Coupled Airborne Systems Simulator* (VCASS). This HMD system was see-through, rather than fully immersive in intention. (Stone) Furness left Wright-Patterson in 1989 to start the Human Interface Technology Lab (HIT Lab) at the University of Washington.

In 1965, as a way of getting metaphorically *inside* the computer, Ivan Sutherland and several colleagues assembled a head-mounted display which combined head-position tracking and real-time interactive computer graphics at MIT's Lincoln Laboratory, a lumpish apparatus now considered the first actual HMD. (Rheingold, p. 81) Sutherland was the first to mount small computer screens in binocular glasses to immerse the wearer inside of computer graphics (even though they had only a FOV of 40 degrees and both eyes saw the identical non-stereoscopic information). He continued his research at the University of Utah in Salt Lake City and that is where the first fully-functioning HMD was tested on January 1, 1970 with an immersion into a wire-frame cube. (Rheingold, p. 106) In 1984, following a talk on stereoscopic head-mounted displays and wide-angle views by Scott Fisher (who worked on the idea at MIT in the late-1970s), Dr. Mike McGreevy and Jim Hsumphries at NASA/Ames Research Center fabricated what became the contemporary (accessible) HMD with a FOV of around 120 degrees. It was then called a *Virtual Visual Environment Display* (VIVED).

(Rheingold, pp. 143-147) According to Rheingold, it was there at the NASA/Ames Research Center that "a human interface researcher, a cognitive scientist, an adventure-game programmer and a small network of garage inventors put together the first affordable VR prototypes." (Rheingold, p. 128)

According to McGreevy, a prominent stimulus towards the creation of the HMD was the July 1, 1966 issue of *Life* magazine which had within it an article on the Surveyor space mission, the first unmanned landing on the moon. The Surveyor had along with it a swivel camera which transmitted images back down to earth. When the scientists wanted to see what the Surveyor saw, they pasted the thousands of component images printed out onto the inside of a large sphere. They would then get an immersive view by poking their heads up through a hole into the interior of the sphere. (Rheingold, pp. 139-141)

HMDs are now formulated generally as a helmet which consists of two small screens, one for each eye, which offer about 70 to 90 horizontal degrees FOV compared to the approximately 180 degrees in reality, which doesn't sound like much until you consider that a typical television (Lubar) or computer screen offers around 4 to 6 degrees of FOV. As previously stated, most HMDs proffer a 60 to 90 degree FOV, but a virtual setting can be computed to fit into anything from a 0 to 360 degree FOV for any particular projection point. (Psotka & Davison, 1995) *Based on the 360° potentiality, I can assert that the predominate unstinting ideal property of virtual immersion's visuality is a first-person omni-perspective.*

In nearly all HMDs the stereoscopic images are perceptually identical in size, so limited anisometropia (differences in the sizes of the two retinal images) is not a difficulty. Such a head-mounted display system allows the immersant to feel as if (s)he were bodily entering what is in fact two stereoscopic flatly presented computer generated images as if they were an integer three-dimensional vista. This is commonly know as a *jack*: to connect and enter virtual space is to jack into it. Generally, when one jacks into a VE there is only one, solipsistic point-zero ego-centre (inner viewpoint); the wearer of the HMD, even when interacting with other users of the system. (Psotka, Davison & Lewis) Most HMDs, such as the Eyephone[a] (a head-mounted display made by VPL (Virtual Programming Language) Research Incorporated - the enterprise founded by Jaron Lanier which spun-off from research done at the Virtual Interactive Environment Workstation (VIEW) lab) displays a 60 to 90 degrees FOV. Such HMDs have been wickedly satirised by the American artist Vito Acconci in his 1993 *Virtual Pleasure Mask* series.

Vito Acconci, *Virtual Pleasure Mask*

The Binocular Omni-Orientational Monitor (BOOM), a display device suspended from a weighted boom that can swivel freely about, also allows a 60° to 90° FOV. (Fisher, pp. 6-7) However the Simulator Training Research Advanced Testbed for Aviation (STRATA) - a fully-functional flight simulation facility at the Army Research Institute Rotary Wing Aviation Research Unit in Fort Rucker, Alabama - is involved in several experiments with more advanced, wider HMDs. STRATA, for example, has been experimenting with HMDs capable of presenting a high-resolution 360° FOV display.

HMDs have been the subject of extensive research and development (R&D) in various countries, mostly in the dominion of avionics (such as the *Supercockpit:* a United States Air Force project led by Tom Furness that advanced the engineering of VR and HMDs using digital displays of instruments and terrain) but more recently for preparation of tank commanders and foot soldiers too. Most of these devices use what is called *See Through Displays* (STDs) which allow the wearer to see virtual data and/or images superimposed over the material world. Such a technique provides a display of flight or attack information or other data displayed on a semi-silvered mirror or holographic optical element to pilots while retaining a normal view of and from the cockpit. This blending of computational virtual space with ordinary viewable space indicates the subsequent emergence of a new immersive topological cognitive-vision of space which I call *viractual space*: the space of connection betwixt the computed virtual and the uncomputed corporeal world which merge. This space can be further inscribed as the *viractual span* of *liminality,* which according to the anthropologist Arnold van Gennep (based on his anthropological studies of social rites of passage) is the condition of being on a threshold between spaces. (Gennep) The term *liminal* was subsequently used by the anthropologist Victor Turner in his 1974 book *Dramas, Fields, and Metaphors.* (Turner, V.)

Concerning this viractual span of liminality, I am reminded here of two very different, yet complimentary, concepts: *entrainment* and *égréore.* Entrainment, in electro-physics, is the coupling of two or more oscillators as they lock into a commonly sensed interacting frequency. (Bohm, 1980) In alchemical terms an égréore (an old form of the word *agréger*) is a third concept or phenomenon which is established from conjoining two

different elements together. (Richardson, p. 27) I suggest that the term (concept) *viractual* (and *viractuality*) may be a concordant entrainment/égréore conception helpful in defining this third fused inter-spatiality which is forged from the meeting of the virtual and the actual, a concept close to what the military call *augmented reality*, which is the use of transparent displays worn as see-through glasses on which computer data is projected and layered. Such an application is called in the military a *heads up display* (HUD), which is a display device which permits users to see computer graphics superimposed on their view of the world. (Psotka & Davison, 1995) For many other military purposes it is unnecessary (or even undesirable) to see the real world and the helmet displays 100% of the information.

Viractuality is a more fully physiological account of vision in virtuality than has been previously articulated. It is a significant envisioning concept which indicates and initiates communions of the protoplasmic body to virtual spatial conditions. As such it is at the core of what is known as *ubiquitous computing*, the so-called third wave in computing (Weiser) exemplified by Studio A.E.M. (Architecture at the End of Metaphysics) an architectural firm made up of Stephen Perrella, Tony Wong and Rebecca Carpenter, which maintains a design philosophy responsive to the digital information that surrounds us, replete with their use of digital-imaging wallpaper. Roy Ascott, in his essay "The Architecture of Cyberception", addressed this hybrid space when he wrote that "... to inhabit both the real and virtual worlds at one and the same time, and to be both here and potentially everywhere else at the same time is giving us a new sense of self, new ways of thinking and perceiving which extend what we have believed to be our natural, genetic capabilities." (Ascott, 1994a) This coextensive notion of viractual immersion has piquant ramifications for immersive theory in terms of multiple locatedness. Indeed, one of the wider implications for art in this new viractual space is the proclivity to solicit the theoretical viewer/participant (what I call the *viewpant*) to respond to the work in both a contemplative and physical way, or at least in an implied tension between these two poles when one side outweighs the other. It is important to remember that *the viewpant is involved often with a series of different levels of immersion in a dynamic emergent continuum.*
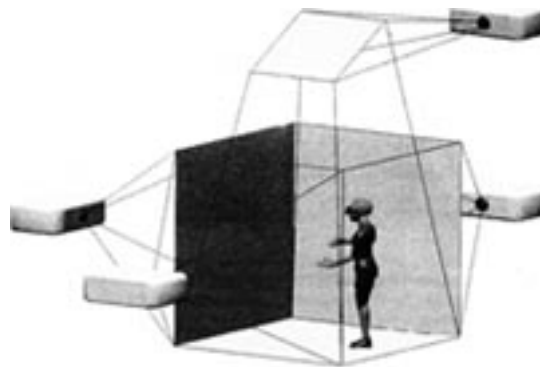
The CAVE

There are also in development other technological systems aimed at producing more unencumbered immersions, which are generally called *spatially immersive displays* (SIDs). SIDs are wrap-around panoramic displays which create an unencumbered, ultra-wide field-of-view, most notably achieved in the Goto Virtuarium DOME system (a 15 metre diameter by 15 metre high dome (49.2 by 49.2 feet) with a 360° by 180° FOV), the 3 by 3 by 3 metres (10 by 10 by 10 foot) CAVE (Cruz-Neira, Sandin & DeFanti), and the Flostation/Florooms (which include SID displays called Bubble Domes).

The mini-dome Flostation was designed originally for training astronauts and to provide them with a higher-level of immersion than other immersion techniques. HMDs had been found to create head fatigue while CAVEs and other group projection systems provide shared spaces where the sense of immersion is obscured by having other people visible. With a Flostation, attention to exterior stimuli is consciously reduced so that attention to the virtual is expanded. At present mini-dome Flostations can only be experienced regularly at the Virtual Environment Technology Laboratory at the University of Houston.

Flostation

The Flostation was developed by Brian Park's Flogiston Corporation in Austin, Texas as a NASA spin-off, receiving its capital investment during the NASA funding period between 1994 and 1997. In 1994 Flogiston Corporation began the development of the Flostation by mounting a Flogiston Chair onto a small motion-base platform. The evolution of the Flostation (the commercial name for the Personal Motion Platform) began in 1980 however with Park's desire to build an ideal cosy-chair conducive to extended meditations which became known as the Flogiston Chair when it went into limited hand-made production in 1989, around the same time Parks became involved with VR via Eric Gullichsen and Pat Gelband of Sense 8. The patent for the Flostation has been approved by the U.S. Patent Office under the title Immersive Cyberspace System.

The Flostation provides a serene, non-contacting, VE immersion which operates on the basis of a method called *neutral immersion* (the posture experienced in zero gravity) to increase the sense of detached presence in VEs. Neutral immersion requires the occupant to lie still, reclining in an embryonic womb posture which helps to reduce awareness of normal surroundings and increases undistracted awareness of surrounding

cyberspace. Buttons under the right arm propel motion and motion cueing, but may also act as very low frequency vibration transducers which may vibrate the entire body.

The Flostation includes a display called the Bubble Dome, which by using back-projection techniques and a wrap-around dome fully fills the immersant's FOV. The immersant sits in the chair and reclines to a relaxing supine position while the dome lowers over the head and the projector visor illuminates. A spherical graphical user interface appears which displays a number of icons, which connect to available VEs. Real-time image warping software (which compensates for the shape of the dome) provides a 180° horizontal by 120° vertical view of the VE. There is nothing touching the face nor the ears and the body remains stationary in the modified neutral posture. The head does not turn and the eyes look straight ahead. Sound is transmitted using speakers mounted off the ears so that there is no headphone pressure, and low frequency vibration is applied using two powerful vibrators which are mounted in the chair's framework which are used to vibrate the lower body. The motion base can also be treated as a subsonic vibrator for very low frequency vibration.

The integration of neutral posture, wrap-around vision, nearphone sound, low frequency vibration and motion cueing provides, it seems to me, the most advanced immersive VR technology available today, as it provides the feeling of floating in the space/fluid of the womb without an entrapping HMD and glove to wear, thus taking us closer to feelings of our naked immersive pre-birth state.

Systems with connected multiple Flostations are what Brian Park calls "Floorooms". The Floroom is a room which contains a number of networked Flostations where people can enter VEs together in groups; which, I believe, will be the predominant ideal aspiration shaping VR in the near future. In a Floroom each person reclines in a modified form of the neutral posture, with the non-contacting wrap-around hemispherical visor floating circuitously around their heads providing them with personal views in the shared VEs. Any number of Flostations can be arranged in a circle facing outward, all mounted on motion platforms which respond to acceleration vectors created by the central-processor. The system provides motion feedback to the immersants in synchronisation with their movements inside the digital world.

Like the Bubble Dome, another advanced SID model in operation now is the U. S. Military's F-18 dome simulator, a 180° FOV mini-dome display using back projection with a hi-resolution focus utilised in the training of fighter-pilots for the F-18 Hornet airplanes. However it is even more interesting to read in *Expanded Cinema* that the Canadian media-artist Francis Thompson saw artistic merit in the mini-dome SID-type display in the late-1960s. Thompson rightfully imagined the mini-dome SID display as creating a situation where "images completely fill your field of vision". According to Gene Youngblood, Thompson found in the SID "a potential for a new consciousness" where people are introduced into, as Thompson says,

"a whole new visual world which would be emotionally, physically, and intellectually overwhelming". (Youngblood, p. 358)

In terms of a "potential for a new consciousness" achieved through connected SIDs, the connected Floroom, in conjunction with what is called *Virtualised Reality,* seems to be the best (ideal) immersive arrangement I can hypothesise based on my research. Dr. Takeo Kanade, director of the Robotics Institute at Carnegie-Mellon University in Pittsburgh, is developing a new visual medium called *Virtualised Reality*, a process which delays the choice of viewing-angle until viewing time. In Virtualised Reality any visual space is mapped using multitudinous virtual cameras which record the space in 360°. (Psotka & Ressler) Triangulation and texture-mapping enable the placement of what is called a soft-camera to reconstruct the space *from any viewpoint*. The computer then knows every point of view which allows an immersant to move about freely in the scene. The collection of the 360° scenes is called the *virtualised world*. The immersant can therefore freely move about in the VE and interact with it from any viewpoint chosen dynamically at viewing time.

But regardless of how it is obtained and to what level of totality it rises, by my terms, immersive ontology would be where the user feels altogether enclosed but free to move in a synthetic environment. This characterisation compliments Michael Heim's definition of the essence of VR as being *sensory immersion in a virtual environment*. (Heim, 1993, pp. 109-128) Non-immersive VR, in for example a desktop virtual environment, is when you are looking at a three-dimensional rendered image on a screen in front of you. Typically it is a conventional computer monitor onto which a three-dimensional environment is rendered. It is *the ability to perceive the environment from within* which is the consequential property that immersive ontology brings to informational interchanges (along with its revised evaluations of self from bound to boundless) and which distinguishes immersive art from art graphics and from flat, two-dimensional, window-like framed spatial representations.

Thus I am only considering here in *Immersive Ideals / Critical Distances* Virtual Reality as the immersive version where some kind of immersive display and tracking equipment is employed in order to create the psychological illusion of being inside a computer generated environment rather than viewing it from the outside through a screen. Otherwise it is too general a term, applying to computer-aided modelling programs, among other myriad software/interface applications.

In the technical literature of academic researchers and industrial developers the terminology VR also is customarily synonymous with immersive VR as it is its unique aspects of *interior interaction within a world* which has been seen as the radically different attribute of VR interfaces (as distinct from other graphical user interfaces) in that it both separates out and then connects the user into what Knowbotic Research KR+cF point out to be VR's "field of fluctuating activities". (Hoekendijk, p. 13) This engagement within an enlarged

perspicacious propensity, in conjunction with additional aspects of psychology within the subject's mental state and world-view, construct for us the consequential part of immersive VR's metaphysical/aesthetic concerns.

Many artworks in the past have been fabricated according to definite and overt metaphysical principles, but it is exceptional for a mode of art-making to capsize an entire philosophic model and to create a new tone of anticipation through a technique of synthetic internal coherence as 360° artistically mediated VE installations (what I will call *VE°art*) may do. Indeed total-immersion's effectiveness requires an alteration in ontology (our metaphysics of being) even as I wish to stress again that VEs' immersive space is *imaginary,* or more precisely, *symbolic* and thus affiliated with our epistemology (our understanding of our acquisition of belief and knowledge) as well as our ontology. The essential opposing philosophy to epistemological symbolisation is that of *rational empiricism*, but there are many gradations and intermediary positions staked out from this binary opposition, including Immanuel Kant's *synthetic a priori*, which allowed for an account of art, among other things. Kant held that space was in essence mental and *a priori* to the perception of exterior objects. (Savile, 1993) For a deeper investigation of Kantian metaphysics in terms of VR see Rita Lauria's Internet essay "Virtual Reality: An Empirical-Metaphysical Testbed". After reading it, what became immediately clear to me was that the implicitly dialectical use of immersive experience in a dialogue between the artist, new technology, and art history creates the means for significantly dilating the epistemological repertory with hitherto incompletely acknowledged ideas and modes of aesthetic praxis which affect ontological premises.

The history of art is, of course, full of new epistemological shifts and I maintain here that the shift in perspective which surrounds Virtual Reality when used to display 360° artistic data is just such a shift, replete with a newness based on a long preparatory gestational development, as Section B of my thesis will demonstrate. The main intention in that section will therefore be to identify artistic immersive perceptual shifts in ontology which involve fundamental changes in aesthetic perception. My method then will be to pursue, through reflection on the insights VR suggests to us artists today (which indeed engenders extraordinarily deep artistic conflicts), a re-examination of aesthetic assumptions. This will entail a review of past and present approaches towards aesthetics, for our conception of the cultivated future depends on the kinds of astute and discriminating questions we seek in the past.

AIII: Allocentric Cognitive Aesthetics and the Subject/Object Merger

All human beings who reach adulthood are programmed biocomputers. Literally, each of us may be our programs...
-John Lilly, *Programming and Metaprogramming in the Human Bio-Computer*

A great artist can make art by simply casting a glance.
-Robert Smithson, *A Sedimentation of the Mind: Earth Projects*

By greatness I do not only mean the bulk of any single object but the largeness of a whole view considered as one entire piece.
 -Joseph Addison, *Spectator 412*

That ye, being rooted and grounded in love, may be able to comprehend with all saints what is the breadth, and length, and depth, and height.
-Paul the Apostle, *Epistle to the Ephesians, III: 17-18*

A close association of space and consciousness can be seen from the fact that in the higher stages of absorption the experience of the infinity of space immediately leads to the experience of the infinity of consciousness.
-Lama Anagarika Govinda, *Creative Meditation and Multi-Dimensional Consciousness*

Materialism is a beautiful and compelling view of the world, but to account for consciousness we have to go beyond the resources it provides.
-David Chalmers, *The Conscious Mind*

You never know what is enough unless you know what is more than enough.
-William Blake, *The Marriage of Heaven and Hell*

Aesthetics has traditionally been connected with philosophic ideals and attempts to define philosophically the concepts behind art (regardless of Plato's notorious philosophical urge to oust the artists from the Ideal Republic to assign philosophy the sole mode of knowing). (Barasch) Traditionally aesthetics examines the problem of how to relate knowledge claims to aesthetic evaluations (Langfeld), but the factual autonomy of this discipline itself seems questioned by the discipline of epistemology. Hence *Immersive Ideals / Critical Distances* shall strive to embed itself in the genealogy of the new rhizomatic epistemology and its aesthetic amalgamation in hopes of affecting the expectant underpinnings and perceptual disposition of our technologically amplifying culture. The nature of this discussion then calls for an examination and exploration of *idealist aesthetic cultural space*, what David Carroll calls *paraesthetics,* a vein rich in associative thinking. (Carroll)

The term *aesthetics* is traditionally used to distinguish the appreciative from the expedient. The notion originated with a 1739 text by the German philosopher Alexander Gottlieb Baumgarten (1714-1762) who introduced the term *aesthetic* in his text *Meditationes Philosophicae de Nonnullis ad Poema Pertinentibus* and defined it as the *study of attraction as concerned solely with discriminating perception*, that is, that aesthetics should be a separate, independent concern dealing only with perception. (Sparshott, 1963) In

Baumgarten's theory much attention was concentrated on the creative act and the importance of feeling. For him it was necessary to modify the traditional claim that "art imitates nature" by asserting that artists must deliberately alter nature by adding elements of feeling to perceived reality. In this way, the creative process of the world is mirrored in art activity. Baumgarten's thought in this regard was influenced by the philosophy of Gottfried Wilhelm Leibniz (1646-1716) and that of Leibniz's pupil Baron Christian von Wolff (1679-1754).

The problems of aesthetics had been treated by others before Baumgarten, but he both advanced the discussion of art and beauty and set the discipline off from the rest of philosophy. Immanuel Kant, who used Baumgarten's *Metaphysica* as a text for lecturing, retained Baumgarten's use of the term *aesthetics* to apply to the entire field of sensory knowledge. When combined with logic, aesthetics formed a larger discipline which Kant called *gnoseology*, a theory of knowledge which to other philosophers was epistemology. Only later was the term aesthetics restricted to questions of beauty and of the nature of the fine arts. Kant used the term *aesthetics* to argue that aesthetic appreciation reconciles the dualism of theory and practice in human nature, thereby leaving the way open to identify *beauty* (a relative, shifting and elusive concept (Gadamer, 1986)) as a profoundly psychological quality (and not inherent in the artwork) by formulating a distinction between determinate, determinable, and indeterminate concepts. For him beauty is non-determinate because we cannot know in advance by applying a set standard whether something is beautiful or not. He also deemed the concept of beauty non-determinable because due to creativity we will never find such a standard. Beauty, therefore, must reside in the indeterminate supersensible. (Kant, 1960)

In respect to immersive contingency this influenced Kant to formulate his *sublime ideal* which moved philosophical inquiry away from what was weakly established as the objective ideal in which the world, and the human subject within it, could be described as if from an outside (logocentric) position. (Crowther, p. 60) Kant, in *Observations on the Feeling of the Beautiful and Sublime,* showed us that intellectually humans are incapable of knowing sublime ultimate reality, but this need not, and must not, according to Kant, interfere with the human obligation of performing as though the ideal character of this reality were certain. (Kant, 1960) More will follow on concepts of the sublime shortly.

Although Sigmund Freud was not an intentional aesthetic theorist, he did influence aesthetic theory through his comprehensive psychoanalytic framework and through his use of art to elucidate the fact that the breadth of psychoanalysis extended beyond dreams and neurosis into aesthetic achievements. (Freud, 1952) Walter Benjamin (1892-1940) conceived of aesthetics not as part of a theory of the fine arts, but as a theory of perception. (Benjamin, 1978) Roy Ascott has amended the concept substantively by redefining it in terms of the process properties of telematic connectivity where "the classical concern with the surface image of the world gives way to the technoetic aesthetics of creative consciousness...". By the *technoetic* he means the "technology of consciousness which provides the substrate from which a new art is emerging." (Ascott, 1996)

Paul Virilio has put forth the *aesthetics of disappearance* into consideration, a disappearance, according to Virilio, due to the ubiquity and dexterity of the transmission of information which enables information to swiftly reconjecture modifications. (Virilio, 1991a) Subsequently Margot Lovejoy has introduced into theory the term *transaesthetics* as "technology does not just change the kind of art that can be made and our relationship to it, it transforms the nature of human perception. (...) The move to the electronic era from the mechanical age has dramatically transformed our experience of the body and of the psyche, changing our perceptions, our conceptions of self, our sense of time and space, and our cultural relationship to the world." (Lovejoy, 1997b)

One wonders, then, what does the sublime (Kant), psychoanalytic (Freud), perceptual (Benjamin), technoetic (Ascott), disappearance (Virilio) detected in transaesthetics (Lovejoy) do to issues of aesthetic distance? It would be preposterous to pass judgement on the aesthetics of the immersive space of VR without asking such a question. The advent of the flying machine (airline) unquestionably was a radically new achievement when it first appeared in 1903, but one need only remember its pre-history: the history of the balloon, of flying myths and irrational dreams to realise that this new accomplishment was founded on earlier, often times forgotten, seed ideals and experiments which were less pragmatic than imaginary. The same holds true for Virtual Reality and its short, but resonant, aesthetic record.

Concerning the technoetic aesthetic, in *Speed and Politics* Paul Virilio implies that we are not solely in the process of losing physical space to the speed of electronic transmissions with VR but that we are also losing the critical distance of duration. (Virilio, 1977) In fact immersion in a Virtual Environment is viewed by many theorists of Post-Modernism (Kroker & Cook) as a passive subjection to the supremacy of the world-designer and that immersion, by sucking people into the work, deprives them of critical consciousness. (Ryan) I do not share these last views or the same would be true upon entering an 18th century Rococo chapel and it is not, but consequently, after reflecting on Virilio's observation concerning the need for a critical distance of duration and finding it truthful, this dissertation will endeavour to reclaim a small allotment of past time by sustaining critical distance from the technically skilful seduction of VR so as not be confined to our electronically charged historical moment and its sense of accelerated time and aesthetics alone. However the question of the genealogy and ontology of total-immersion is escalating in importance in light of contemporary conditions of increasing globalisation and its totalising means: the trans-nationalisation of State economies into a single (total) digital global economy. (Beniger) Thus questions concerning phenomenological states created when a system's display totally monopolises and dominates a users' field, take on broader socio-economical meaning. And in this sense immersion has the capacity (perhaps obligation) to become a signifier, a referent that is no longer tied only to that which it refers but suggests entire systems of references. Thus the term immersion shall also be used in reference, though less precisely, to the individual's position in relationship to the social unconscious of the media environment. (Jameson) By *social*

unconscious I mean the collective field of inherited ideas, images and myths that exist apart from individual memory (Jung, 1950), though nonetheless informing it. (Meier) It is that range of influences which underlie the field of sociology, which is the study of the development and functioning of society. Sociology emerged out of the inquiries of the French philosophers Charles de Montesquieu (1689-1755), Henri de Saint-Sismon (1760-1825) and Auguste Comte (1798-1857) (who coined the word *sociology* in 1839) and the Scottish philosopher Adam Ferguson (1723-1816). The notion of the social unconscious scrupulously avoids Comte's progressive assumptions (Comte's only standard of rationality was that of empirical science) in his argument that human thought developed in consecutive stages: mythical, religious, metaphysical, scientific (Comte) in favour of a multi-leveled rhizomatic-like model of cognitive hyper-totality. Hence an understanding of the idealised concepts behind notions of *totalisation* (Godin) and its remarkable mono-sense of complete universal culmination (and hence immersive closure) is consequential to this dissertation.

Florian Rötzer maintains that as the aesthetic distance between the subject and the image is cancelled out via immersive space, art becomes what he calls a *total-data-work*. (Rötzer) This theme of the *total-data-work* was previously articulated too in Roy Ascott's 1989 *Kunstforum* essay "Gesamtdatenwerk: Konnektivität, Transformation und Tranzendenz" (Total-data-work: Connectivity, Transformation and Transcendence) in which he put forward the proposition that there is a fecund and open-ended "universal data-space" from whose "ground of undifferentiated wholeness we construct virtual realities." In this essay Ascott reiterates the conceptualisation of the computer as a continuous "pure system" which partakes in a "universal transformative matrix" (which includes the total-data-field) and he compares this total-data-field to the holographic unity endemic to holograms as "to be in or at any one interface is to be with all interfaces throughout the network of which it is apart." (Ascott, 1989, pp. 100-109) I find this view to be complimentary to the holonogic model of cyberspace and useful in illustrating attributes of the psychology of totalisation characteristic of visualising virtual immersive space. Certainly it is obvious and true that, technically, cyberspace is a hyper-unified whole because every server of the Internet must behave exactly like any other server: the same requests must evoke the same responses.

Gene Youngblood, in his reference work *Expanded Cinema*, maintains that the notion of universal unity is a "logical result of the psychological effects of the global communications network". (Youngblood, p. 86) In noticeable agreement, Ascott's essay concludes with the observation that artists are impatient with single modes of operation in data-space and that they are increasingly searching for a "synthesis of image, sound, and text" in annexation with "environmental dynamics" and "ambient transformations" in order to attain a "seamless whole" (his *Gesamtdatenwerk*) which, he maintains, reflects "the planet as a whole, its data-space and its electrical noosphere." (Ascott, 1989, pp. 100-109)

Noosphere is a term modelled after *atmosphere* signifying the space occupied by the *totality of human knowledge* collectively available and the processes operating in this space. (Krippendorff, *Principia Cybernetica Web*) The French theologian and paleontologist Pierre Teilhard de Chardin (1881-1955) spoke of the noosphere as the "film of organised intelligence that encircles the planet, superposed on the living layer of the biosphere and the lifeless layer of inorganic material, the *lithosphere*." (Youngblood, p. 57)

It is noteworthy to point out that a search of the *COPAC On-line Public Access Catalogue* (http://copac.ac.uk/copac/) housed at the University of Manchester, for the key word *Total* produced a whopping 1,790 book titles with the English word *Total* in its title; works ranging from John Burch's *Computer Control and Audit: a Total Systems Approach,* to Marabel Morgan's *Total Joy*, to Gyles Brandreth's *Total Nonsense Z to A*. Such a wide display of totalising concepts goes along with what Youngblood reports (but does not reference) William S. Burroughs (1914-1997) as calling our *Age of Total Confront*, noting that all the heretofore invisible aspects of the human condition had suddenly become visible. (Youngblood, p. 66) The falsity and even dangers of the (supposedly) totalising concept and its darker connotations, particularly those aspects of *total ideology* which have tended to impede reconfigurations of its boundary definitions from achieving a more valid reflexivity, must be considered. Typical of this danger is the old con of promising commodious closure to the masses via totalising imagery, which operates at various levels in justifying the collected exploitation and manipulation of people through their emotional attraction to totalised concepts of contented closure. (Levinas) However it appears that there is in the human quite an appetite for, and aspiration towards, totalising revelations; and all explanations which function in terms of some united principle or explanatory device exhibit this desire. One sees it, for example, in the now mundane artistic devises of montage and collage which have become the common language of print media, film and television; unities which deserve the adjective *esemplastic*, a concept Samuel Taylor Coleridge (1772-1834) invented to indicate the faculty of the mind that can fuse unrelated things into a poetically holistic singularity.

The validity of a total anything, of course, came under severe attack with Post-Modernism/Post-Structuralism (Sarup) in which the realisation emerged that concepts and images were always already laden with specific cultural values and implicated in networks of prejudiced and invested power. Structuralist concepts of totality (based primarily on the work of the Swiss linguist Ferdinand de Saussure (1857-1913), led post-structuralists (Harland) to formulate such theories where the impossibility of ever adopting one transcendent meaning is maintained and this trend has carried over into a general inclination. For example, we can recognise this inclination when Lev Manovich says in his essay "The Aesthetics of Virtual Worlds: Report from Los Angeles" that the space of the Web in principle can not be thought of as a coherent totality as it is a collection of numerous files, hyper-linked but without any overall perspective to unite them. (Manovich, 1996) Along these lines, Donna Haraway in a consequential early essay wrote that "we have learned that unities are difficult historical achievements fraught with inevitable exclusionary practices". (Haraway, 1983) For me,

however, her assertion "inevitable" is equally problematic in its totalising sweep and I have problems too with Manovich's limited focus. Besides, even if totalities are rejected outright we ultimately allude to unconscious concepts of totalities which implant and shape our preferred theoretical domains. (Meier) Indeed according to George Kubler, concepts of totality make up the very nature of our thought process in that we understand the discontinuous events which make up our experience of life only by the connective summing identities we imagine among them. (Kubler, p. 67) So it is important to focus on the nature of this concept of totals and on all of its psychological implications; not to insinuate accepting or pejorative judgements against the urge towards totalities, but to note a persistent desire for them and to record the aesthetic appetite that apparently fosters them. (Levinas)

Stemming from this discussion of totalities I expect to arrive at a theoretical position concerning immersive art (with particular emphasis on the totality inherent in electronic space) which will point the way towards an emerging immersive aesthetic. This theoretical activity requires a philosophic element that art criticism alone does not posses. To produce a new set of ideas whose aim is a broad understanding of the mingling of the old division between the artist and the beholder within an ideal, all-encompassing, ambient situation requires that we view recalcitrant artworks which are merely immersively suggestive, as stimuli to implicative philosophical generalisations. To do so I will, in a sense, negotiate an insight into these artworks symbolically which, as Suzanne Langer suggests, is a deeper philosophic reading, "deeper than any semantic acceptance of their use as signs and referents". And moreover, as Ms. Langer goes on to say, a philosophic reading "more essential than any schema that may be heuristically read". (Langer, 1953, p. 22)

Such an approach is philosophically useful in that Ms. Langer's conception of art is one of presentational symbols which preclude established significance. Subsequently she replaces the assumption of conclusive meaning with one of *vital import*, which is the non-objective communication of emotional significance. (Langer, 1953) This seems to correspond to Sean Cubitt's idea that "art is a form of aberrant encoding that precipitates internal shifts within a communicative world, whose innovations ignite trails of knock-on effects, and whose accidental grammars can collide with and interfere in neighbouring discourses". (Cubitt) The architectural theorist Stephen Perrella, defines art autopoiesicly (Maturana & Varela, 1980) as "a newness that emerges on the scene of culture due to dynamic forces that cannot be predicted or measured". (Hoekendijk, p. 21) Hence due to art's symbolic (Langer), encoded (Cubitt), self-generative properties (Perrella), a philosophic consideration of immersive art must assume the two-fold task of establishing an axiomatic aesthetic epistemology based on theoretical texts (of artists whenever possible), while testing them against my own artistic experiences by placing myself within the operations of immersive creations, thus raising questions of reciprocity between theory and practice.

Throughout the 20th century avant-garde artists-groups such as the Cubists, Russian Constructivists, the Dadaists, the Surrealists, the Letterists, Fluxus, the Happening scene, Minimalism, Conceptualism, and post-modern neo-conceptualists have all published their theories of art. (Stiles) Alike, as an artist/theoretician myself, I understand art theory to be a necessary intercourse between creation and reflection, conjecture and practice (Schapiro), and I realise how these apparent bipolarisms can complement one another handsomely. Although theory and practice might once have been seen as contradictory, it has long been the objective of some artists to develop their own theories of art.

In accord with our review of *totalising* concepts, the fact that the scintillating word *world,* or in some cases *metaworld*, is used when describing a VE's space poses a plurality of philosophical issues for deliberation. In real terms, the immersive space of VR is the non-space of computer memory, networks, telecommunications and digital media. However metaphors (comparisons) have a long history in even scientific thought, including the planetary analogy for atomic structure, the clockwork metaphor for the solar system, and the pump metaphor for the heart. Likewise the metaphor *world* seems to abound in descriptions of VR's insinuated immense, but fabricated, immersive space (Roehl); even as, literally, it is a non-space entirely circumscribed within the matrix of computer memories.

As example of this use of the metaphor *world* one might cite Jenny Holzer's VR pieces *World One* and *World Two* which she displayed at New York City's Guggenheim Museum's exhibition *Virtual Reality: An Emerging Medium*, which I saw in the Fall of 1993. This exhibition, developed in collaboration with the *Intel Digital Education and Arts* (IDEA) program, was the first exhibition of VR in an American museum. *World One,* which was developed with Ken Pimentel, placed the immersant into a cave-like techno-sphere in which one could interact with disembodied "souls", either by fleeing them or entering into a discourse with them. *World Two* (developed with Jeffrey Donovan and Tomandandy) placed the immersant into a bleak horizon of chambers in which one encountered verbal testimonies connected with the Bosnia conflict. (Ippolito, p. 5)
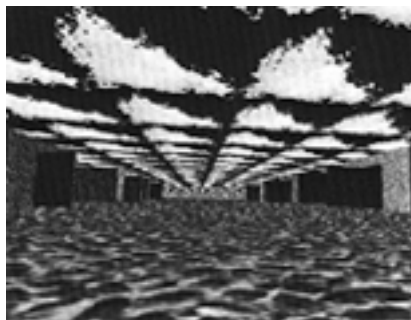
Jenny Holzer, *World Two*

For me this prevalent cyber metaphor *world* is fraught with philosophical significance and deserves to be inspected. In what sense is the prevalent use of the metaphor of world germane to describing computer generated, pixelated illusions of space, and not merely clichéd hubris? What is even more vexing is that static, geometric paintings are also called worlds today, as Peter Halley does with, for example, his painting *The Other World* (1992). To further the distorting metaphoric hyperbole, Halley's paintings have even been called "Virtual Realities", (Doner, p. 8) in that Halley asserts that all relationships are geometric underneath the veil of cultural mythology. (Halley) On reviewing these examples I have come to agree with Stacey Spiegel when she says that "talking about different worlds is problematic as it propagates the illusion of discontinuity". (Hoekendijk, p. 5) Perhaps it is more intelligible to speak of one (total) world where multiple realities simultaneously coexist, overlap, and interpenetrate.

But the question remains, in what ways do simulated VR arenas and computer generated faux spaces resemble our lived world (or not) which make the common metaphoric usage of the VR term *world* either appropriate or inappropriate? The search for the answer to this question will merit the initial emphasis on philosophical history which follows.

Connecting said VR worlds to each other telematically adds other speculative psychological flavours to the discussion but does not alter the need to analysis the singular VR world concept on which connected worlds are fashioned. (Loeffler) Such a consideration will be advantageous when rounding out the historical and philosophical assumptions of virtual worlds in researching the basis of a coherent theory of art which is especially informed by concepts and experiences of immersion in conjunction with the forgone conclusions established concerning the theoretical issues of sexual politics, multiculturalism, gender studies, and the far-reaching heterogeneous philosophical critique of the cultural mechanisms of representation, which will have preceded it.

When physics, biology and mathematical science began their metaphysical examination of heterogeneous systems (Burtt), they initiated a break with Western Classicism and this bifurcation is what is found to be correspondingly interesting to an investigation into what might be called the rhizomatic model of the world. What is important in immersive terms about the rhizome model is that any point in a rhizome can be connected with any other point even while rhizomes remain heterogeneous. (Deleuze & Guattari, 1994) According to Gilles Deleuze and Félix Guattari, rhizomatic activity is boundless in its branching; thus rhizomatic reflection may cross wide chasms of psycho/optic space in an immersive situation as the most disparate elements and details may be linked. Moreover a rhizome is continually dynamic and is ceaselessly actualised by the arousal its dynamism produces and thus it is never in accord with some preestablished strategy or imposed configuration. The rhizome is regularly swarming itself into being as micro and macro factors attract. One cannot declare in advance what its limiting confines are or where it will or will not operate

nor what may become connected and tangled up in the rhizome's multiple dimensions because the connections do not inevitably plait common types together. Rather a rhizome's multiple dimensions instigate cross-overs between both the highest synthetic level and the slightest, most minute discrete distinctions. An immersive rhizome world would be a complication of perceptual vicissitudes so intertwined that it gives birth to different scopes of phenomenological macro-perception. (Deleuze & Guattari, 1994)

We must remember when reflecting upon immersive worlds rhizomaticaly, that in the human brain the cortex feeds-back to the thalamus a complex set of inhibitory controls which allow it to have a measure of control over what it is being fed, so as it does not become overwhelmed by excessive amounts of sensory input. However immersive worlds are always excessive in that their surrounding spatial incidents necessarily overwhelms the optic boundaries and hence fully reveals itself only little by little. It is precisely this latent excess (i.e., the insinuated informational intensity) of immersive worlds which defines immersive desire; a desire synchronous with the absolute partiality, inadequacy and incompleteness of our frontal perceptions. Hence immersive worlds are excessive in that the sheer informational over-abundance of *intense visual data distributed around one* prevents one from apprehending it all in a single intuitive act. Indeed, as Massumi reminds us, "intensity is the unassimilable". (Massumi, 1995, p. 88) Therefore the term *total-immersion* being used here in respect to virtual aesthetic worlds merits an explication as an *intense saturating abstract experience* of *latent excess* which implicates the bipolar spectator's instinctive responses by showering perception/cognition in an *implied excess of aesthetic information*.

We must, additionally, consider that VR takes place in a general media culture of massive electronic deluge where the mercurial reproduction of the free-floating (ineffable) signifiers of language, sound and images have blurred into a problematised complex/compound prodigality referred to as "information-overload". (Lilly, 1974, pp. 108-109) The velocity of human symbolic communication and the ability to co-ordinate human activity has reached the blurring speed of light (Davis & Meyer), a phenomenon which was described by Marshall McLuhan (1911-1980) in *Understanding Media: The Extensions of Man* as an *extension* of the anthropomorphic nervous system. (McLuhan, 1964) That was over thirty years ago. More recently Paul Virilio argued that the acceleration of the flow of information transforms our nerve-space not by extending it, but, by contrary, through what he calls optical technology's *shrinking effect*. (Virilio, 1991a) Here I am not in agreement with Virilio. Technologically stimulated immersive nerve-space is enduringly perceptually rich and significantly vast due to the essentially excessive perspectivism which immersion's latent/potential 360° surroundings offer. Immersive macro-perception challenges automatic frontal assumptions by *expanding peripheral rim alertness and heightening layered spatial attention*. The shift in perspective which it offers us through immersive spatial excess overwhelms and expands the confined spacio-rational threshold and floods it with optic input from the 360° view's middleforebackground, middlebackforeground, middlebackmiddleground, middlebackbackground, backforeforeground, backforemiddleground,

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backforebackground, forebackground, foreforeground, foremiddleground, middleforeground, middlemiddleground, middlebackground, backforeground, backmiddleground, backbackground, foreforeforeground, foreforemiddleground, foreforebackground, foremiddlebackground, foremiddleforeground, foremiddlemiddleground, forebackforeground, forebackmiddleground, forebackbackground, middleforeforeground, middleforemiddleground in the holonogicly mindful observer. This means that the full apprehension of the compositional order of an immersive space is never shrunken but always deferred and held in suspension until even more information is admitted. (Bryson, 1983, p. 121) Such a holonetric position is only plausible if the epistemological orientation for an immersive theory tends to be *a critical hyper-holonogic awareness based on the way that the immersive sliding-standpoints reorganise enhanced and mobile eyes towards an all-over orb that is less allied with frontality and more allied with omni-directional peripheral visuality*. Such an expanded/extended visuality is a pivotal immersive cyber effect on human potentiality which Heim characterises as indicative of a current "epistemology of the peripheral" (Heim, 1998, p. 178): as immersants within cyberspace often experience an augmentation of corporal/sensorial powers by perceptually forgetting (through distraction/overwhelmment) the frontality of their body's eyes, by temporarily losing self-consciousness and by seeing their body representative peripherally as if from the outside as a mock-up cyber-puppet. (Turkle, 1993) As Heim points out, this artistically/technologically enhanced cognitive-vision of the peripheral (which "notices changes in the environment more quickly than central or spot perception") finds its "analogy in electronic tracking". (Heim, 1998, pp. 178-179)

Hence only conceptions of relaxed, dilated, scanning 360° eyes can adequately represent the insinuated visual potential suggested by hyper-real space and only transformative notions of the hyper-real peripheral eye (which is linked "more directly to the subconscious nervous system" (Heim, 1998, p. 179)) can accurately reflect the massive transformational effect of copiously webbed high-end immersive technology. Here we see the relevance of the concept of *peripheral excess* in analysing hyper-real situations, as it is discernible to me that only an excessive opulence which exceeds the borders of the simple non-decadent can offer an elucidation of our implied 360° puppet-eye afloat and mirrored in the periphery of homogeneous hyper-real data-space.

Hyper-reality is the name of the omni-territorial/excessive spatial presence felt when immersed within chimerical (usually inorganic) fabricated worlds (in VEs' case digitally fabricated) *when experienced with the full awareness of said artificially*. (Eco, 1986) Artistic, digital, immersive hyper-reality formulates unaccustomed experiences of space by fashioning optical excessive conditions that in one sense validate the modernist assumption of Western classical space (a space which is harmoniously homogeneous) due to the homogeneous digital (and telematic) obligatory codes and configurations. But in another sense, they are opposed to that fathomable homogeneous space through their inevitable unfathonamable optical excess, an

excess which calls for a 360° holonogic hyper-perception. Such a corrective/excessive holonogic hyper-real opticality is indicative of the sensation of what in French is called *dépaysement;* the feeling of *being here now* but not knowing where here is. (Maubourguet, p. 320) In this way virtual aesthetic interests in optical excess may participate in the tradition of transcendentalism. (Boller)

The insinuated optical excess of immersive hyper-real dépaysement promotes also circumstances of dithyrambian excess when all-over ornamental qualities come into consideration in that the *dithyrambic* is that which is unmeasured, ornately circuitous, and rhizomaticaly flowery. In the optical excess of immersive hyper-real space, forms may enmesh and contradict, altering and disrupting the mundanity of communications in an inexorable and chimerical way. In psychological and neurological terms, such a dithyrambic excess is the opposite of a percipient deficit. While a cognitive deficit is an impairment of mental functioning preventing a complete representation of experience in consciousness, a *cognitive excess* is an *abundance of meaning*. As such it is antithetical to established norms of visual-cognition on principle. (Ricoeur, 1976) Such a dithyrambic visual hyper-logic has manifested in all modes of decadent artistic periods; from the Hellenistic and Flamboyant Gothic, to the Mannerist, Rococo, and Fin-de-Siècle, as they all opposed dogmatically imposed ocular paradigms with hyper-engendering strategies.

When the idea of simplicity takes on the intensity of a righteous injunction, the implied equation between simplicity and goodness obscures a less evident function: that of cognitive constraint. Such umbrage runs counter to what Georges Bataille (1897-1962) considered to be the non-hypocritical human condition, which he took as being roused non-productive expenditure (threshold excess) entangled with exhilaration. (Bataille, 1989) For the finest comprehensive overview of Bataille's thought in this regard, see his book *Eroticism* (along with Hollier's book on Bataille's general postulates, *Against Architecture*). Excess is, for Bataille, not so much a surplus as *an effective passage beyond established limits*, an impulse which exceeds even its own threshold. For Bataille, examples of non-productive excess/expenditure can be found (in varying degrees) in forms of luxury, lamentation, spectacle, art, poetry, erotic activity, and mystical endeavours; some of which place an emphasis on a loss that must be as great as possible in order for that activity to take on its fullest meaning. (Bataille, 1988b)

One consequential effect of immersive excess has been an emphasis in VR research on internal, phenomenological cognisant models (such as the psychological ego-centre, the character of the individual's mental field-of-view, and the subject's psychological motivational drive; factors which raise the felt intensity and hence persuasiveness of immersion) rather than on external, objective constructs alone (such as FOVs' and FOVg's span, size, and grade). (Beer) What has been determined is that the degree an immersant feels totally immersed in an optically excessive virtual space, depends to a large extent on personal psychological

need and adaptability in accord with the proposed spatial depth cues. The cognitive-aesthetic space has to be co-ordinated phenomenologically with the proprioceptive space of the eyes. (Psotka, Davison & Lewis, p.72) As I mention phenomenology here, I shall briefly relate what it is. Fundamentally phenomenology is a philosophy of experience but the term *phenomenology* is often used in a general sense to refer to "subjective" experiences of various types; thus it becomes relevant to an investigation of immersive artistic states, in so far as it is a descriptive science which covers the chief features of experience taken as a whole. It is, in this sense, the study of all possible appearances in human experience during which considerations of so-called *objective reality* and of purely *subjective response* are temporarily left out of account. (Spiegelberg) In the philosophical sense phenomenology begins to redress the alienation between objectivity and subjectivity (Arendt, p. 6) as initiated by Kant in his *Critique of Pure Reason* where Kant proposed that humans do not see the world objectively but rather see it through a number of ideal and subjective theory-laden categories. (Kant, 1965) Philosophical systems and aesthetic theories receive their standing as truthful and useful abstractions, through the human experience of the phenomenological relationship to the world. (Husserl, 1982)

More narrowly, phenomenology is a school of philosophy whose principal purpose is to study the phenomena of human experience while attempting to suspend all consideration of objective reality or subjective association. (Merleau-Ponty, 1952) It will be applied to immersive phenomena here as it inspects aspects of aesthetic cognition and perception. Historically, phenomenology is the philosophical movement initiated by the German philosopher (and teacher to Aaron Gurvitch) Edmund Husserl (1859-1938) in circa 1905 and his systematic study of consciousness from a first-person standpoint. Husserl's crucial contribution to philosophy was his methodical disclosure of how meaning emerges in our consciousness of the world by our becoming conscious of our internal rapport with the world. What is relevant to this discussion is Husserl's formation of a new field of experience, the field of *transcendental subjectivity*; which according to Husserl, incorporates a method of access to the transcendental-phenomenological sphere in which Husserl claimed his transcendental idealism advanced beyond common idealism, *beyond common realism, and beyond the very distinction between these two ideas*. (Husserl, 1982) With the advent of phenomenology rigorous studies of the working of consciousness were undertaken, most noticeably by the French philosopher Henri Bergson (1859-1941). (Bergson, 1969)

In terms of virtual worlds it is pertinent that Husserl should favour a spatial comparison when presenting his phenomenology, as the spatial comparison invites immersive investigation. Husserl maintained that his *transcendental phenomenological idealism* did not disavow the extant actuality of the material sphere, but instead sought to elucidate the sense of the world in contrariety to Immanuel Kant's *Critical Idealism* (which disavowed, through the faculty of the negating imagination, a discursive absolute as constituted in the sensual realm). (Solomon) As a discipline, *transcendental phenomenology* is allied not only with Husserl however,

but also with other European philosophers, principally Martin Heidegger, Jean-Paul Sartre (1905-1980) and Maurice Merleau-Ponty (1908-1961). Their *existential phenomenology* departs however from the transcendental phenomenology of Husserl in that it stresses the embodied nature of human consciousness and views bodily existence as the original and originating material premise of sense and signification. Merleau-Ponty tried, for example, to ground perceptual distinctions in post-World War II brain research and show that there were well-founded modalities by which human beings relate to things around them in the world. (Merleau-Ponty, 1952)

Merleau-Ponty's importance in immersive terms, is based principally on his texts *The Phenomenology of Perception* and the *Visible and the Invisible* in which he outlined much of modern ontology. In them Merleau-Ponty emphasised the structure of perception rather than the interior formulation of consciousness. His phenomenology is particular, also, in that he categorically affirms the reality of the world around us external to consciousness; therefore, much of his philosophy consists of a refutation of certain idealistic suppositions. (O'Neill) In doing so however, Merleau-Ponty discovered a new type of being which he came to call *hyper-being.* In *Phenomenology of Perception* he defined hyper-being as the *expansion of being-in-the-world*, an immersive hyper-real predilection. (Merleau-Ponty, 1952)

The *phenomenology of hyper-being in digital hyper-reality (when considered within the confines of its own supposition) accepts an infinite spatial potentiality as a metaphoric function of its own apparent vastness, a vastness which radiates out in 360° from a central immersant ego-centre*, even though one is literally always looking in front at the absence of physical distance at a feigned sunless sublime. (Barlow, 1990a) This virtual sublime, like all and every sublime, is founded on principles of wonderment and consternation. (Hertz) Indeed the term *sublime* specifically refers to an aesthetic value in which the primary factor is the presence or suggestion of undivided vastness and immense breadth of space which is unable of being completely ascertained. (Rucker, 1984)

The sublime concept first emerged as such as the topic of an incomplete treatise entitled "On the Sublime" that is believed to have been written in the mid-3rd century AD by Cassius Longinus (3rd century AD). The author of the treatise defines sublimity as: (1.) *excellence in language*, (2.) the *expression of a great spirit*, and (3.) *the power to provoke ecstasy*. (Longinus) The immersive sublime, from the combined point of view of Cassius Longinus's last two definitions, is apprehended and grasped as a totality while at the same time experienced as exceeding our usual lucidity, therefore provoking a sensation of awe (as recognised by Cassius Longinus). Centuries later the term was given special prominence by Edmund Burke (1729-1797) in his 1757 *A Philosophical Enquiry Into the Origin of Our Ideas of the Sublime and Beautiful,* one of the most popular 18th century treatises on aesthetics, translated into French in 1765 and into German in 1773. According to Burke, the sublime feeling (which contrasts with that of the beautiful) is caused by an admixture of terror,

admiration, apprehension, and supra-attention. Burke maintained that the life of the spirit depends on this type of awe in agreement with the immense scheme of the universe. The sublime also stands in opposition to the aesthetic concept of the *picturesque*, whose characteristics are luxurious intricacy and calmly poised diversity. The leading theorist of the picturesque was William Gilpin (1724-1804) with his 1792 *Three Essays on the Picturesque*. (Gilpin) In contrast, Burke attributes the sublime sense of pleasure/terror to a heightened tension of the nervous system which distances us from the state of calm indifference that is the normal condition of life. (Burke) Exactly because of this stimulation of the nerves, the sublime (as safe terror) is agreeably engaging, even as this psychologically intense feeling is bound up with our sense of mortality in an existential way similar to the terms of Jean-Paul Sartre's *Being and Nothingness*. (Sartre, 1968)

Burke's text was an operative influence on Immanuel Kant's 1790 *Critique of Judgement*, a text where Kant analysed the sublime in terms of our rational responses and where he distinguished beauty (which can be rationally perceived) from the sublime (which is an emotion invoked by the limitlessness). (Kant, 1960) Kant however, after confirming the Burkian sublime qualities as those which exceed perspicacious comprehension, rebutted Burke's conclusion by subsuming the sublime to a reaffirmation and an aggrandisement of the subjective self. (Hertz) Thereafter, akin reflections were articulated by the philosopher Friedrich von Schlegel (1772-1829). (Schlegel)

Caspar David Friedrich, *Voyage Above a Sea of Mist*

Consequently the German artist Caspar David Friedrich (1774-1840) painted solitary figures immersed in expansive vistas. Friedrich's paintings *Monk by the Seashore* and *Voyage Above a Sea of Mist* are good early example of what is meant by the sublime in painting. The small figure, immersed in a vast space, evokes a breathtaking incomprehension of the immeasurable, a sense of grandiose boundlessness, and an appreciation of one's own microscopic measure and cosmic irrelevance. Corresponding Friedrich were the English artists who also painted landscapes of sublime spatial infinity; Joseph Mallard William Turner (1775-1851) and John Constable (1776-1837). Turner's *Light and Colour* (1843) and *Snow Storm: Steamboat off a Harbour's Mouth* (1842) implicitly includes the viewer into the midst of a vortex of water, mist, and smoke. Certainly one of

the most immersively telling aspects of Turner's work was when he lashed himself to the mast of a stormy ship at sea, an experience which provided him the sublime immersive ideal on which he based some of his work. By contrast Constable painted visions of tranquil sublimity and placid equanimity which stressed an amicable co-existence with nature in a continuum of infinity, as evidenced by his 1821 large painting *Haywain*.
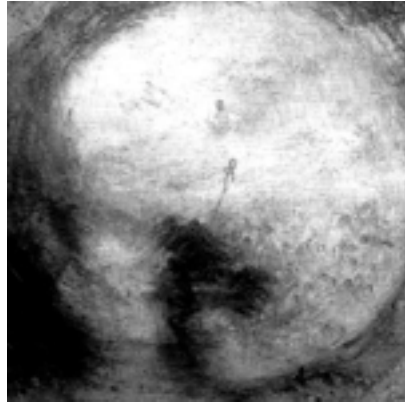
Joseph Turner, *Light and Colour*

John Ruskin (1819-1900) employed the term *sublime* in his *The Seven Lamps of Architecture,* which contains his most elaborate shaping of a theory of sublimity (Ruskin, 1849) and more recently Jean-François Lyotard, post-modern theorist and curator of the important *Les Immatériaux* (Immaterial) exhibition which was held at the Centre Georges Pompidou in 1985 (Lovejoy, 1997a, p. 161) defined a new *technological sublime of indeterminacy* as the exemplary basis of Post-Modernism. (Lyotard, 1984a)

Methodologically an emerging immersive theory must endeavour to achieve a discernible integration of this sublime state of copious formlessness into an analysis of artistic manoeuvres. This will be accomplished in Section B and in the conclusive Section C.

AIV: Immersive Metaphysical Awareness: Issues of Vastness and Intimacy

I feel that the world is at once inside my head and outside it, and the two, inside and outside, begin to include one another like an infinite series of concentric spheres.
-Alan Watts, *The Joyous Cosmology*

The instant of creative spontaneity is the minutes possible manifestation of reversal of perspective. It is a unitary moment, i.e., one and many.
-Rail Vaneigem, *The Revolution of Everyday Life*

Under the pressure of the technological revolution we have been compelled to review our conceptions of structures and operational modes of desires and corporal signs, and their corresponding dimensions in the imaginary, the symbolic and the real.
-Peter Weibel, *The Picture after the Last Picture*

...the infinite. I once longed to compile its mobile history.
-Jorge Luis Borges, *Labyrinths*

A subtle chain of countless rings
The next unto the farthest brings
-Ralph Waldo Emerson, *Nature*

The philosopher Don Ihde has scrutinised technology by arguing, not surprisingly, that human consciousness is changed by the utilisation of it and that technologies *amplify* or *reduce* consciousness in various ways. (Ihde, 1979, p. 53) However the *desire* for an amplified or reduced consciousness, I maintain, necessarily pre-dates the existence of the technology, or it will simply be ignored. In his definition of four-dimensional space (Henderson) in the *Tertium Organum,* Peter Demianovich Ouspensky (1878-1947) shows us that as our consciousness changes and develops, our sense of space changes and develops also; that the dimensionally of our world depends on the development of our consciousness. Space is the multi-dimensional mirror of consciousness, according to Ouspensky. (Ouspensky)

In terms of how immersive technology affects consciousness, I have detected that there are two initially distinct types of immersive psychic space in VR (even though this simple division must be partially obscured by a number of other, in part, overlapping spectral distinctions). Nevertheless there is, generally speaking, *cocooning* and there is *expanding* immersive psychic space involved in immersion. *Cocooning immersive space* is when we feel immersed in a sealed, sheltered, enclosing space; the psychological fortificational remnant of the fusion between mother/me. (Stern) *Expanding immersive space* is when we feel immersed in a defamiliarised, unrestrained, and expansive space; the psychological prominence of a discovered me/universe fusion. (Watts, 1973) In VR, expanding immersive space is felt (paradoxically given the restraints of the display hardware) when the ontological subject feels surrounded by the vastly stretched edges of the digital space's parabolic frame (Barlow, 1990a) and thus psychologically moves into an extensive, cupola-like, immersive orb. As a pre-VR example of an expanding spatial consciousness tool, we may turn to Philip and Phylis Morrison's book *Powers of Ten* (Morrison & Morrison) or the eight minute film/video based on the

book (made in two versions: 1968 and 1977 and now re-tooled as a CD ROM) by the important American designers Charles Eames (1907-1978) and his wife Ray Eames (1916-1988) which takes us on an excursion across 43 orders of magnitude. It starts by observing a picnicking couple in a park in Chicago and subsequently zooms out by the power of ten to the outer reaches of the universe. Thereafter, it zooms back into the picnic, penetrating the hand of one of the humans and in conclusion ends up in an artist's conception of subatomic particles in the nucleus of an atom. Hence it puts all of our ensuing observations in the context of the many orders of magnitude which make up the full range of the universe.

Technically it employs the artistic procedure of latent excess by showing viewers more than they can absorb in the time allowed, as images are a fraction too short to imprint on the mind's eye but not so short as to be subliminal. In this respect, immersive expansive exploration into immersive states (levels) warrants the term *excessive topophilia*, for it seeks to determine the value of an open space which refuses to be simply comprehended. (Eco, 1989) In expansive immersions, cocooned psychological space becomes sublimated and thereby has the capacity to convert individual unconscious imagination (i.e., artistic urges) into expanded art via an externalised fancy midway between restrictive reality and wish-fulfilling inception.

When I use the terminology *expanded* here I am referring to the rich meaning given to it by Gene Youngblood in his book *Expanded Cinema* as that which transgresses and exceeds the customary boundaries of our optic encounters. When Youngblood discusses what he calls "expanded cinema" he refers it to an "expanded consciousness". (Youngblood, p. 41) Such a predisposition towards expansion counters Neil Postman's valid point that "embedded in every tool is an ideological bias, a predisposition to construct the world as one thing rather than another, to value one thing over another, to amplify one sense or skill or attitude more loudly than another". (Postman, 1993, p. 13)

That expanding immersive consciousness is a natural, as well as virtual, phenomenon seems hard to dispute as it is also an extraordinarily salient part of being spatially conscious within vast, open, natural settings (from where the virtual simulation draws its secondary associative powers). Still Youngblood's emphasis on expansion in terms of art is a wonderfully pliant metaphor when addressing that aspect of virtual immersion which seems to provide a rainbow-bridge between an individual's cocooned immersive micro-perceptions and the vast expanses of non-figurative space. In this sense certain projects of the previously mentioned Knowbotic Research KR+cF group, such as their *Simulation Mosaik Data Klaenge* project and the *Dialogue with the Knowbotic South* project (Atzori), are exemplary. Knowbotic Research KR+cF have theorised this sense of vast non-figurative space in virtual terms as the "incomprehensible dimension" where "numerous constellations (layers) of events" occur. (Knowbotic Research KR+cF, 1995, p. 1 in the unnumbered Introduction). They go on to say (on the same unnumbered page) that such an awareness of vast non-figurative space requires us to "part with our two-dimensional imagination and three-dimensional

reconstruction habits, challenging us to develop an abstract multidimensional imagination instead". More will be said on Knowbotic Research KR+cF's important work in BXXIII.

By vast non-figurative space I am referring also to that non-anthropomorphic awareness of space as outlined in Freeman Dyson's book *Infinite in all Directions*. Here Dyson explains that we exist immersed in a spatial omni-unboundedness. (Dyson) So does John Gribbon and Simon Goodwin's book *Origins: Our Place in Hubble's Universe* which, especially when read in tandem with the Dyson book, conveys the overwhelming impression that we are closer to everything/nothingness (Nishida, 1987) than we generally imagine, here on this beautiful planet of a fourth-division star's solar system in a universe 15 billion years old. (Gribbon & Goodwin) When proportion is extended to that degree, all reductivist theories pale in favour of an enhanced awareness of immersive expansion in service of an expanded ontological understanding of spatial unity. (Koyre)
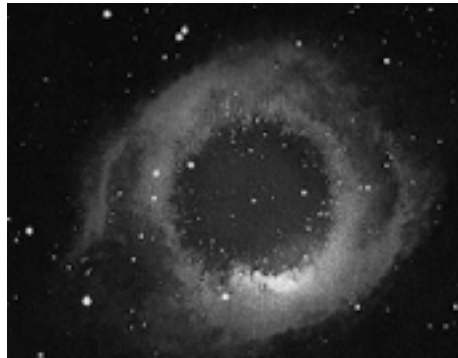
![The Helix Nebula]

The Helix Nebula

Walter Stace however divides the concept of undifferentiated unity into two different ways of experiencing it: into internal and external ways (nearly cocooning and expansive in my terms). The cardinal difference between the two, according to Stace, is that the internal way finds unity through an inner world, while the external way finds unity through the external world. (Stace) However, I do not find these two positions mutually exclusive. Indeed what came to my attention through my allocentric virtual experience was the conflation of these two ways of conceiving concordant space. Thus what I think immersive art (and particularly virtual immersive art) can do pretty well, is to define the membrane between these two ways. Correspondingly, we can accentuate the dialectic between cocooning immersion (with its psychic task of protecting) and expansive immersion (with its psychic task of enlarging) or we can return to the proper sense of undifferentiated unity and cast out the difference, if we view these two types of immersion as waves in the rhythms of a mirrored immersion which extends in both directions well outside the personalisation of the individual. Through the examples cited in Section B of this text we shall see how beatific aesthetic environments act upon both inner and outer psychic space through an exaltation which unites the two psychic immersive poles: (1.) cocooning (that psychic space which concentrates and protects in comfort and safety)

with (2.) expanding (that enthused psychic space which opens up perception and cognition and expands it out into the total field of vast space); in a way which reinforces Gilles Deleuze's statement that "the interior is only a selected exterior, and the exterior, a projected interior." (Deleuze, 1984, p. 125)

Concerning the mirroring of the total field of vast space, in his brilliant book *Poétique de l'espace* (The Poetics of Space) Gaston Bachelard (1884-1962) speaks of the French poet Charles Baudelaire's (1821-1867) frequent use of the word *vast*, which is, Bachelard claims, one of the most Baudelairian of words: the word that marks naturally, for this poet, the infinity of intimate space which I referred to above. This, at first seemingly paradoxical statement, is correct, for Baudelaire is above all celebrated as a poet and practitioner of *double consciousness*: incarnating two intertwined natures. Apparent polar opposites play against (and ultimately with) each other dialectically in his thinking; such as the themes of the naked and the adorned, the female and the male, Venus Blanche and Venus Noire, and of course even more non-sensibly opposed, flowers and evil. (Sartre, 1949) It is this Baudelairian *tension in resolution between two ostensible opposite spatial directions* which informs the integration of cocooning and expanding understandings of immersiveness here. Moreover, Baudelaire's theoretical writings were, like within the rhizomatic model, based upon the flexibility of a multiple/unified acuteness in general. (Baudelaire, 1966)

Bachelard says of Baudelaire's word *vast* that when one has become hyper-sensitive to this word, one sees that it denotes attraction for felicitous amplitude. Moreover, if we were to count the divergent usage of the word *vast* in Baudelaire's creative writing, we should be struck by the fact that examples of its detached use are rare compared with the instances when the word has more intimate resonances. Whenever a manifestation, a consideration, or a fancy was touched by grandeur, this word became indispensable to him. (Bachelard) For example, in Baudelaire's *Le Mangeur d'Opium* (The Opium Eater) the opium eater must have a vast amount of leisure to derive benefit from his soothing daydreams. (Baudelaire, 1966) Bachelard says that it is no overstatement to say that for Baudelaire, the utterance *vast* is a metaphysical contention by means of which *the vast world and vast thoughts are united*. But truly this grandeur is most active in the realm of intimate space (cocooning immersive space), for this grandeur does not come from the spectacle witnessed, but from the unfathomable depths of vast thought. This corresponds to a melting of the individual's limits, which were formerly sharply outlined, in favour of a new organisation of awareness which Emanuel Swedenborg (1688-1772), principally, furnished Baudelaire. Swedenborg's unitary theory provided the metaphysical basis for many artists of Romanticism, including Turner, Constable and Friedrich. Swedenborg posited that matter consists of particles that are indefinitely divisible, and that these particles are in constant vortical (swirling) motion. Furthermore, these particles are themselves composed of smaller particles in motion, an idea which strongly resembles the modern conception of the atom as described in terms of a nucleus and its electrons. Moreover, Swedenborg wrote voluminously concerning what he saw to be the correspondence between the spiritual and the material planes (i.e., the viractual) and he consistently maintained that there was an infinite,

indivisible power to life; an idea which reinforced the neo-Platonic sublime ideals of Romanticism thoroughly. (Synnestvedt)

Romanticism (circa 1795-1840) - the cultural movement inspired by the writings of Edmund Burke and the French philosopher Jean Jacques Rousseau (1712-1778), among other - focused on individual passions and inner struggles and hence produced a new outlook and positive emphasis on the emotional artistic imagination which became perceived as a gateway to transcendent experiences of unity. Bachelard says of Baudelaire's Romantic notion of vastness that the exterior spectacle (i.e., expanding immersion) helps intimate grandeur unfold (i.e., cocooning immersion) and that the word *vast* for Baudelaire is the word that expresses the highest synthesis, as vastness has no delineation. For Baudelaire the word *vast* reconciles contraries, for example in the line "As vast as night and light" in a poem about hashish which Baudelaire wrote in *Les Paradis Artificiels* (Artificial Paradises). (Baudelaire, 1966) Bachelard points out how Baudelaire's use of the concept *vast* implies deep and somber concord and a readiness to amalgamate dislocated profusion. (Bachelard) Consequently, it is through Baudelaire's thoughts on vastness that we discover that the immensity of the intimate domain is *revealed through intensity* (now understood as Massumi's already mentioned "unassimilable" (Massumi, 1995, p. 88)); for *an intensity of concentration in union with openness is a prerequisite to feeling the richness of immersive experiences themselves*. This intensity of being involved in a vast and immense perspective (in for example a 360° FOV VE) offers not only an opportunity for visual perspective expansion and placement dislocation, (or Knowbotic Research KR+cF's non-locations (Hoekendijk, pp. 3-8)) but perhaps even more importantly, a correspondence to the intensity of our intimate (cocooned) being. Thus VR's potentially unencumbered total and expansive immersive space can be an agency of transaction between the immensity of non-figurative external vastness and the intensity of our intimate private being. For if we take Baudelaire's meaning of the word *vast* and apply it to our own personal life-world (that process which is taking place between us organisms as well a within us) we can sense and comprehend how his particular utilisation of the word addresses both cocooning and expanding immersive space. Through Baudelairian vastness we can see how both notions of *in* and *out* (of the edge/frame) are contained in a potentially unimpeded complex mirrored amplitude that deepens both the inside and the outside because they both extend as part of a vast potentially unfettered bi-directional scope. In virtual-immersion, potentially unimpeded vast opposing directions lose their position and meet in an enhanced rhizomatic/holonogic cognitive-ocular space of circling connectivity.

This immersive rhizomatic/holonogic cognitive-ocular-psychic condition, then, involves the exaltation of the void and the melting of frontiers as it expands both inwardly and outwardly, to envelope from both sides a felt understanding of the potentially unfettered immensity and myrrh of the universe. Hence the two kinds of immersive space (intimate cocooning and exteriorised expanding) encourage each other, as it were, in their mutual growth. Thus *the spatiality of aesthetic immersion is a space which goes from deep intimacy to infinite*

extenuation. (Rucker, 1984) It is through the ideas of vastness and excess which I found in immersive art, that these two categories of immersion (cocooning and expanding) blend, for when the two immensities touch, run over, and become akin, human comprehension both deepens and amplifies. Then (as fostered by immersive art) we really are capable of entering into the expansive constitution of our being. (Von Foerster & Zopf)

Immersion, when conceived and lived in this mirrored immensity, is by necessity an instrument of excess as all reflection is foreordained to amplify omni-spatially, setting up an implicit metaphysics of mirrored (double to infinite) expansion. This double to infinite mirrored expansion includes, of course, multiple organisations of spatial thought which exceed expectations of verisimilitude. Thus the investigator of artistic immersion must follow the immersive state in both directions without reducing ever the extremism of the immersive phenomenon, but rather let this extremism grow within the macro-perceptions of immersive-holonogic consciousness fully.

Such an immersive richness suggests the fluidity and ephemerality of an expanding but centred mirrored-being (Berman, 1983) and as such connotes an ontological reflexive inclination based on expanding complexity: the presumed essence of vitality. (Waldrop) This centred vitality might be described, as John Cage (1912-1992) suggests, as "central to a sphere without surface, (...) unimpeded, energetically broadcast (...) as transmission in all directions from the field's center". (Cage, 1966, p. 14)
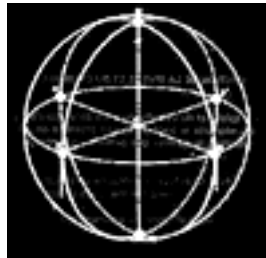
Hence with Cage's help we have a sense of immersive space originating in a centre (our consciousness) and both radiating outward and inward; aligning our consciousness with the presumed holistic traits of absolute space. (Lefèbvre) By examining the cocooning and expanding rhythms of our psychic space through the various spheres of immersion we might conceptualise, with the help of art (and identify thereafter in life), the edges of the frame of our cognition (the frame semi-forced on us by the social and psychological conditioning of empiricist/positivist philosophy (Comte)) and really feel the finer levels of immersion as they reveal themselves to our more exquisite sensibilities. Because we never succeed completely, immersive consciousness is tragic. Because we never stop trying, immersive consciousness is comic.

AV: Idealistic Postulates Behind Immersive Contingency

Every individual is constantly building an ideal world within themselves, even as their external motions bend to the requirements of soulless routine.
-Rail Vaneigem, *The Revolution of Everyday Life*

To overturn Platonism: what philosophy has not tried?
-Michel Foucault, *Theatrum Philosophicum*

The world and life are one.
-Ludwig Wittgenstein, *Tractatus Logico-Philosophicus*

The cinema is an idealistic phenomenon.
-André Bazin, *The Myth of Total Cinema*

We know quite well how all ideals, how all symbols in fact, can be readily adapted to fit the dictates of social power. (Foucault, 1975) However, we also know that ideals are indispensable in creating possibilities for change. (Berber, 1969) Accordingly, I must discuss briefly the existence of another subtle set of supposedly dialectical oppositions: *realism verses idealism*, which my thesis brushes on.

In philosophical terms, *realism* is fundamentally subordinate to the assertion that reality is distinct from thought, while *idealism* rests on the contention that we can only comprehend in terms of abstracted representations and as such idealism holds a problematic relationship to material reality. In my view, based on what has come before in defining immersive consciousness, these oppositions cut across one another within total-immersive models; a view which compliments Edmund Husserl's original intention to go philosophically beyond the incessant binary choice between idealism and realism in the formation of his phenomenology. (Husserl, 1982) If we amend this division within a conceptual homogeneity, as Husserl and I have attempted to do, I believe we are much closer to the truth of the matter as concerns the experiential levels of aesthetic immersion.

Immersive VEs are emblematic ideal non-spaces given their sealed holistic constitution as all representations of the corporeal, if desired, can be removed from the space *with no visible vanishing point and no horizon*. Hence they are, in Heim's assessment, a form of "Platonism as working product". (Heim, 1998, p. 105) Given the preceding discussion of non-figurative external and inner Baudelairian vastness, the co-constitutive, reversible, mercurial relations betwixt electronic immersive technologies and the disembodied affect encountered at times in immersive hyper-space (Barlow, 1990a) invites an investigation of homogenaic idealisms and their place in immersive art, even while acknowledging that the notion of an *ideal* is far from unproblematic. Moreover, the task of the philosophically-based theorist of immersive art is to determine (speculatively) just what the ideal goals and objectives of immersive art are (or might be) so that specific synthetic-immersive-creations may be compared to whether they contribute to the fulfilment of such ideal

ends, or omit, or even hamper them. Thus they must first be identified clearly. After two and one half years of intensive research I can state with assurance that the ideal, formal, constructional VE visual objective is *360° omni-spatial, holonogic optic range*. How this ideal end impacts on ontological realities, we shall now attempt to see.

Total-immersion into a computer generated data-space, and the impression of precisely and fully *being there* (presence or telepresence), is customarily proclaimed to be a consequential feature (while also being the ideal goal) of the Virtual Reality experience. (Heim, 1998, pp. 17-19) Indeed total-presence (or at least the more presence the better) is considered the defining characteristic of a good VR system. (Psotka & Davison, 1995) However this proclaimed feeling of *being there* is in no way a simplistic unproblematic occurrence. The general impression when feeling *present* within an electronic scene is that of *existing (totally and fully within total-immersion) within a pervasion dispersion*, as electronic presence is intimately bound-up in a cerebral, network-like, spread of immediate stimulation mixed with docility. How immersed one feels appears to be determined by a compound collection of corporeal components in agglomeration with the surroundings; as yet an inadequately understood psychological processes. (Ray) However, there appear to be two psychological factors dominant in predicting the depth of immersion in a simulated world. One is the *imagination* necessary to accept another reality and to participate in it fully and satisfactorily. The other factor depends on the *concentration, attention and self-control* needed to shut out the distracting effects of the real world in order to enter another world apart. (Psotka & Davison, 1996) But the question of how pre-VR concentrated/imaginative acts became embedded in the genealogy of VR technology so as to affect VR's underpinnings and perceptual disposition is not so immediately evident.

While reflecting on the above during the first week of July 1997, I, along with most of the world, watched the Pathfinder Mission's telematicly controlled robo-eye scuttle across the surface of Mars (some 191 million kilometres (118.42 million miles) from earth) to observe and record its barren terrain. With the incredulity of the once fairy tale-like roving telematic star-eye removed, our ideal (and extant understanding) of vision was dramatically altered in favour of the once fictional farfetched. In that issues of imagination and fictionality apply to the sense of presence in a VE, pertinent is John Ronald Reuel Tolkien's (1892-1973) account of how fiction works. According to Tolkien, when a writer's art is good enough the writing produces in the mind a predisposed suspension of credulity. This mental state entails an enchanted subsidiary suspension of disbelief which, according to Tolkien, unleashes an unencumbered, mobile, detached, inner-eye. Tolkien points out however that a suspension of disbelief in favour of idealised assurance is not all there is to it. What particularly happens in the closing of that plausibility gap is that a *sub-creator* (the detached inner-eye) appears inside of the idealised consciousness and creates a *secondary world*, one which may now be competently encroached. Inside this secondary world what is proposed *becomes true* as the proposition accords with the inner laws of that world. The proposition is believable so long as one is inside the idealised

totality of this secondary world. With misgiving, that hex is broken and the art fails to produce the secondary world state of mind any longer and one is released back out into the *primary world,* gazing at the beguiling secondary world from outside of its idealisation. (Tolkien, p. 37)

Along these lines, Dr. John Suler in his on-line essay "Cyberspace as Dream World" speaks also of primary and secondary mental worlds and reminds us that psychology has mapped out many of the mental components of dreams and other altered states and labelled them *primary process,* a style of thinking and experiencing that is quite different from normal waking states of consciousness (called *secondary process).* (Suler) Regardless of which world is deemed primary, the important thing is that we recognise the existence of psychic immersive worlds, complete with boundary frontiers which may be breached. When immersively active, the psyche immersed in a hypothetical world eclipses momentarily the "normal" world (Suler's secondary process) where idealistic implication attains ontological actuality. The immersant is no longer in front of an image (mental or graphic) *but inside of it*, self-positioning being temporarily within that feigned and ideal world.

This operation concerning the production of internal idealisms pertains to immersive art, in that idealism - as defined from the perspective of art history - generally maintains that the artist should not strictly chronicle the world as seen, but ought to ameliorate it by favourably selecting a supposedly superlative ideal, thus improving upon nature. The philosophical justification for this brand of artistic idealism comes from Plato's *Theory of Ideas*, whereby the forms we see in this world are but imperfect versions of the true forms of the mind. (Barasch) In real terms, the Greek ideal of human beauty and proportion was arrived at by a process of selection between different types of men and women, a strategy of discrimination and differentiation. (Martin, T.)

In contemporary Western culture the ideal model of life has, broadly speaking, taken on the form the celebrated pseudo-sexy/rich lifestyle of the media celebrity/sex-symbol/star as depicted through their image merchandising in the mass media. (Chomsky, 1988) Idealism in art however is a venerable aesthetic temperament which was frequently advocated during the Renaissance. (Strong, 1973) The application of idealism to the realm of art by artists and art theorists is bound up with the classical art tradition as taught in the European art academies through to and including the period of Romanticism (circa 1795-1840), thus spurring the development of subsequent neo-classicisms.

Philosophic idealism attempts to account for all objects as representations of the mind based on the early idealism of Plato where Plato conceived of a world in which external *Ideas* constituted reality. Indeed an early immersive metaphor is the celebrated Platonic cave. (Deleuze, 1990, pp. 253-266) In philosophy, the suggestion that sensory perception is frequently, some would say always, illusory has come to be known as

the *appearance-reality distinction*. This distinction, readily embraced by Plato, is believed to have been first suggested by the Pre-Socratic Greek mathematician/philosopher Thales (625-547 BC). (Stove)

Generally, idealism in philosophy means *monism*, a notion which maintains that everything is based in the mental. The two philosophers most closely associated with such an idealism were George Berkeley (1685-1753) and Georg Wilhelm Friedrich Hegel. (Nauen) The idealism of George Berkeley maintains that our impressions of the world come only from the individual's consciousness. His type of idealism was a variety of *total monism* in which everything is mental. As such it stands in contrast to *materialism*.

In 1709 the young Berkeley published his *Essay Toward a New Theory of Vision*, an examination of visual consciousness, in order to prove that visual consciousness affords no grounds for belief in the reality of the objects apparently seen. In 1710 he published *Principles of Human Knowledge* which presents his theory of *subjective idealism*, for which he is best remembered. Berkeley's subjective idealism holds that there is no existence of matter independent of perception. In Berkeley's monistic metaphysical position, nothing, including material objects, exists apart from perception. External objects are ultimately collections of ideas and sensations.

However the actual term *monism* was first used by the previously mentioned German philosopher Baron Christian von Wolff in his discussions of the mind/body problem to depict both camps of philosophers: those who only acknowledged the mind (the idealists and/or mentalists) and the philosophers who only acknowledged the body (the materialists). The mind/body problem is, simply put, the quandary over how the mental and private (separated from the physical world) can relate to the physical world. (Fodor, 1981) Wolff emphasised that every occurrence must have an adequate reason for happening or there arises the impossible alternative that something might come out of nothing. He applied the rational thought of the Anglo-French Enlightenment and of Leibniz and René Descartes (1596-1650) in the development of his own philosophical system. Indeed Cartesian *dualism* is the starting point of the mind/body problem. (Damasio) The Enlightenment's core period is the second half of the 18th century, but its major theme, the belief in rational science and the experimental method (Horgan), originated in the 17th century with René Descartes's critical rationalism and Francis Bacon's (1561-1626) advocating of the deductive scientific method. (Stewart)

The meaning Wolff originally intended by the term *monism* has broadened in scope through the centuries (mainly through its influence on Kant) and today applies to any doctrine or theory that claims that all things, no matter how many or of what variety, can be traced to one unifying process or quality. A rejection of monism forces the repudiator into a commitment to either the two-fold or the manifold. *Total-monists* maintained that everything is part of a single system, a stance best exemplified by Baruch Spinoza (1632-1677), the philosopher who merged mind and matter into one viractual substance. (Deleuze, 1970) Indeed as

Massumi points out through his reading Deleuze's *Difference and Repetition*, Spinoza's philosophy is distinguished by the "notion that *ideality* is a dimension of matter (also understood as encompassing the human, the artificial, and the invented)". (Massumi, 1995, p. 97) On the other hand, *monist materialists* integrate mind into matter by saying that everything is based in the material and physical, just as *immaterialist monists* do the opposite by merging matter into mind. *Attributive monists* maintain that, although there may be many distinct substances, they are all attributes of a single one. (The Internet Encyclopedia of Philosophy)

More widely recognised is *German idealism*, a phase of intellectual life that had its origins in the Enlightenment as modified by German conditions. The Enlightenment started as a French philosophical movement in the 18th century which celebrated reason over passion and the environment. As Theodor Adorno and Max Horkheimer (1895-1939) have shown, along with the Industrial Revolution, the Enlightenment was the movement occasioning the profoundest change in the mind-set of the largest number of people in the West since the ascendancy of Christianity over Paganism. (Adorno & Horkheimer) However, if the Enlightenment succeeded in reducing Christianity from its position as the dominant monotheism of Europe to a secular moral metaphor, it was not until the late-19th century that the so-called *black arts* began to be tolerated, and then only in socially innocuous forms. This is pertinent to our discussion in that black magic rejects both the desirability of totality within the universe and any (in its view) self-deceptive antics designed to suggest such an idealism. (Denning & Phillips)

By giving precedence to sensation, English and French thinkers of the Enlightenment developed into empirical sceptics; viewing the world as a rational machine. By contrary, thinkers in Germany gave concept precedence over sensation, and, instead of empiricism, idealism dominated. (Royce) In place of the mechanical conception of the world, an organic-dynamic view was upheld and interpreted teleologically. This was made possible as Immanuel Kant's scepticism had tarnished the influence of empiricism and thus set the stage for an idealism which brought into question the value of the cultural ideals of the Enlightenment, impelling thinkers and artists to seek the basis of culture in the creative powers of the mind. (Kant, 1965) Indeed, German idealism usually means the philosophy of Immanuel Kant and his immediate followers. The basis of the *aesthetic idealist* movement, which manifested in the art and poetry of the period, was largely Kant's *transcendental idealism*. Kant had upheld that the phenomenal world is produced *a priori* by the activity of consciousness reacting on an external reality which cannot be known. (Savile, 1993) The constancy of experience is accounted for by the very fact that the world as we know it is only the sum total of phenomena. (Levinas) This becomes the basis of the universal validity of certain principles of explanation, for example space and time become subjective and thus ideal. Taken together they form a mould in which we shape the impressions coming from an unknowable, transcendent reality. (Nauen) Thus with Kant the imagination is celebrated as a "creative transforming of the real into the ideal". (Kearney, 1991, p. 4)

Gotthold Ephraim Lessing (1729-1781) was the first representative of the transcendental idealistic movement to articulate an inner aesthetic development of the mind. Thus Lessing situated idealism directly in aesthetics. Thereafter, the German librarian and archaeologist Johann Joachim Winckelmann (1717-1768) applied transcendental idealistic ideas to the visual arts. The great representatives of the transcendental idealistic mind in German poetry were Johann Wolfgang von Goethe (1749-1832) and Friedrich Schiller (1759-1805), both of whom experimented with the totalising aesthetic ideals of the *gesamtkunstwerk* (total-artwork), a key idealistic concept in the arts which shall be discussed at length shortly.

On the basis of Kant's transcendental deduction Friedrich Wilhelm Josef von Schelling interpreted the process of development in a purely ideal manner, as the unconscious opposition of the *absolute* to itself. Schelling, whom H. D. Schenk in his book *The Mind of the European Romantics* characterises as being "self-intoxicated on metaphysical speculation", worked out his *identitatsphilosophie* by extending to consciousness the view that *conscious subject and object are identical*. (Schenk, p. 178) The sum-total of existence then becomes the absolute as perceived by itself. With Schelling the absolute comes to consciousness in order that we may enjoy the pure aesthetic contemplation of the unity of mind and nature. (Nauen) It should be remembered however that already by 1800 many spheres of life had proclaimed their independence from religion, as politics first exerted its autonomy followed by economics and science; a trend which lead up to Théophile Gautier's (1811-1872) celebrated declaration of the *l'art pour l'art* (art for art's sake) ideal in his 1852 poetic book *Emaux et Camées*.

The immediate result of the aesthetic-metaphysical system of Schelling was a revival of the poetic production known as Romanticism. (McGann) I use the term *poetic* here in the sense that the romantic image of the poet/artist was, above all, that of a highly-strung bundle of nerves, excited by the senses to peaks of imaginative enthusiasm that can be read as the apex of the era's artistic temperament. (Baudelaire, 1868) Theodore Géricault (1791-1824) and his disciple Eugène Delacroix (1798-1863) best characterise this inclination in French painting.

The union of poetry with a metaphysical view of life became a recognised principle of art under Romanticism and it was this combination that secured for idealism ascendancy over the narrow naturalism and rationalism of the Enlightenment. (Honour) That that idea in Romanticism holds application to our concern with the excessive attributes of immersive space, can be made readily clear by one of Romanticism's initial and most penetrating critics, Søren Kierkegaard (1813-1855), when he noted already in 1836 that Romanticism "implies the overflowing of all boundaries". (Schenk, p. xxii)

The leading post-Kantian philosophical influences in the German idealist/romantic movement were Schelling, Friedrich von Schlegel, Johann Gottlieb Fichte, Hegel, and Novalis (the *nom de plume* used by Baron

Friedrich Ludwig Von Hardenberg) (1772-1801), but many others took part in various ways. (McGann) Fichte likened God to the natural world's unified but shifting magnificence as before vastness Fichte sensed the overwhelming wonderment allied with the Supreme. As a result, Fichte took the concept of the *monad* from the *monadology* of Gottfried Wilhelm Leibniz as the model of a system embracing *unity in plurality and plurality in unity*, as he sought to fuse extreme spiritualistic monism and extreme pluralistic realism into what he called *concrete theism*. (Fichte, 1992) Leibniz had defined a *monad* as an *ever-changing set of representations created internally as a result of perceptions*. In immersive terms this monad concept equates with the idea of an apropos mixture of unity and variety as being the investiture of the immersive aesthetic.

Leibniz, an esteemed diplomat, mathematician, philosopher, and historian is unequivocally the foremost German thinker of the 18th century (Kant being generally reckoned among 19th century philosophers). (Jolley) As a philosopher Leibniz exhibited a many-sidedness which characterised his mental activity in general. His most relevant books to our concerns are *De Arte Combinatoria* (On the Art of Combination) from 1666, *Discours de Métaphysique* (Discourse on Metaphysics) from 1686, and the celebrated (by the late-20th century French philosopher Gilles Deleuze (Deleuze, 1993)) *Monadologia* (Monadology) of 1714. Leibniz's considerations were capacious and his convictions eclectic, in that his aim was not so much that of the thinker who wished to found a new system of philosophy, as that of a philosophic attaché who would propitiate all existing sparring systems by demonstrating their essential harmony. Leibniz therefore resolved to utilise everything that the human mind had up to his time achieved, and thereby to discover unanimity where antithesis and inconsistency seemed to reign. (Jolley) Leibniz is relevant here for the magnitude of his thought and his philosophical reflections upon possible worlds and principles of unity. In Deleuze's words, "Leibniz innovates when he invokes a profoundly original relation among all possible worlds." (Deleuze, 1993, p. 59) A bit more on Leibniz's monadolog*y* will be said at the closing of AVII.

The uppermost post-Kantian representative of German idealism however was Arthur Schopenhauer (1788-1860) who blended the perennial Platonic idea of the phenomenal *world as an idea* with that of a *universal will,* which Schopenhauer interpreted as illogical and aimless. Schopenhauer stressed aesthetic contemplation as the means towards achieving a state of suspension of belief which freed the mind to contemplate this aimless life, and he, post-structuralist-like, maintained that "we can never arrive at the real nature of things from without" in that "we can never reach anything but images and names". (Schopenhauer, 1907, p. 127) Following Schopenhauer, the German philosopher Karl Robert Eduard Von Hartmann (1842-1906) attempted to unite the *idea* of Hegel with the *will* of Schopenhauer in his doctrine of the *absolute spirit,* or, as he preferred to characterise it, *spiritual monism*. According to Von Hartmann the world is produced by will and idea, and consciousness, instead of being elementary, was seen as unintentional and unconscious. (Schenk)

AVI: The Holonsthesiatic Gesamtkunstwerk

Humanity became human when it made art to communicate consciousness.
-Georges Bataille, *Lascaux: La Naissance de l'Art*

A human being is part of the whole, yet thoughts and feelings are experienced as something separated from the rest, which is a kind of optic delusion of consciousness.
-Albert Einstein, *Ideas and Opinions*

Our field of consciousness has an undeniable holistic quality.
-Thomas Metzinger, *Conscious Experience*

...nothing exists apart from the whole!
-Friedrich Nietzsche, *Twilight of the Idols*

Since I am using the term *ideal* in the title of my dissertation I felt it necessary to convey rapidly here the history of the concept of the *ideal* in order to proceed. However for my purposes I wish to reject ideal types of perfect rationality (which factors necessarily constrain) so as to foreground and espouse the cognitive operational dynamic which charges the unconscious and conscious mind with desire. Hence I accept John Lilly's definition of an ideal as a metaprogram in our bio-computer (Lilly, 1974, p. 39), a metaprogram who's typical strategy is to activate, through desire, great hidden networks of latent assumptions that rest implanted in the unconscious mind (Minsky) and as such reveal the *noumen* within phenomenon.

In that respect, this dissertation again follows the example of Heinrich Wölfflin who was infused with the holistic desire for discovering hidden principles at work in the history of form. Wölfflin maintained that the purpose of the history of aesthetic forms is to understand the particular modes of envisioning, historically available to different cultures in different times. (Wölfflin, 1915) In his 1899 *Classic Art: An Introduction to the Italian Renaissance* Wölfflin was intent upon detecting the theoretical laws of stylistic change that behest the development of form as it metamorphoses from one style to another. (Wölfflin, 1899) Using the minor arts (particularly those rooted in *ornamental expression*) Wölfflin helped to weaken the previous assumptions of hierarchy and value which were established in the history of art. (Kultermann) Hence Wölfflin shows that since all art participates equally in the laws of historical determinism there are no lesser artists, no lesser arts, no lesser civilisations; only *cultural holisms,* i.e., general doctrines which hold that the unity of a cultural belief's content is determined by its place in the web of beliefs which comprises an aggregate theory or group of aggregate theories. (Eliasmith) This notion, of course, contradicts the basic tenants of Post-Structuralism as initiated by Jacques Derrida who, starting with his 1967 *Writing and Difference*, developed the idea of a constitutive fracture consisting of a refusal of the supposed unity of meaning. (Derrida, 1978a) By contrast, Daniel Dennett in his book *Consciousness Explained* has argued that what we are is in fact a unified fluid organisation of conflicting activities between processes in the brain and body. (Dennett, 1991) I have adopted the Dennett/Wölfflinian intellectual position of cultural holism when beginning my research as it provided me

with a wide open arena from which to search for immersive precedents in relationship to the interplay of the three elementary constructional components which make art up: configuration, content, and context. (Arnheim, 1971) But a precise definition of the term *holism* I expect will help further clarify this position.

The term *holism* was coined by Jan Christiaan Smuts (1870-1950) in 1906 although the general notion can be traced to Eastern philosophy many centuries earlier in the ancient *non-dualistic* teachings of Buddha and the theistic, pantheistic, and other ancient forms of *non-binary thought*. (Yamamoto) The basic premise on which the epistemology of *gestalt therapy* rests is that of *non-dualistic holism*. (Koffka)

Gestalt is the German word meaning *configuration*. It is any whole pattern with characteristics different from its parts. The (in our terms immersive) value in the gestalt approach, according to Perls, Hefferline and Goodman "... lies in the insight that the whole determines the parts, which contrasts with the previous assumption that the whole is merely the total sum of its elements". (Perls, Hefferline & Goodman, p. 19) This basic holistic premise was not only adopted by *gestalt psychology*, which is the study of human behaviour and experience as a whole phenomenon, but also by *gestalt therapy* and most of the humanistic and existential psychologies working in the field of perception. (Haber & Hershenson) Consciousness, for example, cannot be studied analytically because the analysis would break it into parts which would cease to bear any resemblance to it. Gestalt psychology showed that the human does not perceive things as unrelated isolates but organises them in the perceptual process into meaningful wholes. (Perls)

However Jan Christiaan Smuts formulated a number of other immersive concepts, the most important of which for the development of an immersive theory is the *unity of the individual*. Smuts wrote in 1895 that "every individual form of life is a unity (...) it is this ultimate and internal unity that shapes the innumerable products of life into an orderly and harmonious whole". (Hancock & Van Der Poel, p. 61) This understanding of humanity regards physical, emotional, and mental events as expressions of a unified individual cognitive being. (Newell) We cannot attain an adequate concept of self by merely summing up the absolute individual component parts of the individual self. *The whole is greater than the sum of its parts.*

More will be said of such a holistic epistemology in relationship to the gesamtkunstwerk's aptitudinal powers of evocation in BXIII, especially as it concerns the phantasmagoric Dream King; King Ludwig II of Bavaria (1845-1886) and Richard Wagner (1813-1883) (who coined the term); but a brief and precise definition of Wagner's term *gesamtkunstwerk* is in order here as it is a central concept.

The concept of the gesamtkunstwerk (total-artwork) is a proposition rooted in the neo-Platonic heritage of Romanticism. However for Richard Wagner it took on a narrow and precise meaning as he re-theorised it in his 1849 hypothetical essays "The Artwork of the Future" (Das Kunstwerk der Zukunft) and "Art and

Revolution" (Kunst und Revolution). (Stein) "The Artwork of the Future" has two principal themes. The first proclaims the doctrine of an "art of the people" which idealised art in a way which would necessarily engage the masses (inasmuch as it was a narration of the masses own thoughts, feelings and aspirations) as Wagner had imagined existed during the period of the Greek dramas. This is the gesamtkunstwerk ideal in the kind-hearted political sense. In order to attain this level of idealised democratic-communist amiable social blend, the formal characteristics of the gesamtkunstwerk were theorised as necessarily being the product of a fusion of the separate arts in pursuit of a "total effect" (Stein, p. 62) which would be achieved through a total synthesis in which all of the individual arts contribute.

In *L'Art Romantique* (The Romantic Art), after quoting at length from Wagner's program notes for a performance of *Lohengrin*, Baudelaire tells us that Wagner provoked him to sense clearly the progressive expansion of his daydream, up to the ultimate point when the ecstatic immensity that is born intimately is dissolved and absorbs into the perceptual world. (Baudelaire, 1868) It is beneficial here to recall that Baudelaire felt while watching *Lohengrin* "a sense of being suspended in an ecstasy compounded of joy and insight". (Heim, 1993, p. 125) This special suspended, engulfing, ecstatic consciousness (Rowan, p. 13) is for Baudelaire what immersive consciousness basically must be: excessive. But this excessive consciousness does not abdicate depth, as it seeks correspondence with what is beyond, above, behind, and below it through various frequencies of intensity and lucidity reminiscent of Baudelaire's ideal synesthesia, which he advocated in his text "Correspondences". Here Baudelaire addressed this excessive gesamtkunstwerk-like ideal of feeling and smell and sight all mingling together in an entranced, intricate, astonishment (Baudelaire, 1966) and indeed Baudelaire's poetic attestation to the ecstatic (and yet languorous) weaving of all the senses into one gesamtkunstwerk-like excessive singularity is certainly important to the further development of the gesamtkunstwerk ideal.

However in the widest possible sense of the excessive gesamtkunstwerk, Schelling, the aforementioned central metaphysical philosopher of German Romanticism, saw the universe itself as a perfect work of art and he ends his philosophy of art with the demand for a combination of all the arts. (Marx, W.) Complimentarily, Richard Wagner spoke often of his ambition to plunge himself into philosophy, just as he had done into music. Moreover, Wagner had studied Schelling's system of transcendental idealism in his youth and Schelling's thought shows an influence on the idealism endemic to the *gesamtkunstwerkkonzept* (concept of the total-artwork). However, Wagner dedicated his 1849 essay "The Art and the Future", which concerned the gesamtkunstwerkkonzept, to the philosopher Ludwig Feuerbach (1804-1872), author of *Thoughts on Death and Immortality*, in which Feuerbach describes true immortality as that which is conferred solely on sublime deeds and inspired works of art. Feuerbach, who followed Hegel and subsequently was influenced by the theoreticians of socialism, Karl Marx (1818-1883) and Friedrich Engels (1820-1895), conceived of philosophy as essentially an invitation to Hegelian revolution. Hegel had taught Feuerbach that history has a

rational end following the characteristic dialectic of thesis/antithesis/synthesis. (Hegel, 1949) Wagner encountered and read *Thoughts on Death and Immortality* during a spell in Zurich, as the book had been banned in Germany.

Friedrich Schiller himself theorised and experimented with the gesamtkunstwerk ideal in his *Braut von Messina* though he was never able to achieve it, in that he was unable to supply the music (Schiller was characteristically a dramatist and poet, known for his 1781 drama of political revolt *Die Räuber*). The majority of Schiller's aesthetic essays, however, were written between 1793 and 1795 and were steeped in the language of Immanuel Kant's critical writings, especially his *Critique of Aesthetic Judgement.* Schiller's influential 1795 essay *On the Aesthetic Education of Man* was instrumental in the development of romantic theories of art, despite the fact that in it Schiller's arguments oscillate between both diachronic and synchronic planes of thought.

In *On the Aesthetic Education of Man* Schiller undertook to scrutinise the connection between the beautiful and art. In it he concludes that art, over time, bequests improvement of the human race and sets the individual free from the constraints of either unmodified nature or the strictly solitary mind. Also within, he maintains that the ultimate endowment of art is education, as art, by its rapport with beauty, exalts the human race through *imagining aesthetic ideals*. Jointly, with Johann Joachim Winckelmann's *Thoughts on the Imitation of Greek Works in Painting and Sculpture,* Ephraim Lessing's (1729-1781) *Laocoon*, and Kant's *Critique of Aesthetic Judgement: On the Aesthetic Education of Man,* Schiller frames the essence of German aesthetic criticism in the mid and late-18th century.

Nevertheless, even though Goethe and Schiller maintained idealistic concepts concerning the gesamtkunstwerk, it was Richard Wagner who channelled the two dominant streams of experimentation, the musical (practical) on the one hand, and the literary (theoretical) on the other, into an holistic oneness. Wagner was able to achieve this fusion in a fuller way than his predecessors were able to do because he was a composer of music, a poet and a theorist with an (albeit derivative) body of theory on synthesis (which he followed with a succession of theoretical counter-positions). Following the two initial Wagnerian theoretical essays was another more detailed 1851 essay "Opera and Drama", in which the substantive plan for Wagner's subsequent artistic presentations emerges by subordinating the individual arts into a "total drama". (Stein, p. 6)

Truly, Wagner's "Opera and Drama" is a remarkable admixture of romantic ideals in and of itself, where the aesthetic rationalism of Gotthold Ephraim Lessing, and the materialistic sensationalism of Ludwig Feuerbach blend in the concept of the gesamtkunstwerk. The uniting does not end there however. Later Wagner attempts to superimpose upon this hypothetical structure Arthur Schopenhauer's metaphysics of music. And still later

Wagner abandons his original ideas on the limitations of the various arts (and his Feuerbachian materialistic sensationalism) to swing over entirely to Schopenhauer's metaphysical view of art and art synthesis.

In *The World as Will and Idea* Schopenhauer accepts the Kantian ultimate reality behind the world of phenomena and identifies it as human metaphysical will. Furthermore, Schopenhauer holds that music alone is independent of the world as representation (since it does not derive its material from phenomena) and is therefore an expression, not of ideas, but of the metaphysical will itself. (Stein, p. 114) With his acceptance of Schopenhauer's philosophy Wagner assumed a philosophic position which contradicted the very essence of "Opera and Drama" as Schopenhauer ruled out the prospect of artistic synthesis. It was Wagner's quandary in the ensuing years to form a compromise amid Schopenhauer's theory of music as an inevitably lone art and his preceding compulsion to achieve an ideal union of all of the arts. (Stein) Friedrich Nietzsche (1844-1900) writes brilliantly of Wagner's fundamental shift in aesthetic belief in his book *Genealogy of Morals*. (Nietzsche, 1969)

Since Wagner, however, the gesamtkunstwerk concept has been expanded and given different colours of meaning as the idea took on a broader, and less formally synthetic sense of unity. Indeed the post-Wagnerian concept of the total-artwork has taken on two meanings which need be differentiated, as I wish to stress one sense (the less Wagnerian sense) of this concept and not the exact, precise sense which Wagner intended. Rather, I am interested in using the more generalised sense of the concept which the notion attained as it circulated and mutated throughout Europe and the Americas. To further complicate things, Wagner's theoretical conception of the gesamtkunstwerk is double, as one sees when reading "The Artwork of the Future" in tandem with "Art and Revolution" in which Wagner, under the influence of Mikhail Bakounine's (1814-1876) revolutionary writing, connected aesthetic-spiritual optimism to anarchist force as a way to combat the encroachment of efficiency and productivity endemic to the instrumental logic of the Industrial Revolution. (Taylor, p. 102)

The first sense of the word, the precise sense which Wagner prognosticated for us, is the idea of an artwork made up of a *synthesis of all the arts*: a fused combination of music, poetry, dance, architecture, sculpture, and painting into a *multimedia-spectacle*. Here all of the individual art forms would contribute to the whole spectacle under the direction of a single creative mind. That is the first sense of the term Wagner envisioned. The second is that this synthesis was to be achieved through what he called the genius of community, through the free association of artists lead by a director-writer-composer-performer. Thus Wagner meant two senses of the concept: a totality through synthesis of the art forms (1.) and a revolutionary total communal synthesis of artists (2.). Wagner perceived the Greek Dionysian ritual as a fruitfully rich model for the art of the future because, as he explained in "Art and Revolution", it involved the full community in a fusion of the arts, all embodying one singular ideological dramatic purpose. He perceived this Greek unity as the ideal, or to put it

succinctly, *unity is the ideal*. The goal and fulfilling telos of art is to embody this singularity of unified thought and (implied) unified identity, even though the binary opposition between the recognition of Dionysian and Apollonian consciousness would seem to *a priori* conflict with such an imagined unity if not resolved in synthesis. Regardless, unity was the ideal state of consciousness which Wagner's gesamtkunstwerk is meant to propose. As Wagner saw it, Greek unity had been lost in human consciousness and the arts had been splintered apart and removed from their collective community function which further participated in the break-up of a joint consciousness. (Taylor, p. 108)

This conception came to Wagner while in political exile in Paris (1839-1842) as he was sitting in the Café Littéraire where he was, as he wrote, "dreamily surveying the cheap wallpaper covered in scenes from classical mythology" when suddenly a picture he had seen as a boy flashed before his mind. The picture was a water-colour by Bonaventura Genelli (1798-1868) entitled *Dionysos Among the Muses of Apollo*. As Wagner wrote, "There and then I conceived the idea of my artwork of the future". (Westernhagen, p. 144) That said, Martin von Amerongen in his book *Wagner: A Case History* suggests that it was the outrageous and extremely popular musical productions of Jacques Offenbach (1819-1880) (such as *Orphée aux Enfers* (1858) and *la Belle Héllène* (1864)) which were the "real protagonist of the gesamtkunstwerk" (Amerongen, p. 66) even though Offenbach's productivity follows Wagner's period of exile in Paris and Offenbach left us no penned theoretical doctrine.

Regardless, what Wagner had loved so much about the pictures of Bonaventura Genelli (for example his *Bacchus Among the Muses* which he saw at the home of Genelli's patron Count Schack in Munich) was the fact that they suggested to him a new conception of Greek classical culture that went beyond the classical ideal of *noble simplicity* which was the reigning conception of the classical ideal as presented throughout Germanic culture by the archaeologist Johann Joachim Winckelmann in his widely read book *The History of Ancient Art.* In it, Winckelmann described the highest beauty as that which is in simple harmony with God (which reminds me that Kazimir Malevich (1878-1935) alleged that he saw the countenance of God in his simple abstract black square paintings). (Gablik, 1984, p. 21)

Winckelmann's codification of classical ideals as those being primarily uncomplicated and Apollonian in their logic had become reified into a legislative code. (Winckelmann, 1968) In Genelli's paintings Greek classical culture was presented, rather, as a dramatic conflict between Dionysian and Apollonian ideals. It is significant that the *gesamtkunstwerkkonzept der zukunft* (the concept of the total-artwork of the future) was established under this sign. Pertinent to these concerns is Friedrich Nietzsche and his acute criticism of the static culture of the bourgeoisie via similar terms, particularly as it relates to the gesamtkunstwerkkonzept in *Die Geburt der Tragödie* (The Birth of Tragedy), Nietzsche's account of classical Greek drama and its merits. In *The Birth of Tragedy* Nietzsche procures the concepts of the Apollonian and the Dionysian principles out of Greek

tragedy. The Apollonian principle; reasoned, restrained, self-controlled and organising, is subsumed, according to Nietzsche, within the Dionysian principle, which is primordial, passionate, chaotic, frenzied, chthonic and creative. This dialectical aesthetic tension allows the imaginative power of Dionysius to operate, in that the products of this operation are kept intelligible by Apollonian constraint. Hence Nietzsche examined the dialectic between an Apollonian calmness in relation to an antecedent Dionysian non-restraining tragedy which has its origins in the chants of the Greek chorus. By invoking the power of the Greek drama, Nietzsche implied a pejorative judgement on subsequent dramatic forms of realism and inert spectatorship. (Nietzsche, 1967) Generally speaking, this aspect of Nietzsche's thought participated then in the widespread ideal embedded in Romanticism of a popular recovery of the mythic precondition necessary for a unified/total cultural consciousness based on, in most cases, the sublime excess of the infinite. (Nicolson, M.)

It is salient to these concerns quickly to recall the formation of opera as an art form as it, as a convention, expresses this ideal of Greek unity and its synthesising attributes. The origination of opera occurred at the end of the 16th century in baroque Italy. The word *opera* derives from the Latin word *opus* which means *work*, however the word *ritual* may be a more accurate description. The Earl of Harewood in his *Kobbe's Complete Opera Book* points out that the antecedents of opera are to be found in the buffalo dance of the western American Indians, in the *Ramayanda* of India, and most notably, in the inclusion of singing as an expressive element in ancient Greek ritual; all of which express drama through sung music, gesture, and guise. Medieval Mystery Plays likewise contained some of these elements as did the semi-dramatic Madrigal Comedies, the Pastorals, the Masques, and the Interedios. (Jacobs & Sadie) All of the above mentioned synthetic rituals present in some proportion or another a mixture of song with instrumental music, oration, and performance in various proportions. I hasten to add here that the Catholic Mass, which blends music, singing, performance and visual intensity (among other things), should also be included in this account of precedents. This precedent seems to have been overlooked in the sources I researched which I find peculiar particularly in that Italian culture was heavily penetrated by Catholic ritual in the 16th century.

Regardless, it was in Florence where a group of intellectuals referred to as the *Camerata* brought opera to its initial flowering as lavish entertainment. What is germane is that the Camerata group was *dedicated to the renaissance ideal of recapturing the spirit of Greek drama*. In this respect Wagner's attempt to recall Greek unification consciousness through opera is doubly rich in that by doing so he hails back to the origin of opera twice as the early operas generally took classical Greek or Roman myths as their basis (partly due to the fact that the public was *a priori* familiar with these tales and presumably with their many allegorical layers of meaning) but even more significantly because these tales too hearkened back to the ideals of Greek holistic kinship with which their creators wished to be identified. (Jacobs & Sadie)

The first recognised opera was *Dafne*, completed in 1598, which was produced in Florence. But the operatic style quickly spread throughout much of Italy, chiefly through the works of Claudio Monteverdi (1567-1643), who is recognised as opera's originator.

It is consequential to note the failure of the strict Wagnerian concept of the gesamtkunstwerk; an ideal which never reached fulfilment even within Wagnerian aesthetics. If one conceives of the gesamtkunstwerk as a fusion between all of the arts, as Wagner did when he first published it, its weakness as an aesthetic ideal becomes immediately obvious. By fusing a successful work of art, say T. S. Eliot's (1888-1965) poem *The Wasteland*, with music and drama and dance, is it necessarily a stronger and better work of art? Is even contemporary music always improved by the MTV video which accompanies it? The obvious answer is no, not necessarily so. Furthermore, is anything less like a Dionysian celebration in conflict with Apollonian aesthetics than a Wagnerian opera? In my estimation, a punk rock performance by the Ramones (Marcus) came far closer to this proposal than Wagner's own productivity.

Wagner himself, when writing later in life on Ludwig van Beethoven (1770-1827), leaves behind his own strict gesamtkunstwerk ideal and places music above the role of poetry, drama, and the visual arts. In his text "Beethoven", Wagner celebrates music's "unique powers in realising supreme accomplishments" in the arts and reveals, in terminology close to Arthur Schopenhauer's, his belief in music's power to reveal the perfect embodiment of the objectification of the will. (Wagner, 1897b) Thus music resumed its role as daemonium through what he perceived as its sublime intensity over and above the other arts and any hypothesised polymedia fusion between them.

The subsequent non-strictly-Wagnerian modern meaning of the gesamtkunstwerkkonzept, however, indicates an *experience of inexorable entirety* and this definition is the appropriate meaning to this study of immersion, as it was this sublime sense which emerged in romantic philosophy and subsequently in neo-gothic and then neo-rococo architecture and art theory, which spread through the Arts and Craft Movement and flowered as the *reason d'être* of the Art Nouveau movement. Stripped down but smoothly persisting, it became the central motivating ideal of orthodox Modernism's unified reductive model. (Greenberg, 1961) This objective was ruptured only briefly during the post-modernist period as now it is thoroughly resumed with immersive VR technology, as shown. Indeed it is the insignia of the World Wide Web (WWW): the *net*.

This sense of the *gesamtkunstwerk as inexorable entirety* is the objective and means of total-immersion, but it also recedes backwards, as Section B will demonstrate, into Prehistory where the ideal of total-immersion begins as inexorable entirety for me, well before the supposed Greek unity with which Wagner began his theory. As Wagner himself stated in his essay "Religion and Art", "The Science of Aesthetics has at all times laid down Unity as a chief requirement from the artwork." (Westernhagen, p. 182) Though his statement is

problematic if not patently false, as the fragmentation (albeit unified in collage/montage) intrinsic in various forms of unorthodox Modernism (and explicitly in Post-Modernism) has shown us, I think it true to say that this conception of art as a unified exemplification of overriding mind-sets/world-views holds much in way of inquisitional material when seeking to identify and elucidate ideals, as in this case, immersive ideals as suggested by immersive technology.

This inexorable entirety notion of the gesamtkunstwerk is the sense of the concept which began to be applied retrospectively to art projects in which art strives to achieve a *unified effect*. This is found first primarily in interior-architectural theory; in neo-gothic architectural theories (referring to gothic cathedrals and palaces) and neo-rococo architectural theories (referring to extravagant rococo interiors). (Ball, V.)

18th century rococo interior at the Palis Royal, Madrid

These theories are relevant when discussing interpretations of the gesamtkunstwerk in terms of immersive virtual worlds. Here the stress lays less with the fusion of normally discrete art forms and more on the *totalising, harmonising and engulfing immersive effect* of the art experience within any given art form. I will be using this extended, comprehensive sense of the idea which the notion attained in, for example, Adrien Henri's important book *Total Art*, a book which concerns Environmental and Kinetic Art, Performance Art, and some Happenings of the 1960s and early-1970s. Henri adapts the term gesamtkunstwerk in historically contextualising a stream of art in the 1960s and early-1970s as work which "sets out to dominate, even overwhelm; flooding the spectator/hearer with sensory impressions of different kinds. It is not meant as information but as experience." (Henri, p. 10) With this sense of a "seamless union (...) that would sweep the viewer to another world..." (Heim, 1993, p. 125) we can immediately see here how immersive Virtual Reality

with its potentially overwhelmingly 360° FOV qualifies as an inexorable entirety gesamtkunstwerk. So, rather than further hypothesising polymedia fusion, with all of the weaknesses and gaudiness that that idea may entail, I have adapted this inexorable entirety concept of the gesamtkunstwerk and further defined it as an art which cedes a *unified total experience expressing a dominant ideal*, regardless of the fact that Wagner did not desire this type of encounter for his audience, or if he once did he repudiated it later in life. In fact Wagner dropped the term gesamtkunstwerkkonzept from his vocabulary altogether late in life. Evidently he lost interest in a unified art experience which overwhelms the audience, as he wrote the virtuoso pianist and composer Franz Liszt (1811-1886) on August 16, 1853 that, there is no reason why there should be "this wretched 'special' and 'total art'" and he bade Liszt to make "no more mention of that wretched 'total art'!!!". (Westernhagen, p. 147) But additional mention of the total art ideal was made by others; indeed much.

So, as explained, I will adapt the concept of gesamtkunstwerk as a *unified total experience expressing a dominant ideal in search of an inexorable entirety* as the pertinent one. This understanding of the inexorable entirety gesamtkunstwerk, as we shall see more clearly ahead, can be traced retrospectively to ancient times; within prehistoric caves, the Greek nymphaea, and Roman grottoes. It is this inexorable entirety sense of the gesamtkunstwerk, in conjunction with Charles Baudelaire's theory of correspondences (Baudelaire, 1966), which was avidly taken up by the Symbolist and Post-Impressionist circles and which coiled its way into the orthodox modernist *ideal of unity through reduction* in an attempt to unite the various art forms so as to arrive at an all-embracing universal language of art. (Barzun)

Susan Sontag has identified this all-embracing tendency, which she characterises as a "breaking down of the distinction between artistic genres", as one of the two major radical positions of early (mid-1960s) post-modern art (the other trend stridently maintaining those distinctions). (Sontag, 1966, pp. 24-37) This all-embracing gesamtkunstwerk ideal, which Sontag goes on to identify as a desire for a "vast behavioural magma", though under serious attack within authoritative Post-Modernism, as previously mentioned, penetrates certain aspects of Post-Modernism itself. For example this gesamtkunstwerk ideal of "breaking down of distinction" is detectable in some aspects of Fluxus and Actionism and clearly in the Happening movement and developments in the Expanded Arts (Popper, F., 1975) which flourished throughout the 1960s and 1970s and in today's Art Installation Movement and some VE°art. In fact the basis of the post-modern sensibility arises from an acceptance that reality is understood as a *congruous region* where various complex levels of meaning interrelate. (Crowther, p. 163)

It had been suggested that the expanded cinema was the successor of Wagner's ideal of the gesamtkunstwerk (Youngblood), with its tendency to provide an apparent seamless fusion between the visual and the aural and by providing the spectator with a cathartic emotional involvement (Wyss & Bazin), but with this I do not agree. VR is the real successor, but not because it fuses sights and sounds together. It is so because its total-

immersion cuts us off from the world and plunges us into a homogeneous (even if manifold) mono-world without external distraction. It is precisely this sense of radical *aesthetic transcendence through an intimate totality* which immersive experience offers, as it provides a complete alternative reality to the immersant for exploration and contemplation. It is due to this sense of immersive art's production of a consummate whole that the term *holosthesiatic gesamtkunstwerk* holds relevancy to the study of the aesthetics of immersion today. *Holosthesia,* a word coined by Dr. William Martens, describes any medium which produces the all-embracing perception of an event through several (or all) sensory modalities in a self-consistent manner. (Martens) The term *holosthesia* has its roots in the Greek word *holos* (whole) and *aisthesia* (to feel or perceive). According to Mark Pesce, immersive Virtual Reality falls into this category of holosthesia in that "holosthesia is the necessary component of (...) synthetic perception". (Pesce, 1994)

AVII: Questions of Absolutes, Post-Modern Evaluations, and Omnijective Understandings

...in our awareness the spatial is entangled with the non-spatial...
-C. J. S. Clarke, *The Nonlocality of Mind*

I understand these two certainties, my appetite for the absolute and for unity, and the impossibility of reducing this world to a rational and reasonable principle.
-Albert Camus, *The Myth of Sisyphus*

Relevant to our understanding of total-immersion are the concepts of *absolute*s and *wholes*; concepts which will necessarily appear throughout this discussion of idealised immersive worlds and their internally self-defining postulates. The dialogue between parts and wholes is one of the prerequisites for understanding the fuller immersive implications which VR suggests, as its immersive perspective overrides many previously apparent mutually exclusive categories. However I do not wish to be guilty of manufacturing or reproducing false universals and thus I will proceed researching and discussing this arena without wishing to pronounce already in advance on whether or not there is such a thing as an *absolute* or *whole*. But it must be remembered that total-immersions are experiences of emerging consciousness where viewer and view coalesce and as such they reveal themselves through their vivacity and their effaced impulses towards the desire, at least, for the *conceptual closure of wholeness*.

But there is a caveat. I am writing these words at a time when privileged transcendent values of closure (particularly those supposedly ordained by cosmic forces) are increasingly experienced as inaccessible and even insanely dangerous. A good example of the latter is the UFO cult Heaven's Gate's idiotic tragedy where members committed suicide *ensemble* in belief that by doing so they would rise up to meet incoming space aliens travelling behind the passing Hale-Bopp comet. At the Heaven's Gate web-site (created by their own Higher Source group) there is a reference to the Hale-Bopp comet as bringing "closure". One also is reminded of certain monomaniacal aspects of Nazi art ideology as recapitulated by Albert Speer (1905-1981), the Nazi theorist, architect and spectacle designer (Speer, 1969) and the steadfast philosophical outpourings against them of the recently deceased philosopher Sir Isaiah Berlin (1909-1997).

Albert Speer, *Ice Cathedral*

Even while Berlin recognised the desire for monistic closure as an abiding human trait, he attacked what he saw as the predominant 20th century Western version of monism, which for him consisted of irrational propositions which put forth a single, final solution to human problems furnished by an ultimate and overarching truth that merits the sacrifice of human life to such a grand abstract truth. (Berlin) Regardless of the types of abusive possibilities which Berlin points out to us, *Immersive Ideals / Critical Distances* concedes to the rhizomatic/connectivist (hence ultimately hyper-holistic) notion that parts of a cognitive system have significance primarily by virtue of their interrelations and accessions with all other parts. This then is a 360° rhizomatic hyper-holism connected from all sides, as it were, since it eschews *a priori* transcendent closure from above. As such it seeks out hyper-holistic understandings via the n-dimensional perspective of connected inclusion. It is my opinion that the greater part of the history of art of the 20th century has striven to depict and activate just such an inclusive hyper-perspective. Hence, in its hyper-holistic and rhizomatic open-endedness, *Immersive Ideals / Critical Distances* will seek to avoid interpretative agnosia through just such a mentally hyper-contiguous magnanimity.

The abstract (axiomatic) concept of an *absolute* generally evokes anything established as being free of subordination; anything unfettered by the reliance upon factors external to itself. (Rosenthal) For example, *absolute scale* means the actual size of an object without reference to the size it appears to be in a given context. In the philosophy of metaphysical idealism the absolute is the totality of what exists. (Eliasmith) In aesthetics it implies that which is the opposite of *relativism*. Hence it insinuates that there are eternal and immutable standards for the evaluation of works of art. Most post-modern thought rejected *absolutism* (Harvey) which, to my mind, is one more privileged absolutism (though unequivocally a more legitimate one) to add among the rest. But just what is meant by that seemingly contradictory phrase *Post-Modernism*?

The terminology *Post-Modernism* was first used in reference to architecture as early as 1947, spurring a fertile discussion among architectural theorists. (Jencks, 1996) Literary critics began to employ the term in the 1960s to distinguish post-World War II experimental fiction from the writers of High Modernism. Post-modern writers are considered to be Samuel Beckett (1906-1989), Jean Genet (1910-1986), Jorge Luis Borges (1899-1986), William S. Burroughs and most all of the writers following the Second World War. The publication of Jean-François Lyotard's tract *The Post-Modern Condition* further defined the post-modern aesthetic, as in it he emphasised the anti-holistic aspects of French post-structuralist theory and its opposition to eternal, metaphysical truths and to grand narratives or theories that provide totalising explanations. (Lyotard, 1984a) Instead, Lyotard proposed that we lived in a post-modern era in which decisions are made on the basis of local conditions and are applicable only in that limited context. (Foster, 1985) Obviously, in my view, this statement is now passé, given the global inter-connectivity of the mid-1990s.

Generally speaking, in Post-Modernism the modernist formal examination of art in sequestration yielded to an investigation into the social determinants of the artwork and to the ideological assertion, whether explicit or implicit, of the work. As a result post-modern art abandoned the distinctions between high and low art. (Higgins, D.) Post-modern art thus aspired to employ the affective capability of popular images, much as standard corporate culture does. (Crowther) But more importantly, Post-Modernism opened the door to a plethora of once marginalised heterogeneous genres.

Following the release of the Lyotard text there was a pertinent rebuttal to Lyotard's theory of the post-modern by Jürgen Habermas and Fredric Jameson, among others. Habermas insisted that a complete immersion in the local gives us no way to judge it and is thus doomed to accommodation with the given. (Habermas, 1989) Jameson lamented a lack of distance between post-modern theory and the schizo-capitalist society (Deleuze, and Guattari, 1987) that generated it and he argued that we needed another theory capable of representing the complex realities of the emerging global economic order that, as he saw it, exploits the vast majority. (Jameson, 1988) During the 1980s, Post-Modernism in the arts tended to emphasise issues of style and history (Crowther) even while the common use of the term *Post-Modernism* induced a crisis in the whole notion of historical and artistic periods, as every distinguishing feature of Post-Modernism can be located in an era prior to its own. What was particular to Post-Modernism then was not the inclusion of something new but rather the newly focused concentration on features of the past that were most often previously overlooked. (Davis, 1977) In that small sense this dissertation partakes in the tradition of Post-Modernism, as it makes up part of an elaborate rereading of history which is still taking place in our healthy climate of critically questioning previously established traditions. (Kroker & Cook) As I will demonstrate, a good deal of the basis for the questioning of the Western tradition can be found in the Western tradition itself, if we look with new eyes and ask new debatable questions about it and join this with an interest in non-Western expressions which may offer divergent perspectives on the West's previously totalising self-image of itself.

By attempting to do so, *Immersive Ideals / Critical Distances* participates also in the tradition of hermeneutic interpretation, as formerly mentioned. Because *hermeneutics* initially attempted interpretations of the *Bible* and accepted that all aspects of a Biblical stanza had to be meaningful because they were (supposedly) divinely inspired, hermeneutics carries a cognate connotation that meaning is to be derived from every conceivable feature of a text or artwork that can be construed as a bestowal to some sort of a *co-ordinated hagiographical whole*. (Madison) *Hagiography* is a doctrine that maintains that all objects, events and experiences are parts of larger wholes. Though hagiography can be an insidious practice, it is, when used circumspectly, useful in formulating hyper-configurations of immersive style in that immersion runs through several distant periods at many different levels of degree in this study. Influential to this approach (in this respect) was Peter Bürger's book *Theory of the Avant-Garde* in which he put forth the proposition that a hermeneutic interpretation must apply in some way to a *totality of meaning.* (Bürger) Hence it is this sense of

the variant attributes of aesthetic immersion (with all the gradient distinctive characteristics with which a phenomenological investigation of immersive states necessarily entails) which will be utilised to formulate a symphonic hagiographic mélange of immersive ideals.

By using hagiographic intentions carefully, specific historical periods involving immersion can be characterised by clusters of immersive perceptions and feelings consistent with the definition of consciousness as the totality of experience at any given instant. (Chalmers, 1996) The expression of these perceptions and feelings though, demands a dependable uniformity consistent with a formal hagiographic approach. There are multiple hermeneutic approaches with which to perform hagiographic wholes however. (Kearney, 1995) The key hermeneutic approach, which I am adopting for the purposes of this largely hagiographic discourse, stem from Paul Ricoeur's book *The Conflict of Interpretations* in which he distinguishes between linguistics (which he conceived of as a mostly sealed system of intra-significant signs) and the extralinguistic properties of hermeneutics. (Ihde, 1971) Prominent to the adaptation of hermeneutical imagination (relevant to immersive states) is what Ricoeur explains as key to his hermeneutical principles: an "opening up of a world". (Ricoeur, 1981, p. 181) Hence immersive conclusions must open up new perspectives, for, as Ricoeur further writes, "are we not ready to recognise in the power of our imagination (...) the capacity for letting new worlds shape an understanding of ourselves". (Ricoeur, 1981, p. 181) If so, then immersion within virtual worlds, forthwith perforated and connected by passage links (Loeffler), offers us today, I submit, just such an occasion for re-understanding ourselves. As we become immersed in the global hyper-media landscape which facilitates the real life-world of conflict or accord, questions of rapport are of the utmost importance. Immersive reflection then in Ricoeur's terms "opens up a world" of reflection which behoves us anew to reflect on our sense of closure and affinity, on our sense of singularity and totality, and on our particular motives in accepting to place ourselves (or not) within national, ethnic, racial, and sexual political power structures in the real life-world of instrumentality. (Boskovic) Ricoeur also implies that the power of immersive imagination would "not be conveyed by images, but by emergent meanings in our language". (Ricoeur, 1981, p. 181) Thus the reader has discovered within this discourse a few new words, based on hybrid concepts generally, and supplementary rejections of previously inherited words and notions, as would be expected.

I, necessarily given my background, started writing with the eye of a painter on developments in new technology in conjunction with the evolution of art as a theoretical discipline. (Kosuth) In doing so I found myself confronted with a host of contradictory impulses. Of course this distinction between the theoretical and practical aspects of art cannot be taken as absolute, since the artistic process necessarily involves experiments between the two. Besides, technology and art alike develop out of theoretical premises. (Weibel) Hence the theoretical premises behind both technological practice and hypothetical theory fascinated me with their common bonds and this helped ease the perception of contradiction. I was further convinced of the

appropriateness of this realisation after rereading Peter Bürger's aforementioned book *Theory of the Avant-Garde*. Previously, the hermeneutic exposition had to resolve all traces of contradiction, but Bürger called for a reconsidered approach replacing the obligatory conformity of parts with a stratification of elements in which different layers might challenge one another and yet still endow meaning to the whole through their very contradictoriness. (Bürger) So I began with the painterly artistic sense of immersion (where the human imagination may pass from suggested two-dimensional space into an apparent boundless space) and from this non-literal position began to formulate an artistic consideration of some of the wider implications and ramifications of this passage, now further literalised in the enveloping space of VR.

I do not know whether it must be said today that such a reflexively profuse task entails faith in art, but I continue to think that the self-defined task of artist requires continual work on our socially imposed limits, that is, a stalwart but buoyant exertion giving pattern to our impatience for expansion and liberty. Yet many artistic concerns can be found in other areas of endeavour. Scientists and some philosophers still use criteria such as beauty and symmetry to help them decide which theories they prefer, for example. As an exemplar, I cite David Chalmers's use of such aesthetic values when he outlines what is required to formulate a fundamental theory of consciousness. According to Chalmers "nonemperical restraints" on theory such as "simplicity" and "homogeneity" are appropriate (Chalmers, 1995, p. 211), even though previously he concedes that thinking and perception are more like a "whir" (Chalmers, 1995, p. 201); a Dionysian jittery quality far from the placid Apollonian aesthetic values of simple unity. Moreover, in evaluating a utilitarian instrument or software, the contemporary interpretation of technical refinement is often that of an elusive elegance perceived from its Apollonian simplicity and power. (Gelernter, 1997) But in art and aesthetics we, generally speaking, identify something as beautiful when it has the "propensity to call forth a response of delight" (Savile, 1988, p. 14) and in many cases this response involves deep levels of complexity and even Dionysian chaos. In making immersive qualitative judgements I too will refer to this convoluted "response of delight" property, as the grounds to do so lay in a felt excitement and delectation.

As Herbert Marcuse (1898-1979) has explained, art functions by the felt transmission of ideals which act in exciting other people's feelings, ideals and creativity. (Marcuse, 1978) That is why we must look back and forward simultaneously so as to inquire into the effects of science and high-technology on the internal sensualities of artists (and by implication society) as it is clear that the framework for the shift from industrial to service to information economies has been fuelled by the computer in order to know to what extent science and computer high-technology frees and enhances idealistic imagination and increases sensuality. Pertinent to this question is what Frank Popper says in his seminal book *Art-Action and Participation* when he contends that we must make a basic distinction between science and technology. According to Popper, science, in its comprehensive sense, is the exact and rational knowledge of specific phenomena. The impact of physical science on art can thus be studied from a purely theoretical angle. Technology, on the other hand, is generally

considered to be the application of science on the industrial level and originally on the pre-industrial level of arts and crafts. (Popper, F., 1975, p. 204) However such technological processes such as amplification and transmission may provide technical assistance to art's general anti-utilitarian spirit. In this way technological éclat becomes a process within the overall transmutation of cultural value as the artist adopts technology while generally leaving out its proscribed utilitarian function. Thus technology's influence on art is chiefly practical, even while, as the examples in Section B of this thesis demonstrate, technological procedures can be adopted and transformed into introspective artistic techniques.

My interest in technology's influence on art developed through just such a fascination in the application of "objective" technological developments in correspondence with a "subjective" artistic anti-formalism as applied to my own art. Post-structuralist methodology encouraged just such an interdisciplinary crossing where technology's, art's, and philosophy's previously insular roles (roles which previously tried to examine their areas as unique, sealed off disciplines) are blended. (Poster, 1990) But perhaps this question needs further articulation, as it will remain a constant subtext embedded within the entire dissertation.

In philosophic terms, *subjectivity* is a term used to denote that the truth of some privileged class of statements depends on the mental state or reactions of the person making the statement. In epistemology, subjectivity is knowledge which is restricted to one's own perceptions. This implies that the qualities experienced by the senses are not something belonging to the physical beings, but are subject to interpretation; an attribution parallel to Spinoza's previously mentioned total-monist position. This view is based on the limitation of the senses as physical organs. (Levine) In metaphysics, subjectivity includes the idea of *solipsism*. In aesthetics, subjectivism is the view that statements about beauty (for example) are not reports of "objective" qualities inherent in things but rather cognitive reports of internal feelings and attitudes.

In terms of virtual immersion, I have come to understand that the concepts *subjective* and *objective* do not function any longer, at least not within the realm of the total-immersive experience. As Stephen Talbott construes, when exploring a VE, is that orb imaginary (subjective) or actual (objective)? In fact it is neither/both. It is "subjective" as its forms and spaces (which are rendered in a programming vernacular which defines the rules objectively) are postulated by personal, interactive, participation/choice; but it also is external and "objective", as one may not redesign the space's options according to one's own autonomous whimsical inclinations. Moreover, if an immersant influences a form by moving it within a VE, that is where another immersant in the space will find it. There is, furthermore, purpose in the entire representational contrivance predetermined by the designer/programmer. (Talbott) But suppose many immersants share a VE where the software affords the assembly some means for reconfiguring the space's programming algorithmic parameters from the inside, at the level of the software, while immersed inside of the VE. What is now fanciful and what is extrinsic? If the accumulated subjectivity determines the actual algorithmic forms, and if

the objective algorithmic forms induce individual indefinite experiences subjectively, it becomes highly speculative to pigeonhole types of experiences as exceedingly fancied or extrinsic as the immersant can no longer detach her or his selfhood and view the events from an "objective" distance.

Thus useful and relevant to VR immersion is the understanding of *omnijectivity*, the metaphysical concept stemming from the discoveries of quantum physics which teaches us that mind (previously considered the subjective realm) and matter (previously considered as the objective realm) are inextricably linked in omnipresence. (Bohm, 1993) The term *omnijectivity* corresponds with Gene Youngblood's term *extra-objective*, which he used to describe the "synaesthetic and psychedelic features" of what he termed *synaesthetic cinema*, an underground cinema tendency of the late-1960s which ostensibly combined subjective, objective, and non-objective features into a syncretistic perception of the simultaneous space-time continuum. (Youngblood, p. 81) This syncretistic perception was chiefly accomplished by the use of superimposition and by "reducing depth-of-field to a total field of non-focused multiplicity" after closing the span between the inside and the outside of the picture plane. (Youngblood, p. 85) Youngblood derived the term *synaesthetic* from Anton Ehrenzweig's idea of *syncretistic vision*, which Ehrenzweig characterised in his book *The Hidden Order of Art* as a *Total Vision*. (Ehrenzweig, p. 9) More will be said on the origin of the key concept of omnijectivity in AX.

Even though Otto Kernberg pointed out that the splitting of the subject from the object is "the crucial mechanism for the defensive organisation of the ego" at its most basic (pre-oedipal) level (Kernberg, p. 26) the subject/object question pursued in this discussion will not appear in any stable binary positioning of easy subject/object opposites, as I recognise, as Stephen Talbott points out, that the subject/object set functions more along the dialectical lines of the magnet, where the north pole exists only by virtue of the south pole (as is the contrary). Like the supposed subject/object opposites, neither pole exists in isolation. Hence a subject/object debate in terms of immersive perspective (a debate I do not wish to shy away from) is possible only with the radical conflation of this polarity into an omnijectivity which recognises the mutual interpenetration that unites the apparent opposites. Then there is something of the subject in the most impenetrable object, and an objective, world-sustaining presence in the sheerest subject. As with the magnet, where if you nip off the slightest piece of one end of the magnet you will discover that it still possess both a south pole and a north pole, so the forces of subjectivity and objectivity co-exist in omnijectivity. It is as impossible to conceive of an isolated subject or an isolated object as it is to conceive an isolated north or south pole, but it is entirely imaginable to relinquish sight of their conjoint importance. (Talbott)

This said, in what sense is immersive art and, in VR's case, the immersive computational environment/subject amalgamation it employs, especially pertinent to us as omnijective beings? This is the question which has fascinated me as I began to define and then assemble an account of immersive aesthetics in connection with

the history of art and the mind. With aesthetics we are obliged to realise philosophical considerations of art and the question of how we define art is thus brought to the fore. Immersive aesthetics employs necessary omnijective questions concerning our experience of time, space, and consciousness, and, by inference, how we view our being.

An emerging omnijective/immersive aesthetic beckons forth and amends the previously mentioned *mind/body problem,* the metaphysical problem of how the mind and body (and I would stress the body's eyes) are related to one another and of how consciousness relates to conjectural substantiality in immersion. This problem concerns the question of how something incorporeal like consciousness can cause something physical like the body to act. Male masturbatory practices stimulated by lifeless, flat, printed (or electronic) images, (and even more abstractly, words) serve as an example of this puzzling question. How can inked or televised images and printed words stimulate physical erections in men?

Among the more important positions in the formation of the general debate is René Descartes's argument that the mind and body are quite disconnected elements that anyhow interact with one another. (Damasio) Richard Rorty asserts that Descartes's feat was conceiving of the human mind as an internal chasm in which both pains and clear and distinct ideas passed in examination before an inner eye. (Rorty) By contrast, Gottfried Wilhelm Leibniz asserted a theory of psycho-physical parallelism based on his theory of *Monadology,* his previously mentioned model of a system which conceived of unity in plurality and plurality in unity. (Calinger) Leibniz's monadological ideas have substantially influenced those of Gilles Deleuze, whose fertile philosophical articulations have played an important role in this dissertation.

Based on the above understanding of aspects of qualified hyper-absolutes and post-modern omnijective understandings concerning immersion, my formative contention is that immersive aesthetics (based on omnijective impulses) when contextualised in a wider historical arena can be reasonably adept in assisting us in the intrinsically hermeneutical comprehension of our hagiographic existence. Such an omnijective/immersive aesthetic would be capable of heightening the relative theoretical worth of art historical scholarship in rapport with the most recent developments of the information revolution in the service of an expansive conversation concerning our joint aesthetic consciousness.

AVIII: Scrutinising the Terms of Total-Immersion

It is difficult to oppose the virtual world because it harnesses all the polarity of the system, the positive and negative poles; it absorbs everything.
 -Jean Baudrillard, *Philosophy Discussion with Jean Baudrillard: Interview by Claude Thibaut*

We are, cognitively speaking as well as physically, spatial beings par excellence: our entire conceptual scheme is shot through with spatial notions, these providing the skeleton of our thought in general.
-Colin McGinn, *Consciousness and Space*

A hyper-real sheltered from the imaginary, and from any distinct relation between the real and the imagined, leaves room only for the reoccurrence of models in the simulated generation of difference.
-Jean Baudrillard, *Simulations*

Totality or multiplicity in abstracto is nothing other than 'something or other', and 'something or other', and 'something or other', etc...
-Edmund Husserl, *Habilitationsschrift*

As with art, reductive explanations of consciousness have proved impossible. (Chalmers, 1995, pp. 208-210) Correspondingly the term *immersion* merits a wide aesthetic interpretation as a *saturating abstract experience*. (Wollheim, 1970) In a VE, immersive phenomenon implicates the bipolar spectator's instinctive responses by soaking perception-cognition's threshold in an excess of connected/unified spatial information. I say unified because it must be recalled that digital media (i.e., VR) transforms originating analogue impulses into the homogeneity of digits. (Negroponte) Friedrich Kittler, professor of philosophy at the University of Freiburg/Breisgau, Germany, in his tract "Gramophone, Film, Typewriter" points out that the general digitalisation of information erases the difference between individual media. An analogue-to-digital conversion process transfigures all various physical quantities into homogeneous numbers. (Kittler) And numbers, it must be remembered, are abstractions that have no solid tangible actuality. (Negroponte) The fact that digital media (VR) accumulates abstract numbers into unifying abstractions (based on traces of analogue events) makes digitalia both abstract and unified in essence.

In the non-digital realm we need to distinguish between the quotidian and the artistic sense of the word *immersion* and draw a line between immersion in the common architectural and household sense of the word (those immersive transitions which we are obliged to submit to in terms of city planning and housing) and those, on the other hand, of supple epistemological artistic merit where it is a matter of active rather than passive relationships between perception, imagination and feeling. (Walton) As previously established, art is an individuating way of envisioning the world based on a conceptual metaphysics that is produced in a distinctive style. (Chamber) As my architect acquaintance, Rebecca Kaplan said to me in an email interchange, "architecture could qualify, after VR, as the most immersive of the arts, but first it must qualify as art." And of course at rare times architecture does qualify as art. Indeed entire cities can attain an artistic splendour when designed in a harmoniously unified style. Examples are the Indian cities of Jaipur, which is a

predominantly pinkish coloured city, and Jodpur, which is wholly bluish. Moreover, renaissance Italy provides us with a number of examples of what is referred to as the *Città Ideale* (the Ideal City), cities which display an elegant unifying characteristic. (Pennick, 1979) Also, in France, King Louis XVI's (1754-1793) royal architect Claude-Nicolas Ledoux's (1736-1806) microcosmos project at Arc-et-Senans (whose entrance is designed to resemble that of a cave) deserves special mention. (Miller, N., pp. 97-98) The *Ideal City of Chaux at the Saline Royale* (the Royal Salt Works at Chaux-de-Fonds), where I worked as artist-in-resident for over two years, was conceived in 1774 (though never completed) in idealistic and total terms. So also was the industrious municipality of San Leucio in the late-18th century near Naples, Italy. Such ideal cities, which have been planned and constructed as *single entities*, have a *unity and totality* which could not have been accomplished differently and thus deserve the designation art.

16th century design for the ideal city of Palmanova

For reasons of clarity, experiences of *absorption* must be separated out from experiences and expectations of *total-immersion*. Absorption is a necessary prerequisite of immersive presence. Certainly it is necessary to give ourselves up to an artwork and to forget other matters temporarily in order to receive an immersion of any particular emotional benefit. Also it is true that absorption and intense concentration are cardinal factors in inducing the sense of out-of-bodiness typical of total-immersion. But reading or viewing film, interacting with Multi-User Dungeons or MOOs (in their present state), or Internet Relay Chating (IRCs), however engrossing the activity can become, is by my terms *non (or only very partially) immersive* in that the activity is primarily *frontal*, involving a *centrally directed concentration of sight*. Indeed U. S. Army Research Institute/Catholic University researchers flatly state that total-immersion in a VR world "is not like being immersed in a book or a good movie" and that "it appears to be more like remembering your dreams". (Psotka & Davison, 1996) Loss of self-consciousness when watching standard television programs, video, or a staged performance is equally non (or only slightly at best) immersive.

In my view one of the most important characteristics of immersion is a sense of total enshrouding closure in the visual and audio environmental field. This definition counters that offered by Ken Pimentel and Kevin Teixeira who, in their book *Virtual Reality: Through the New Looking Glass*, state that the feeling of being immersed in a computer-generated world involves the same spontaneous substitution involved in suspending disbelief for an interval of time as "when you get wrapped up in a good novel or become absorbed in playing a computer game". (Pimentel & Teixeira, p. 15) Though I agree with the "suspending disbelief " component, I do not agree with their reading example and I believe that my definition of total-immersion is more specific and accurate than theirs as it insists upon the importance of macro-perception and an encompassing *total* visual field (given individual measures of susceptibility and a measure of depth and complexity of the visual data-field). Once this distinction has been made it becomes easier to trace various forms and levels of artistic immersive intent back through history and prehistory (Bersani, pp. 50-51), always bearing in mind that the intention and ideal of encasing total-immersion has changed radically as simulacra technology changes.

It is art's *feeling for opulent fulfilment delivered through atmosphere*, an immersive viractual atmosphere which embraces us, which is what separates out artistic immersive events, ideals and intents from ordinary immersive acts, such as the entering of each and every room, bed, and bath. Naturally even this distinction evokes thought-provoking philosophical questions concerning the relationship between art and life, a distinction which much late-20th century vanguard art has called into question. (Lucie-Smith) Performance Art, for example, has forced us to come to grips with the boundlessness of the question of art and life (the question of *what is art*?) through its capacity to confuse the boundaries between art and autobiography, through its use of effectively ambivalent representation and its presuppositions of personification. (Kirby, 1969) Performance Art has been an important moral force in its inoculation against elitism by implicitly posing challenging counter-hypothesises concerning the High Art tradition of the West (Goldberg, 1988), as do particular aesthetic themes and issues from the non-Western African, Chinese, Japanese, Indian, Islamic, Navaho, and other indigenous pre-colonial cultures in other ways which will remain unexamined here. Regardless of these poignant philosophical challenges which performance and non-Western art provokes in my distinction between artistic immersive events from ordinary immersive acts, I will maintain this distinction between art and life, for, as Marcel Duchamp (1887-1968) said, the fact that ready-mades are regarded with the same reverence as objects of art probably means he failed to solve the problem of trying to do away entirely with art. (Cabanne)

Traditionally in art the frame serves as a containing indicator, a type of delimiting sign that says "*art*" but hypothetically bears no meaningful resemblance to its enclosed referent. It's ideal is to refer not to itself but that which it contains. Thus it strives for the condition of invisibility (or at least peripheral unconsciousness). Immersive technology (and the shifts it engenders theoretically) eliminate the framing circumference, altering

the ratio of what can and cannot be noticed as art. Inside VE°art, space's outmost boundaries may appear radically expanded and this is precisely how immersive consciousness exceeds habitual consciousness. This artistic immersive consciousness may function then as a trellis for a larger immersive backdrop of consciousness which holds the potentiality of undermining our habitual mental reliance on point-perception, as will be demonstrated through various artistic examples in Section B. It then is possible to outline a state of greater immersive awareness on the grounds that it includes through sensorial resonance previous immersive conditions within a general greater awareness of the multiple/unified acuteness of immersion in its pleonastic (perpetual) state. This assertion on my part concerning general immersive consciousness as being *sensorially reverberating, incessant, multiple, and unified* as understood via the holonetric model received some external support from Michio Kaku and Jennifer Thompson in the newly revised edition of their book *Beyond Einstein*. In the book they purport to have attained the (or an) elusive unified field theory which explains the universe as an incessant totality, a problem which escaped Einstein after all his best efforts and those that followed him. They termed their theory the *theory of superstrings* and it, similar to the way I propose the degrees of reverberating multiple/unified immersion combine into an all-inclusive account of immersion, achieves totalisation through *sympathetic vibration* (Kaku & Thompson), just as strings of a piano vibrate in sympathetic agreement, especially when tuned to the tuning system called *just intonation*. Just intonation, in music, is a system of tuning in which the correct size of all the intervals of the scale is calculated by different additions and subtractions of pure natural thirds and fifths (the intervals that occur between the fourth and fifth, and second and third tones, respectively, of the natural harmonic series). Supposedly used in medieval monophonic music (melody without harmony) and considerably discussed by 20th century sound artists and art-music theorists, just intonation proved impractical for polyphonic (multi-part) music and was replaced at least by the year 1500 by meantone temperament.

Aesthetic immersive consciousness, particularly when comprehended as pre-pleonastic, may be said then to be in a vibratory self/non-self referential mode and thus illustrative of what Metzinger sees as the "infinitely close and at the same time infinitely distant" (Metzinger, p. 14) characteristic implicit in all states of consciousness. This pre-pleonastic vibratory comprehension, which illumes Metzinger's attestation, occurs by way of the distance that the artifice of immersive art confers to consciousness; an artifice which lends itself to a reactive self-attentive unification. As such, immersive artifice works to circumvent the current fragmentary view of the body/mind in the world which has been underpinned by the Cartesian/Newtonian model of optical physics. (Haber & Hershenson) Based on these understandings of immersive consciousness, the immersive theory emerging here should develop means for achieving insight into how the agency of visual thought (Arnheim, 1971) works when we release it from its frontal obligations. To achieve such an examination would be to overcome the tendency for aesthetic visual thought to analyse itself in terms of a presumed separation between the process of visual thinking and the content of visual thought which is its product and this view of immersive consciousness clarifies an initial issue of immersion in one grand sense. Since visual

thinking is shown to be a process consisting of the transformations of nuero-physical visual-thought impulses impregnated in continuous waves, our visual thoughts are not distinct from visual thinking. (Dennett, 1991) Similarly, immersive visual thought, visual thinking, and visual thinker make up a reverberating, incessant, multiple, and unified continuity.

I realise that this comprehension is nothing more than visual aesthetics catching up to basic science today. (Moriarty) As the analytical philosopher Thomas Metzinger says, "...in the physical outside world there are only electro-magnetic oscillations of certain wavelengths..." and that in a scientific look at reality, "...all we find are myriads of subtle electrical impulses." (Metzinger, p. 15) Taking it a step further in seeking the field of contact between the inner cognitive world and the outer penetrable world of physics (a viractual realm which I posit is the veritable domain of art), it makes sense to see thinking, thought, self, and experienced immersion as a non-localised flow of reverberating, incessant, multiple, but hyper-unified frequencies in which self-conscious immersive manifestations occur through immersive awareness.

AIX: Jean Baudrillard's Media Immersion Verses a Consciousness of Latent Excess

...we all live in "simulations" since everything is a construction...
-Maren Köpp, *Virtuality and Subjectivity*

The unreal is no longer that of dream or of fantasy, of a beyond or a within, it is that of a hallucinatory resemblance of the real with itself.
-Jean Baudrillard, *Simulations*

The cyberspace experience is destined to transform us in other ways because it is an undeniable reminder of a fact we are hypnotised since birth to ignore and deny, that our normal state of consciousness is itself a hyper-realistic simulation.
-Howard Rheingold, *Virtual Reality*

I am all sex. What I am not is moral thought, simulating and separating.
-Austin Osman Spare, *Book of Automatic Drawings*

...Plato discovers, in the flash of an instant, that the simulacrum is not simply a false copy, but that it places in question the very notions of copy and model.
-Gilles Deleuze, *Logic of Sense*

Criticism is only possible with distance, but Jean Baudrillard proclaims that there is no possibility of distance anymore in techno-mediacratic society. (Baudrillard, 1983a) This portion of the dissertation begins to explore the problematics of this proclamation and its refutation through an immersive art of latent excess. Thus here we shall theorise issues of contemporary societal immersion and threshold excess in the Baudrillardian context of a world culture where information now controls the flow (Baudrillard, 1987) and speed (Virilio, 1977) of consciousness. To summarise, the Baudrillardian position is that we live inside an increasingly global simulation where the dominance of media-forms engender, homogenise, hallucinate and drive communications via a rigidly methodical interactive network: what Baudrillard calls the *hyper-reality of simulation*. Observations concerning the sense of dissolving borders that once helped to separate the "true" from the "false" and the "real" from the "imaginary" were distinctly established in Jean Baudrillard's book *The Ecstasy of Communication*. (Baudrillard, 1987) In it (and in other books) Baudrillard theorised the media's effect on society in our immersive environment and argued that we had entered a post-modern era because, as he saw it, it is the production of images and information, and not the production of material goods, that determined who held power. (Bell, 1974) In the post-modern mediascape, according to Baudrillard, the private sphere of human intimacy is exteriorised and made categorical and thus diaphanous. In *The Ecstasy of Communication* Baudrillard described this diaphanous media effect as an instrument of *obscenity, transparency* and *ecstasy*. (Baudrillard, 1987) Artists and critics influenced by Baudrillard, and I include myself here, tended to elucidate a concern with images in the circulation system and were occupied with their recoding and perverse reuse, now recycled into a commentarial neo-conceptual art. Thus the Baudrillardian post-modern/neo-conceptual artist worked with cultural givens, trying to manipulate them in various ways, such as through noise, pastiche, collage, and/or jarring juxtapositions. The ultimate ideal aim of the

Baudrillardian artist was to appropriate circulating media signs in such a way as to elude being utterly dominated by them.

Baudrillard's *ecstasy of communication theory* described post-modern society of the 1970s and 1980s in terms of the presupposition that social immersion in media simulation (what he called *cyberblitz*) adds up to a new zone of experience. (Kellner) Baudrillard started rethinking media consumer theory in the light of what he saw as the excesses of the technological information society. (Bell, 1974) Baudrillard's previous works had emphasised the shaping of the consumer society and how it provided a new world of significance and value. In so doing he addressed issues of Marxism (Marx, K., 1967) and the general political economy. However, with his book *The Mirror of Production* Baudrillard broke with Marxism and moved away from his previous critique of the political economy towards a more systematic development of a theory of *simulation*; a radical semiurgy based on what he saw as the persistent uninterrupted proliferation and dissemination of signs. (Baudrillard, 1975) Thereafter he addressed media simulacra and the new information technologies which produced what Baudrillard called both *implosion* and the previously recapped *hyper-reality*. (Harvey) These hyper-real implosive circumstances developed for Baudrillard into what constitutes a new post-modern world which, in Baudrillard's theorising, obliterated the boundaries, categories and values of the previous non-hyper-real forms of industrial society while establishing new forms of social organisation and new forms of experiences. He views VR as a simple extenuation and perfection of this implosive hyper-reality.

We are, Baudrillard claimed, in a new (in my view immersive) hyper-real era in which the new technologies of media, cybernetic models, virtual systems, computer networks, and information processing supplant industrial production and the political economy as the organising synthesis/principle of society. Such a self-producing, self-regulating and self-referencing principle of total-hyper-reality (and its feeling of closure) was the essence of Baudrillard's philosophical propositions; propositions which I saw in totalising terms, and as such, essentially as an extenuation of Romanticism. Romantic in that those active in the era of Romanticism embodied a general longing for synthesis. (Stein) This desire was expressed and exemplified in the writings of Ludwig Tieck (1773-1853), Wilhelm Heinrich Wackenroder (1773-1798), Novalis, Clemens Brentano (1778-1842), Otto Heinrich Ernst Runge and Ernst Theodor Amadeus Hoffmann (1776-1822), all of whom theorised synthesis or experimented with it to one degree or another. Baudrillard's philosophy seems to me an extenuation of the philosophy of Romanticism in that it proclaims a gesamt resolution which is all-embracing in its use of the philosophical notion of a cyberblitz *zeitgeist* which envelopes (supposedly) all aspects of our lives. To grasp my point, one need only to glance at the title of Baudrillard's recent book *Ecran Total* (Total Screen) in which he submits, among other things, that the intrinsic objective of simulacra is to bring forward a malleable (but controllable) universal *modus operandi* bent on world domination through electronic media totalisation (the feedback-looped totality of computer terminals and television screens). For Baudrillard the computer and television screen are both depthless and infinite, a superficial abyss and a hypnotic transparency

which simulates and denies space at the same time. As he wrote in *Simulations*, the screen offers "an aesthetics of the hyper-real, a thrill of vertiginous and phoney exactitude, a thrill of alienation and magnification, of distortion in scale, of excessive transparency...". (Baudrillard, 1983a, p. 50)

Of course, when Baudrillard described the hyper-real condition as a transformation in which the code of production becomes the primary social determinant, he makes an important provocative point as he focuses our concentration on media, simulation, new technologies, and cybernetics. Among Baudrillard's most provocative assertions, as concerns this dissertation, are his reflections on the role of the media in forming the post-modern world and our place within it. In *The Ecstasy of Communication* Baudrillard puts forth a paradigmatic model of the media as an *all-over, engulfing, omni-present, totalising agent*. (Baudrillard, 1987)

Baudrillard began developing this theory in an essay entitled "Requiem for the Media" in *Toward a Critique of the Political Economy of the Sign* (1972). The title is ironic, for Baudrillard is only starting to advance a social theory in which the media plays an acicular role. By the late-1970s Baudrillard was interpreting the media as a devouring simulation machine which by hyper-reproducing images, signs, and codes comes to constitute an autonomous realm of hyper-reality. In "The Implosion of Meaning in the Media" Baudrillard claims that the proliferation of signs and information in the media obliterates meaning by neutralising and disintegrating all content through hyper-excess. He theorises that such a process leads to both a collapse of meaning and the destruction of distinctions between media and reality. In a society presumably saturated with media messages; information and meaning *implode* into noise, into pure effect without content or meaning. (Pierce)

Baudrillard uses here a model of the media as a black-hole that absorbs all information contents into a situation which no longer communicates purposeful messages. As content implodes into appearance, presumably the medium and the real are now seen in an indistinct, idealised, *totalised pattern*, from which there is *no critical distance* from which to oppose (or even surmise one would think) it. Dada and Surrealist techniques of uncertainty, irony, mockery and humour, all of which downplay reason - and particularly Max Ernst's (1891-1976) concept of "systematic displacement" (Lippard, 1970, p. 126); a technique which is concerned with the liberation of individual signs from their utilitarian purpose - are discounted as prototypes here; which is not as one might have hoped and expected after reading Baudrillard in *The Transparency of Evil* say that "...so long as there is a dysfunction in a system, a departure from known laws governing its operation, there is always the prospect of transcending the problem." (Baudrillard, 1987, p. 32)

Walter Benjamin, in his essay on the Surrealists, notes how their emphasis on excess and ecstatic encounters creates an opposition to the domain of purpose through an ecstatic excess which dissolves away the idea of the self as determined by controlling utilitarian purpose. (Benjamin, 1978) This is all-important to Benjamin

for, writing in 1929, the aspect of the Surrealist movement which he saw as embodying its principal worth, was Surrealism's place in the political awareness and the struggle of socialist resistance against the rising threat of the irrational ideology of fascism. (Cardinal & Short) The dialectical step beyond intoxication (which is reached first by entering into it) is the beginning of a new realm of purposes, now directed toward the revolutionary transformation of an irrational social reality which insists on calling itself rational.

By ignoring such dysfunctional strategies, Baudrillard is able to claim rather that the masses can only incorporate media content, thereby neutralising meaning by demanding and obtaining more and more irrational self-contradictory spectacle/entertainment, thus further eroding the boundary between the media and the *real*. (Kellner) All modes of representation collapse into a realm neither real nor imaginary, but *simulatory*. In this sense, the media implodes into the masses to such an extent that we no longer know what effects the media have on the masses and how the masses process the media; thus constructing *an holistic circular totality without (apparently) an outside*. What this means in terms of immersion is demonstrated by what Baudrillard says in *The Ecstasy of Communication* as that "which was previously mentally projected, which was lived as a metaphor in the terrestrial habitat is from now on projected entirely without metaphor, into the absolute space of simulation". (Baudrillard, 1987, p. 16) By ignoring the potential impact of the Dada and Surrealist metaphoric procedures of juxtaposition which pertain to the liberation of the meaning of signs (Cardinal & Short), Baudrillard, in my view, misses the precision with which they remove from the image-world the closed familiarity of his "absolute" and leave information suspended in a plenum (vacuum state) of consciousness. When information is suspended, there is only the slightest difference between an intentional and an involuntary transcendence of reality. Such a collapse of utilitarian consciousness (combined with the pursuit of inexactitude) may create the unique intensity of abstract excess in our perceptual circuitry.

I will further explain how quasi-abstract excessive art achieves this lapidary incisiveness below in respect to my essay "The Art of Excess in the Techno-mediacratic Society", which was written as a mildly corrective retort to many of the totalising positions which Baudrillard put forth, as well as a reply to Peter Halley's totalising theoretical assertion that all relationships are geometric (Halley) (as opposed to rhizomatic; which was my view, as the flows, folds, excesses, and repetitions of the virtual describe a perpetual decentering rather than any geometric stability). This rhizomatic and labyrinthine view of post-industrial society takes into account the rich ensemble of relations possible: the diversity, the unexpected links, the ruptures, the amalgamations, the connected heterogeneity which Deleuze and Guattari showed to us. Their vision of post-industrial life re-opened the way for the production of subjectivity in art by affirming the befittingness of variety and the necessary right to dissension. (Deleuze & Guattari, 1987)

As we have seen, for Baudrillard, media, information and communications neutralise signification by encompassing spectators in a glossy media-immersion, which he defines in terms of an inert absorption of

images which resist meaning, rather than an active processing/production of significance. (Baudrillard, 1983a) But Baudrillard goes farther still and globalises this suppositional hyper-real media effect; thereby making the media homogeneously accountable for a hyper-reality which obliterates, he claims, the differentiation between interior and exterior space, which is presumably replaced by mediational amplitude. (Baudrillard, 1993) This, I wish to point out again, is quite a totalising generalisation. In making such a sweeping statement, Baudrillard reversed the propositions found in Marshall McLuhan's books *The Gutenberg Galaxy, Understanding Media: The Extensions of Man,* and *The Medium is the Massage;* all of which perceived media as extensions and exteriorisations of our human powers (McLuhan, 1964) even while questioning the relationship between medium and content. By contrast, Baudrillard argued that *humanity is immersed in the media, engulfed by it and consequently overpowered and overwhelmed by its excessive omni-present constrains*. (Baudrillard, 1983a)

Correspondingly, Baudrillard's book *Simulations* contained a chain of analyses of some of the ways in which diaphanous simulations have come to eclipse hyper-real society and immerse society in media contrariety. For Baudrillard, *simulacra* are reproductions of objects or events, while the *orders of simulacra* form dissimilar stages or *orders of appearance* in the relationships betwixt simulacra and the real. He thereupon construed how simulacra came to eclipse social life, both historically and phenomenologically. (Baudrillard, 1983a) In *Simulations* Baudrillard claims that modernity broke with the united medieval hierarchy of signs and social positions by introducing an artificial, democratised world of diaphanous signs which valorised artifice, thereby shattering rigid medieval hierarchies and arrangements. (Baudrillard, 1983a, pp. 83-92) The Feudal Age, according to Baudrillard, had established a puissant social formulation and instituted a tight hierarchy of signs in the West which designated class, position and social status. (Borgman) During this era one could readily read from an individual's clothes and appearance his or her social rank and status. Signs at this stage were rigid, restricted, entirely limpid and obligatory. In ensuing epochs the counterfeit sign became the paradigmatic mode of representation and the order of the simulacra begins. (Baudrillard, 1983a) With the loss of fixed values and the celestial decrees that the Christian Church granted to society in the medieval era, the post-medieval symbol (now capricious and diaphanous) is discharged from its standing of inflexible gothic hierarchy. As Baudrillard saw it, the sign now strove to reproduce nature and to ground its form in resemblance to nature.

Baudrillard's claims follow, assuredly, Walter Benjamin's examination of photography and film and particularly Benjamin's exposé of art's plight in relationship to mechanical reproduction. As is well acknowledged, according to Benjamin, art lost its original *aura* and thus became obliged to relinquish its claims to exceptionality as a form of human endeavour capable of offering alternative (and ostensibly superior) experiences and models for better being. (Lovejoy, 1997a, p. 24) Benjamin brought into critical discourse an awareness that widespread integrated changes in technological conditions can affect the

accumulated consciousness and trigger prevalent changes in cultural norms as he specifically analysed how photo-mechanical technology intervenes in delineating existence. He understood that through the mediation of machines, the inherent realm can be contorted and prejudiced, thus changing our awareness of it. (Lovejoy, 1997a, pp. 24-25)

However in post-modern society, with its electronic and digital simulacra, there is no longer a spent nostalgia for natural semblance and Warholian reproducibility becomes the fundamental logic and code of the information society. (Warhol & Hackett) This condition is first manifest, Baudrillard believes, in Walter Gropius's (1883-1969) Bauhaus, in which designed objects function as signs within a larger gesamtkunstwerk ideal of homogeneous functionality; a notion Walter Benjamin seems to confirm in his text on Charles Baudelaire when he says that in the wake of bourgeois culture "art (...) begins to have doubts about its function" indeed it "ceases to be inseparable from utility". (Benjamin, 1973, p. 172) In *For a Critique of the Political Economy of the Sign* Baudrillard states that "it is the Bauhaus that institutes a universal semantization of the environment in which everything becomes the object of a calculus of function and of signification. *Total functionality, total semiurgy*." (Baudrillard, 1981, p. 185)

I shall be explaining in detail in BXVI from where Gropius developed his ideal of the total gesamtkunstwerk, and thereby counter Baudrillard's claims for a radical post-modern departure between the values of Medievalism and Modernism by illustrating how gesamtwerk ideals have existed at least as far back as the Gothic period and how their roots are well planted in the philosophical history of Romanticism, an historical supposition which I see Baudrillard as sustaining.

In *For a Critique of the Political Economy of the Sign* Baudrillard described the Bauhaus systematisation of designed objects and architecture consistent with gesamtkunstwerk homogeneity and then extends the notion into post-modern cybernetic systematisation, in that the Bauhaus had harnessed industrial developments and techniques to art (rather than rejecting them as Arts and Crafts largely had) as it sought to design buildings and objects which suited mass production by eschewing ornament. According to Baudrillard, such an abstract homogenetic systematisation connects its unifying locus even more tightly with this homogenisation of *total design*. The Bauhaus's gesamtkunstwerk synthesis of art and technology, in Baudrillard's view, anticipated technocratic and cybernetic projects by developing a whole system of objects controlled from above that would produce a functionalised realm in which the meaning of every object would be determined by its place and role in the extant system.

Although I agree with Baudrillard when he reiterates that (in general) most visual information is accepted by society rather passively, in my view, his way of conceiving of life as passive homogeneity is itself romantic idealisation, however supposedly critical or negative its ubiquitous aggregates propound to be. This is evident

in *For a Critique of the Political Economy of the Sign* when Baudrillard writes, "...the whole environment becomes a signifier...". (Baudrillard, 1981, p. 186) Following on, he evinces the conquest of functionalisation and portrays post-modern society as one of "total control" and "total organisation" in which functionalised aesthetics are incorporated in the very cybernetic organisation of society. (Baudrillard, 1981, p. 186) Accordingly, Baudrillard concludes that the Bauhaus's gesamtwerk aesthetic ideals allegedly reach consummation in the structural formulation of the post-modern society by what he characterises as the previously mentioned *cyberblitz:* the electronic immersive state whereby individuals and society at large are subordinated to the effects of cybernetic codes and models; modulations of a society which aim at a consummate instrumentalisation and mastery. In Baudrillard's gesamtwerk (homogeneous) theory, simulacra plays a dominating role in social life to such an extent that previous enclosing boundaries dissolve altogether into a sublime homogeneity. All dichotomies between appearance and reality, surface and depth, life and art, collapse into a functionalised, integrated, and self-reproducing gesamt universe of passé simulacra models and codes. (De Bolla)

By contrast, in my 1993 essay "The Art of Excess in the Techno-mediacratic Society", which I wrote to support a travelling exhibition I curated for the Musée d'Arbois titled *Excess in the Techno-mediacratic Society*, I hypothesised that an art of latent excess produced in that kind a Baudrillardian milieu of image superabundance and information proliferation can problematise and hence enliven us to the privateness of the human condition, in lieu of the fabulously constructed social spectacle which engulfs and (supposedly) controls us. (Debord) As supporting evidence for this statement we have the quantitative studies of immersion conducted by the U. S. military which, all said, show that immersion is a very personal thing, in that each person has a different threshold between disbelief/belief which blocks or facilitates it. (Pesce, Kennard & Parisi) However, I accepted the Baudrillardian point that numerous people today dwell in the expanse of infotainment (with its instantaneous non-separability and ubiquity) and that is why I elected to title the essay and exhibition *Excess in the Techno-mediacratic Society,* for I wanted to ask just what should be art's contribution to the enlargement of understanding of our conspicuously excessive Western society. (Galbraith) This was the question I set myself in spawning this exhibit, catalogue, and subsequent *New Observations* magazine issue which I guest edited under the same title.

What I discovered was that, for me at least, art, when excessive in its own right, is capable of functioning, paradoxically, by nurturing in us a sense of polysemic uniqueness and of individuality brought about through a *counter-mannerist* style of reproducibility (ever more circuitous, excessive and decadent); a style which takes us from the state of the social to the state of the secret distinguishable I, by overloading ideological representation to a point where it becomes non-representational. It is this *non-representational counter-mannerist representation* which breaks us out of the fascination and complicity with the mass media mode of

communication. Thus the *repartie* (vivacious spiritual response) to Baudrillard's view of media-bathed society is an aesthetic *élan* constituted through private superabundance.

This aesthetic élan of superabundance reconceptualises art in terms of latent excess so as to grant art an unbridled zone. However, this character of openness (Eco, 1989), which an inception of the art of excess assumes, demands that we seek a liberation from custom, doctrine and influence, and that we grasp again the autonomy and priority of art as a special type of excessive ideological activity. (Marsh) The acknowledged probing at the outer limits of recognisable representation, the excited all-over fullness and fervour of this syncretistic probe, isn't a failing of communications within excessive immersive terms then; *it is its subject*. Such a copious realisation is insinuated through overloaded/excessive stimulus inasmuch as latent excess can represent every integrated meaning conceivable, for in the art of immersive excess the focal point is never circumscripted. The fusion of elements within latent excess are not, by definition, passively received and accepted. By nature of its conflicting excessive presentation, information is to some degree psychologically embedded and thus withheld even as it is inexorably displayed all at once to the limited nature of our human perceptive competence. (Carr & England) Thus immersive excess takes us away from the habitual focus of the picturesque. This excessive view (the quintessence of immersive space) works when the immersive bubble dominates over frontally conceived configurations. It is a consciousness of the immensity of the immersive ground which potentially liberates us inwardly from the infringements stemming from the deluge of mass-media images and which stimulates us to assess anew the calibre of any such infringement. Immersed within the excessive ground of representation, we must interrogate the validity of our sense of simple binary image oppositions. Hence it is in the amity felt with the excessive ground that we feel a sensuous liberation from ideological monotony and cultural prudery.

Banal depictions of ideological content are flawed in the immersive/excessive field for they close the spectator and the creator off into ascertainable parcels of restricted implications which preclude the concept of freedom of thought. There must be a subliminal infinity about the immersive/excessive field, an overloaded incompleteness which lures us to the inspiration of individual sovereignty; the idea of our own unclear and denuded fourth-dimensional realm. (Ouspensky) The art of immersive excess frees us then from accustomed coyness, platitudes, and predetermined perceptions with which we are deluged daily by the mass-pop media. It is my experience that it is in this artistic condition of privately excessive formlessness that we can ascertain the delimitation of mass-pop media ideology and the resultant implications of that cognisance.

An art of immersive excess never offers us conventions then. Rather excessive/immersive art is like a fertile seedbed which undermines the hitherto clear distinctions falsely made between representation (identity) and the imagination by way of negating and recombining. Here semblances and spaces are always already connected within a dark and obscure excessive orb as the art of immersive excess negates representations (and

all they imply), thereby affirming a consciously divergent way to see and exist. The excessive artistic ground can therefore spawn in us a sense of affinity which communicates individuality in totality without forfeiting liberty.

Imaginative excess stands in defiance of the limits of ordinary perception and representation then. Thus it is (or can be) about the opposition between the daily work day and the sacred/sexual, transgressive/ecstatic moment. (Lewis) In a sense it attempts to set up a stable form of ecstatic transgression where one can go back and forth at will *via dissimulation*.

I should say that most all of my ideas on this subject stemmed from the reading of Georges Bataille's *Visions of Excess* (which appeared in English translation in 1985) after which I began to experiment with (and analysis through my artwork) various artistic approaches towards latent excess. In the terms Bataille proposes, any "restricted economy", any sealed arrangement (such as an image, an identity, a concept, or a structure) produces more than it can account for, hence it will inevitably be fractured by its own unacknowledged excess, and in seeking to maintain itself, will, against its own rationalised logic, crave rupture, expenditure, and loss. More specifically, for Bataille, the term *expenditure* describes an aspect of erotic activity poised against an economy of production. (Bataille, 1985, pp. 116-129) Librarian, libertine, paleologist, archivist, radical thinker, author of erotic fiction; Bataille took an active role in the mid-20th century Parisian avant-garde art and literary scene by objecting to what he saw as the aestheticism and sentimentality of the Surrealists. Consequently he became André Breton's (1896-1966) antagonist from the intellectual ultra-left. After World War II, as founding editor of the journal *Critique* and after authoring the transgressively philosophical books *L'Expérience Intérieure* (Inner Experience) (1943), *Le Coupable* (Guilty) (1944), *Sur Nietzsche* (On Nietzsche) (1945) and *La Part Maudite* (Accursed Share) (1947), Bataille's thought emerged as a viable alternate to Jean-Paul Sartre's then reigning philosophical school of Parisian Existentialism. (Sartre, 1965) Yet Bataille's accomplishment transgresses disciplines and genres so repeatedly and so thoroughly that capsule accounts of his oeuvre are compelled to delegate themselves to abstractions. However, one can say with assurance that his thinking consisted of a meditation on, and fulfilment of, *transgressions through excess*.

Bataille's *Visions of Excess* immediately impressed me as it resonated handsomely with the overloaded nature of my palimpsest-like gray graphite drawings from the early-1980s (which were reflective of the time's concerns with the proliferation of nuclear weapons, the threat of nuclear holocaust (Schell), and the excessive nature of the Ronald Reagan military build-up; the largest in the history of the world). (Levidow & Robins) To put a number on this excess I refer the reader to Robert Romanyshyn's report on the situation of the mid-1980s where he conveys the fact that in 1986 the world spent "an average of 1.7 million dollars per minute on weapons", with the U.S.A. spending the most. (Romanyshyn, p. 245) These drawings were subsequently

digitised and developed into my first digital computer-robotic assisted paintings of 1986. (Lovejoy, 1997a, p. 156)

Joseph Nechvatal, *Integrating Web*

Much of what I have delineated here as my theory of immersive excess will be germane to my interpretation of the Apse in the Grotte de Lascaux in BIII; an immersive space which I take as emblematic of immersive ideals in general.

AX: Today's Immersive Weltanschauung: Allocentric Eyes Within the Holographic Summum Bonum

The only thing that can be brought into cyberspace is the self.
-Mark Pesce, *Understanding Media: The End of Man*

First, I am dealing with no object. Perception is the object. Secondly, I am dealing with no image, because I want to avoid associative, symbolic thought. Thirdly, I am dealing with no focus or particular place to look. With no object, no image and no focus, what are you looking at? You are looking at you looking.
-James Turrell, *James Turrell, Air Mass*

One is necessary, one is a piece of fate, one belongs to the whole, one is in the whole...
-Friedrich Nietzsche, *Twilight of the Idols*

A new metanarrative, based on the story of the universe and its generative qualities, will soon create a new world view that will affect all areas. It is a story which grows directly out of the post-modern sciences of complexity and is thus both true and mythic.
-Charles Jencks, *What is Post-Modernism*

The holomatic principle is that each network interface is an aspect of a telematic unity: to be at any one is to be in the virtual presence of all others throughout the network.
-Roy Ascott, *A list of definitions and terms coined by Roy Ascott*

This portion of the dissertation will begin to address the psychic drive for the aesthetic satisfaction attained in entering perceived hyper-totalities which I detected in the contextual research of the atmosphere surrounding immersive gesamtkunstwerk issues, some of which I touched on previously. The ability to think in nominal terms of abstraction is the key requirement necessary when considering the credulity of wholes and totalities and their make-up, in that nominalism teaches us that abstract concepts are names for individual things, and that there is no reality corresponding to abstract concepts. (Gosselin)

When one is fully immersed in an intensive, synthetic, feedback-looped perceptual hyper-totality, the issue of the contrivance of homogenous sets and subsets emerges and impacts on the full analysis of immersive art. In fact it is imaginable to say that the consciousness of *subsets immersed within abstract sets* is a consequential understanding of immersion in that even when one is fully immersed in a synthetic totality, one still exists within other, larger, synthesised totalities. From a philosophical perspective, *synthesis* is the procedure by which once thought separate elements of a system are assembled into a superior ideal union of an undivided whole, so that the consequent unity is something more that the mere sum of its unmitigated parts. Synthesis proceeds from the stand-alone separate elements discerned by analysis, but it supersedes analysis by raising the particulars up to the point of being conscious of their larger comprehensive framework. Such amalgamic thought unites multiplicity into a gesamt hyper-oneness which we may eventually call indicative of *immersive culture*.

The task of writing a history of immersive culture is assisted through understanding specific sets of *ideal imaginative beholdings* and in understanding immersion through what Sigmund Freud called a *weltanschauung:* an ideal "intellectual construction which solves the problems of our existence uniformly on the basis of one overriding hypothesis, which, leaves no question unanswered and in which everything that interests us finds its fixed place". (Freud, 1933, p. 622) More broadly the term *weltanschauung* has come to mean a *blending of idealism and materialism* into philosophical, political, scientific, religious or just private *ways of perceiving the world* (or not perceiving it). It is different at different times and there are different weltanschauungs at any one time. (Wollheim, 1974) Specific artworks are products of various metaphysical weltanschauungs, as art both is made by and in turn makes its surrounding culture. Still, even the proclamation *culture* presents a set of highly ambiguous notions in that the word *culture* has instantaneously conflicting insinuations, and it is invariably best to observe scrupulously the context of its use. For some it means High Art, but for others (this author included) the word has more anthropological applications where culture represents less hypothetical measures of excellence than a widespread *way of seeing and being.* (Williams) It is this usage and intent which brings the notion of culture closer to that of the weltanschauung.

Paradoxically, the traditional opposite of culture, *nature*, may be established as an inception that could exclusively have been created by culture. On the other hand, it is equally possible to argue, as Gilles Deleuze does with his statement "artifice is fully a part of nature" (Deleuze, 1984, p. 124), that civilisation and all its production subsides within nature, however ostensibly distinct they seem to be. Regardless of these fascinating mirrored counter-definitions, for the purpose of this study I accept the tacit presupposition that aesthetic culture refers generally to non-utilitarian endeavours. A useful reference in sorting out what is meant by culture in general is Clyde Kluckhohn's *Mirror for Man* in which the following meanings for the word *culture* are suggested.

 1. the total way of life of a people

 2. the social legacy the individual acquires from his group

 3. a way of thinking, feeling, and believing

 4. an abstraction from behaviour, a theory

 5. the way in which a group of people behave

 6. a storehouse of pooled learning

 7. a set of standardised orientations to recurrent problems

 8. learned behaviour

 9. a mechanism for the normative regulation of behaviour

 10. techniques for adjusting to the external environment and to others

 11. a precipitate of history

 12. a behavioural map, sieve, or matrix

In that my theoretical aim is to establish an understanding of the *omni-expansion of the allocentric subject which ideally occurs in aesthetic immersive situations,* my emerging immersive theory will connect to definitions 2, 3, 5, 6, 8, and 10.

As previously established, any single simplistic explication of the function of art (a concept which has no single function, but several) within Western society today would be inapt. However, by examining the various definitions offered over the centuries, we can see that the idea of art has primarily developed out of notions of anthropomorphic aesthetic agency displayed through, at first, manual dexterity and then intellectual stratagems concerning collective or intimate exposition. As this embraces many types of production that are not conventionally deemed to be art, perhaps a better term for art would be *culture* as defined above in definition number 1: *as a totality*. This would explain why certain pre-industrial cultures produce objects which Eurocentric interests characterise as art even though the producing culture has no linguistic term to differentiate these objects from utilitarian artefacts. (Geertz, 1995)

In examining the above concept of *art as culture-totality* I found the Germanic terminology *geistesgeschichte* (which means a history of mind in a cultural sense) useful as brought to my attention by Max Dvoràk in his *History of Art as the History of Ideas.* (Dvoràk, 1984) To further elucidate the meaning of geistesgeschichte as the history of ideas (or intellectual history), it is worth remembering that if the natural sciences explain events as the result of causal laws, culture should explain events in terms of the meanings and intentions that people give them. (Kearney, 1991) These meanings and intentions however are informed by historical and social change, particularly the total-outlook peculiar to a given period (its dominant weltanschauung). Furthermore, isolating or giving undue priority to any one element which makes up the primary interpretative material can skew an interpretation and thus falsify it through oversimplification.

Inspecting the current total-outlook in today's cultural weltanschauung terms, necessarily requires a subsidiary look at of the concept of omnijectivity. As previously mentioned in AVII, this key immersive concept arose out of the discoveries of quantum physics, a non-spatial physics (and logic) which Clarke has shown to parallel the workings of consciousness itself. (Clarke, pp. 236-240) More specifically, the concept of omnijectivity emerged from the theories of quantum physicist David Bohm (1917-1992), protégé of Albert Einstein; and Karl Pribram, author of the neuropsychological textbook *Languages of the Brain*. Pribram noted how modern theories of how the brain stores memories did not explain how memories seem to be distributed throughout the brain as a whole. Each memory a person has was believed to have a specific location somewhere in the brain cells. Pribram, however, made the discovery that memories are not localised, but rather they are somehow spread out or distributed throughout the brain as a whole. Even when much damage is done to a brain, or pieces of it are removed, organisms don't lose sections of their memory. He knew of no process that could account for such a phenomenon. Finally, the process that made the most sense in

metaphorically explaining this aspect of the brain was *holography*. Therefore Pribram offered the holographic model as an explanation of the functioning of the brain. (Pribram)

In 1947 Dennis Gabor described the principles of *holography* as where every tiny portion of holographic film would contain all the information recorded in the whole. Hence holography helped explain how it is possible for every part of the brain to contain all of the information necessary to recall memory which Pribram had proven by conducting experiments on rats. Rats, after having been taught to run through various mazes, were operated on and designated portions of the rat's brains were surgically eliminated. Pribram found that no matter what portions of their brains were cut out, their memories of how to run the mazes were not eradicated. If memories had specific locations, then the rats would not be able to run the mazes after the *memory* had been cut out. By adapting a holographic model, this discovery could be elucidated as each piece of holographic data contains the whole image. (Talbot, p. 17) However, memory is not the only holographic process in the brain. *Vision is also holographic*. The part of the brain that interprets what the eyes see is also unaffected by large-scale damage of the brain or by removal of parts of the brain.

But Pribram was not alone in adapting the holographic model in explaining reality. David Bohm also arrived at the conclusion that *the universe operates under holographic principles*. Bohm, who had studied at the University of California, Berkeley with Julius Robert Oppenheimer (1904-1967) (noted theoretical physicist and director of the Los Alamos Laboratory during the 1943 to 1945 development of the atomic bomb), received his Ph.D. in Physics in 1943 and taught widely before becoming professor emeritus of theoretical physics at London University. His explorations into the nature of consciousness were stimulated by Jiddu Krishnamurti (1895-1986) and later by the Dalai Lama. (Peat) His most celebrated book is *Wholeness and the Implicate Order* in which he expresses his disinclination with the previous prevailing interpretations of quantum theory and suggests that an unseen order is at work beneath the ostensible chaos (Gleick) and lack of continuity of the individual particles of matter. (Cushing, Fine & Goldstein)

Bohm had been dissatisfied with the unexplained dual nature of subatomic particles, the fact that they behave sometimes as particles and sometimes as waves. According to Bohm, the holographic model explains it. Hence, Bohm claimed that though our plane of reality makes it seem as if things are separated, at a deeper level of reality everything in the universe is part of a *total unified continuum* (thus subject and object coalesce in omnijectivity). (Peat) Holographic film is an appropriate model, according to Bohm, because of its implicate order, as the image is encoded in the film's interference patterns. It contains a hidden *perceptual totality enfolded throughout the whole*. Equivalents to this recognition exist in fractals in the sense that they present a system in which all parts are encode into the structure of the whole; that a small extract contains, or has enfolded within it, the essential features of the whole. (Mandelbrot) The hologram projected from the film is an explicate order because it represents the unfolded and perceptible version of the image. This relational

structure means a mutual and dynamic coexistence where each "part" depends in its being on the other "part". This relational structure theorises a *space/time matrix* (the enfolded order) which in itself has no mass or density but is the source of all that we call matter. This implicate order acts like a projector of the explicate order in a way which can be *likened to a hologram*.

Hence, Bohm sought to develop a theory of reality that would be *inclusive* and *whole* (Peat); a coherent hyper-spectacle of omnijectivity in which things hook together. (Sharpe) As Bohm said in his key book *Wholeness and the Implicate Order* (a book which defines a seamless physical order of continuous wholeness), "I would say that in my scientific and philosophical work, my main concern has been with understanding the nature of reality in general and of consciousness in particular as a coherent whole, which is never static or complete but which is an unending process of movement and unfoldment". (Bohm, 1980, p. 9) Also in the book, Bohm emphasised the distinction between wholeness and holism, because he felt some holistic theories have had very negative effects in the past.

Surely incoherent views of the whole have been destructive, as Boris Grois's book *The Total Art of Stalinism: Avant-garde, Aesthetic Dictatorship, and Beyond* substantially makes apparent. However, in rejoinder, Bohm points out that if we think of totality as constituted of independent fragments, then "that is how our mind will tend to operate", but if we can "include everything coherently and harmoniously in an overall whole that is undivided, unbroken, and without a border" then our mind will tend to proceed in like fashion, and "from this will flow an orderly action within the whole". (Bohm, 1980, p. 11) When looking at a whole, we must also do justice to the parts and understand their relative independence. This concept is Bohm's *implicate order*, the source of all the perceptible explicate matter of our space/time world. (Peat) According to Bohm, the world we live in at the most evident and superficial level is the three-dimensional world of objects, space and time; what Bohm calls the *explicate order*. A lucid comprehension of the world only becomes possible by understanding a deeper level, the *implicate order*. On the space/time-matrix explicate plane, certainly both things and events strictly are disassociated, but immersed underneath the exterior, on the implicate frequency level, *all things and events ultimately are one total unanimity*, thus omnijective. This implicate order is the enfolded order which, in Bohm's theory, is unlimited; containing a super-implicate order, a super-super-implicate order, and so on; each level being more perspicacious than the last. (Sharpe)

As previously indicated, Karl Pribram reached corresponding conclusions separately from Bohm respecting the meaningfulness and expressiveness of the holographic/omnijective model. In his book *The Holographic Paradigm and Other Paradoxes* Pribram sums up his theory about consciousness by saying that mental qualities are the permeating organisational principles of everything in the universe. (Pribram) Clearly the universe includes the brain; thus jointly with Bohm, Pribram became an architect of the

holographic/omnijective paradigm by stating that the brain acts like a hologram which perceives and takes part in an omnijective universe.

What makes it difficult to grasp this concept (but we must grasp it if we are to understand the wider implications of immersive art) is that we are not looking at a hologram from a removed and critical distance, but *we are part of the hologram*. This concept is immensely important to *Immersive Ideals / Critical Distances* as it immediately addresses the conventional conception of aesthetic distance, the traditional audience's awareness that art and reality are not the same. Edward Bullough's (1880-1934) essay "Psychical Distance" in the 1912 *British Journal of Psychology* contains an early presentation of the conception. Bullough's explanation of *aesthetic distance* included a paradox in that, in his view, an artist's composition is fully efficacious when it is intimate, however the artist must contrive an artistic presentation by assumptions of detachment from it. *What is most desirable is the maximum abatement of aesthetic distance without its disappearance.* (Bullough) Consequently, Bullough maintains that there is such a thing as *aesthetic consciousness* and that in order for aesthetic consciousness to occur the subject must have a distinct sort of demeanour towards that object of knowing. This unique attitude Bullough calls *psychical distance*. According to Bullough, this psychical distancing attitude has both negative and positive aspects. The negative aspect is the blocking out of pragmatic thoughts, feelings, impulses and actions. This negative aspect, in turn, makes possible the positive aspect, which is a contemplation and appreciation of the features of the object of consciousness. (Bullough)

The Bohmian/Pribramian concept of holographic/omnijective immersion, though lucid from the pinnacle of hyper-spectacular thought, is thoroughly abstract and defies most direct perspicacious exposition. Fortunately, the intuitive discernment necessary to fathom non-dualistic, holographic, and omnijective principles is a special quality of the human mind which immersive art especially abets given its inclusive coherence and enveloping suggestions of perimeterless aesthetic entirety. The level of abstract difficulty found in conceiving and accepting the holographic/omnijective understanding indeed is another indication of how radical a revision Bohm and Pribram are making on occidental thought. Paradoxically, ancient philosophies of India (the Vedas are considered the most ancient texts known to humanity at an estimate of at least 12,000 years old) are better equipped to understand the indivisible nature of the universe. In the Vedas the part is recognised as being of the whole. Verily this tenet is basic to the unitary philosophy of Yoga; a system of solicitude established during the Indus Valley civilisations more than 5000 years ago. (Havell) The principle of *Brahmanism* (*Brahman* is the term used to refer to a transcendental omnipresence connected with the characteristics of loving consciousness) is the harbinger of both Hinduism and Buddhism and provides us with the oldest texts and best preserved metaphysical system on our planet. (Coomaraswamy, 1956)

The Brahman which has been thus
described is the same as the

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ether which is around us;
And the ether which is around
us, is the same as the ether
which is within us. And the
ether which is within us,
That is the ether within the
heart. That ether in the heart
(as Brahman) is omnipresent and
unchanging. He who knows this
obtains omnipresent and
unchangeable happiness.
-Khandogya Upanishad, III Prapathaka, 12, Khanda, 7-9

Relevant too is the Indian system of Buddhist *Tantra* (*tantra* means *woven together*); a term loosely applied to a system of Hindu yoga in which the sexual union of male and female principles are worshipped through a sexual ritual in which leisurely, non-orgasmic intercourse is performed as a way to experience the ethereal one. (Yamamoto) Great temples have been created in service to this philosophy, such as the famous temples of Khajuraho in Madhya Pradesh (Central India) built between the 9th and 13th centuries (the Chandela dynasty) where a throng of sexual positions are illustrated via teeming, copulating carvings which cover the temple's exterior. A Tantric adept meditates on the carvings and by so doing frees the psyche from sexual desire so to enter into the inner emptiness of the temple. (Havell) Additionally, Sufis embrace the ancient Greek philosophers's idea that the macrocosm is the microcosm. (Critchlow)

Similarly, with an omnijective/holographic understanding of immersion we are no longer looking at an outside weltanschauung/universe but rather we are looking at ourselves (thus necessarily critically removed a half-step) seeing our own eyes holographicly process a holographic environment. For Pribram, this understanding made him realise that the accustomed objective world does not exist. Rather Pribram explains that we have two very different aspects to our reality: as physical bodies moving through space and as interference patterns enfolded throughout the universal hologram. (Talbot, pp. 54-55) Bohm believes this second option to be the most correct, for to think of ourselves looking at a holographic universe is again a faux abstraction, an attempt to separate two things that ultimately cannot be separated. (Sharpe) This interconnected and mutually immersive weltanschauung has been termed *holographic consciousness* by Mindell who states that this holographic-field theory of the universe and brain indicate *a world operating like a field*. (Mindell, 1988)

This theory/weltanschauung of holographic omnijectivity *elucidates immersions' ideal metanarrative and gives immersive art its truth value*. It does this inasmuch as the holographic weltanschauung, imbued as it is within the field of omnijectivity, provides an encircling holonetric outlook by which consciousness is recognised as a unitary enveloping phenomenon which (if it can be described reductively at all) can exclusively be reduced to a unitary condition of undifferentiated cognition. This comprehension is artistically

represented through accordant immersive gesamtkunstwerks which require immersive entrance, and finally, the self-construction of the immersive hyper-being.

AXI: Further Discussion of Total Models and Immersive Consciousness: (Sets and (Sub-Sets))

We build models of the world inside our head, using the data from sense organs and the information processing capacity of our brain. We habitually think of the world we see as out there, but what we are really seeing is a mental model, a perceptual simulation that only exists in the brain.
-Howard Rheingold, *Virtual Reality*

It is no longer a question of imitation nor reduplication, nor even of parody. It is rather a question of substituting signs of the real for the real itself.
-Jean Baudrillard, *Simulations*

VR will enhance the power of art to transform reality.
-Michael Heim, *The Metaphysics of Virtual Reality.*

Through applications of scrutiny and immersed involvement I intend to expose in this portion some of the gesamt model's chain of associations which formulate the metaphysics of immersive consciousness, by asking the question of what ways the essence of the immersive gesamtkunstwerk is equivalent to an historical account of Western metaphysics? This is the specific question I shall address here.

At the heart of the previous discussion concerning weltanschauungs, totalising ideologies, immersive technologies, art ideals, and the constitution of immersive consciousness, is the intrinsic question of human *model fabrication*. Undoubtedly, totalising analogies at times in the past have been fatuously and unequivocally self-sententious in their urge towards perfectification, embellished (as they seem to must be) with a sort of self-significance and often fallacious sweeping universalism. However this thorny question of totalising weltanschauungs in terms of immersive art and immersive consciousness is at the hub of this investigation and so it beckons forth immediately the question of what models we make for ourselves, which do we prefer aesthetically, and why?

If the place to start answering these questions is with our own internal make-up, then we can immediately understand totalising analogies by knowing that *consciousness models itself as a whole*. (Churchland, 1986) We self-model our own consciousness (and being) into a totalised unit. Hence any philosophical project in search of a total theory of immersion demands that consciousness be self-aware that it is already always constructed as a "mental universe". (Metzinger, p. 33) Hence when occupied with questions of artistic and philosophical theorising, *it must be remembered that our abstract and ideal concepts may desire to adhere to our all-over, but unified, neurological configuration*. (Harland)

Moreover, in considering weltanschauung notions which entangle the difficult idea of the multiple in the unitary, Edmund Husserl's research into the conceptions of unity is instructive as he perceptively addressed the question of how we identify the plural within a unitary whole. In his *Logical Investigations* Husserl

located the grounds of multiplicity in the *mental operation of combining*, which he sees as a *psychological contrivance* and as a *synthesis of polysemic input into a closed set*. (Husserl, 1970) Husserl's transcendental phenomenology then is the recognition that various modes found within conscious totals correlate with *the unity of imaginative consciousness*. (Kearney, 1991, pp. 13-38)

Given the postulates of Churchland, Metzinger, and Husserl, we are now capable of formulating a quintessential characterisation of immersive art theory: that *immersive art partakes in an idealised and externalised form of omnijectivity based on our own ideas of our unity of consciousness*. As such it merits a comparative analysis with neo-Platonic philosophy; a philosophy which likewise locates consciousness within ideas of unity. Such a comparison is doubly meaningful in that neo-Platonic theory supplied Wagner (and his philosophical influence, the Romantic philosophers) the all-embracing weltanschauungen world-view which drove and contextualised the re-emergence of the ideal of the total-artwork.

As Frank Chambers explains in his book *The History of Taste*, "Romanticism was a mystical philosophy and thus committed to a metaphysical ideal." (Chambers, p. 178) The reason being, that the romantic mysticism of Johann Gottlieb Fichte, Novalis, and Friedrich Schelling was a circuitous counter-action against much of the overt rationalism of 18th century philosophy. Romanticism, per say, was the artistic and intellectual movement that originated in the late-18th century which accented pathos, fancy, and aversion to adhering to sociable etiquette in opposition to rationalist obligation. (Barzun) Romanticism announced a rebuff to the precepts of regulation, tranquillity, equilibrium, quintessence, and rationality that typified Classicism in general and late-18th century Neo-Classicism in particular (as exemplified in art by the immense paintings of Jacques Louis David (1748-1825)). Thus Romanticism was a counter-attack opposing the Enlightenment's ideals of strict materialism by accentuating the visceral, the inconceivable, the mercurial, the inner, the extemporaneous, the emotional, the extravagant, and the spectral. (Honour) Idiosyncratic of the romantic demeanour was the expanded valuation of the beauties of nature (and of architectural ruins) accompanied by a capacious aggrandisement of feeling over logic. This re-evaluation of ideal human responses was accompanied by a spiralling within the personality and an intensified inquiry into the individual personality with its moods and intrinsic verisimilitudes. (McGann)

In that the concepts of idealised totals is endemic to total-immersion (and thus is a major theme of this dissertation) and that they owe their Western ancestry to neo-Platonic philosophical tendencies, a further review of Neo-Platonism is salient to our concerns. Salient too because neo-Platonic thought predominantly appears in the romantic transcendentalists, such as in the influential work of Friedrich Wilhelm Josef von Schelling, the German philosopher who more than any set the itinerary for Romanticism and its gesamt tendencies which are pertinent to the elaboration of an immersive theory of art.

Schelling acquired academic eminence with a succession of philosophical publications, culminating with his *System des Transzendentalen Idealismus* (System of Transcendental Idealism) which was published in 1800. Jointly with Hegel, Schelling provided the key philosophical assertions in the augmentation of post-Kantian philosophy and his ideas severely influenced the course of Romanticism. Reality as a whole was regarded by Schelling as the manifestation of a spiritual vigour that initially operated unconsciously, but that in conclusion, consummated in self-awareness through the instrumentality of human thoughtfulness. Art represented the culmination of that operation. (Marx, W.) The artist's achievement was conceived by Schelling as being the culmination of this thoughtfulness at the level of consciousness, *revealing and manifesting the equivalent abstract impetus that underlay the elaborate phenomenon of nature*. (Nauen)

Thus with Romanticism, philosophy became again involved in the challenge of art, and conceptions concerning beauty were used to solve philosophical problems as Romanticism moved away from reason (as it had been conceived through the tradition of Aristotle's logic) and towards a revival of Platonism in neo-Platonic epistemology. (Stove) What particularly interests us here is that Platonic philosophy, and the Platonic tradition, uphold a dominant concern for values, and in judgements of values we implicitly calibrate them against ideals. (Copleston) However, according to Plato, we cannot ascertain such ideals directly by observing them because they are not evident in the physical world. Hence we determine these ideals (which Plato calls *Ideas*) in supplementary ideal worlds, disconnected from the corporal world (i.e., in a virtual world).

Plato's doctrine of Ideas put forth the dualistic proposition that the universe is composed of two basic substances: mind and matter. Moreover, Plato asserted that exceeding the many forms seen in nature there was a unifying principle (the field that grounds them) for which he frequently used the highly immersive metaphor of the sun. (Owens) It follows that our mind must imagine our being in uncustomary ideal realms. Furthermore, Plato postulated that the corporal world is only a manifestation of inference and hence does not actually exist. In Platonism, *Ideas* are what exist and which make up the orbit of being. (Russell, 1945)

Following these basic premises of Platonic thought are the voluminous attempts at a philosophical scheme of the neo-Platonic School. As a definite school, neo-Platonic theory originated in Alexandria, Egypt, where the intermixture of nationalities made for an amalgamation of philosophic tendencies indicative of the fact that while the system was a characteristic product of the Hellenistic consciousness it was largely influenced by the ideals and mystical tendencies of Oriental thought. Jewish speculation as well played a part as it (in certain stages of its theology) rejected anthropomorphic ideas of God in lieu of an abstract spiritual conception.

The genuine founder of the neo-Platonic School was the porter Ammonius Saccas (3rd century AD), a Christian who returned to Hellenism; however he left no written texts and it is thus difficult to determine his exact relation to his successors. But among his pupils were Plotinus (AD 205-270) and neo-Platonic theory is

based on the metaphysical explanations of Plotinus, particularly his *Enneads*. When Plotinus was 28 he was taken to hear Ammonius Saccas speak, and thereafter for eleven years continued to harvest the lectures of the porter. Through Ammonius Saccas, Plotinus saw that the essence of mystical knowledge resonates with our deepest level of being yet it persistently defies our logical minds. But, he asserted, that, like in holographic/omnijective consciousness, individual consciousness has a depth of extension equal to that of the universe itself. (Chaudhuri) Reality, according to Plotinus, is just this depth of space, this uninterrupted unified reflection of the depth of consciousness. According to Plotinus, we cannot see its extensive magnitude as such, as we are immersed in it completely and have no critical distance from which to perceive it. Indeed, this immersive dimension cannot be seen because it is how we think and see. It itself is the vitality of consciousness. (Stove)

In AD 244 Plotinus went to Rome and taught philosophy to Porphyry (circa AD 233-303), author of *De Antro Nympharum*, a consequential and elaborate interpretation and defence of Paganism which adapted Plotinus's teachings while putting extra emphasis on the importance of theurgic magical practices. In turn, Porphyry's theurgic theories were succeeded by those of Iamblichus (circa AD 250-312) (who also emphasised the preternatural theurgic factors in Neo-Platonism) and Jamblichus (circa AD 255-315), who too maintained a belief in sorcery and theurgy (the art of compelling demons and other supernatural powers to produce desired results). (Catholic Encyclopedia)

Following, Neo-Platonism developed into an idealistic pantheistic/monistic philosophy tending towards the type of hagiographic mysticism which flourished in the Pagan world of Greece and Rome. (Denning & Phillips) It is of interest and importance to this reflection because it is the last attempt of Greek unitary thought to rehabilitate itself and address inherited Pagan polytheism through a unifying oneness. This poly-oneness (suggestive of the dual nature of the erstwhile explained rhizome theoretical model) abetted putting an end to Aristotelian rationalisation by ideologically immersing the subject into an unmindful appreciation of the many-one by enveloping the subject in the unifying properties of deranged ecstasis. (Chaudhuri) More will be said on this in connection to the origins of art in the Greek ecstatic rituals in BVIII.

With the establishment of Christianity, Pagan mysticism had waned. However, when the ideas of Neo-Platonism began to flourish again, Christian writers took advantage of the sustenance they lent to their complimentary doctrine that there is an ethereal world more real than the world of matter. Later, there were Christian philosophers, like the late-4th century's Nemesius (circa AD 340-400), who took over the entire system of Neo-Platonism so far as it was considered concordant with Christian creed. Nemesius's theories considerably influenced later Byzantine and medieval Latin philosophical theology as Nemesius integrated elements from various sources of Hellenistic philosophical and neo-Platonic idealism (among other influences). The result is a Christian synthesis in which he submits that the soul must be an

incorporeal/intellectual manifestation subsistent in itself yet one with the body. Such body/mind teaching became a keystone of medieval and renaissance Christian theory, though further mediated by a spectrum of classical Greek theorists. (Internet Encyclopedia of Philosophy)

There were of course repressive oppositions to Neo-Platonism. The Christian school of Alexandria opposed the Gnostics, for example, who had attempted to construct a majestic system of higher knowledge based on the Christian viewpoint through assimilating various Greek and Oriental elements. Gnosticism worked the tenants of the Christian revelation into an extravagant hyper-spherical speculation on general metaphysical and cosmic problems based primarily on an abstract neo-Platonic Godhead which became the background for their system. (Stace) For example, the Gnostics conceived of the transcendent as an intelligible sphere whose centre is everywhere and circumference nowhere; interesting from our virtual immersive perspective.

Regardless of the ensuing heretic status most often attributed to neo-Platonic teaching, the author Pseudo-Dionysius (alias The Areopagite) (circa AD 465-510) drafted a systematic treatment of Christian mysticism in his neo-Platonic works where he carefully distinguished between rational and mystical knowledge, therefore exercising a great influence on subsequent centuries. (Pseudo-Dionysius) Pseudo-Dionysius, it is believed, was a Syrian monk who, known only by his pseudonym, wrote a series of Greek treatises uniting neo-Platonic philosophy with Christian theology and mystical theory. These writings established an unmistakable neo-Platonic trend in a large segment of medieval Christian spirituality and formed a total-theology which covered a full symbolic and mystical explanation of being. The system is essentially dialectical theology however, the simultaneous affirmation and denial of paradox in any statement or concept relative to totality (i.e., God).

Notwithstanding, it was not until the rise of Humanism in the 15th century that neo-Platonic texts were translated and studied with that zeal which characterised the Neo-Platonists of the Renaissance (where the theurgic elements in Neo-Platonism became all the more prevalent). Thus Neo-Platonism had a marked revival during the Renaissance, especially through the Humanist philosophers Marsile Ficin (1483-1499), Giovanni Pico Della Mirandola (1463-1492), and Giordano Bruno (1548-1600) and thereafter came down to our times implicitly in the theories of Schelling, Fichte, Hegel, and other leading 19th century Romantic philosophers whose ideas shaped those of the 20th century profoundly.

From the neo-Platonic perspective we understand that physical experience makes us consider that we are disconnected, when in actuality we are not. In remarkable parallel developments, 20th century science (Poincaré) found that it became increasingly difficult to keep detached from just such metaphysical contemplation. (Moriarty) With immersive attention, the comprehension of both the universe and consciousness as undiminished totality has re-emerged, as the fields of physics and metaphysics appear to be dropping their separate distinctions to some extent and forming an intimate rendezvous in immersive art. This

is so due to immersive art's attributes of presenting cohesion within apparent borderless excess. As immersive art exemplifies this dynamism, it newly fulfils art's ancient function as a model-maker of contemplative consciousness too abstract to be embodied in less circuitous human expressions.

Section B. Centuries of Immersion: Questions of Antecedent Immersive Culture and its Psycho-Immersive Dynamics

Truth stems from desire.
-Georges Bataille, *Lascaux: La Naissance de l'Art*

The information explosion is not a window on the future so much as a mirror of the past catching up with the present.
-Gene Youngblood, *Expanded Cinema*

As we have seen, Immanuel Kant's transcendental idealism, like neo-Platonic thought, argued that as the mind begins with disconnected perceptions we can never altogether perceive the omnijective unity of the world. (Solomon) Nevertheless, Kant also maintained that the mind's *integrating intuitive faculties* can surpass scant disparate perceptions and that *intuition can suspend these categories of the individual senses as separate unrelated entities and experience them all together as a single unified totality*; and, in this manner, *we can fathom the knowledge of omnijective unity*. (Murray) So from this contention we may conclude that there are no swaying logical comprehensive metaphysical explanations of our place in the world, only intuitive polysemic genus based upon culturally enfolded paradigms and artistic models which feel right when judged against our consciousness' peculiarity as a total entity. This modelling potential, given its various orders, degrees, and intensities of convincingness, is the prime function of immersive art. Thus in this section we shall study various examples of this modelling function as I have found and identified them in art historical contexts. Taken together these examples can be said to begin to build the basis of what I have termed *immersive culture*.

As previously stated, the cultural premise under investigation here is that VR's immersive/peripheral space is radically new even while being based on non-logocentric epistemological precedents and seedling immersive art experiments. Thus non-logocentric immersive art ideals, as identified and defined within various periods in various degrees, will be established here so as to be conceptually placed alongside the high-tech ability which computing power brings to the possible realisation of such ideals. Therefore I will construct the second portion of this discourse by identifying within miscellaneous historical periods those non-logocentric artistic strategies and practices which might contribute towards the development of an immersive theory of culture based in the visual arts. Though sound is integral to total-immersive experience, the human being is primarily a seeing animal and the most plentiful information comes to us via our eyes to our consciousness. (Merleau-Ponty, 1964) 38% of the fibers entering or leaving the central nervous system are in the optic nerve and it is estimated that as much as 75% of the information entering the brain arrives through the eyes. (Youngblood, p. 46) So, coming as I do principally from the visual arts, the optic component of immersion will receive principal interest here. Nevertheless it is useful to remember that this component is only the primary element in indispensable harmony with the other senses inside of immersive art environments. (Begault)

brain-eye rapport

The concept of non-logocentric immersion is not one that we are accustomed to applying systematically to culture and to the visual arts of the past, but on examination it turns out that omnijective intentions and non-logocentric based activities are present in various degrees and orders in a wide number of divers artworks and art theories. In this sense I will demonstrate here that there has been a micro-tradition of immersive art, a tradition which can be situated in the concept of total-immersion in VR ideology presently. Obviously we need to learn a great deal more about this tradition: about its sources, internal developments, spiritual affinities and its cross-cultural manifestations. However, with only what I have researched here, we shall see how this newly discovered micro-tradition's concern with immersive fulfilment leads ultimately to an alternative conception of the relationship between once held ideas of being, art, sex, and death.

As the intent of my research is to find and define unifying principles of immersion by examining the diversity of immersive non-logocentric intentions in relationship to the various styles which periodically express them (as employed by artists and art theoreticians), such a theory requires the formulation of common apparent ideals between particular immersive aesthetic circumstances. Thus in order to explore a set of questions surrounding immersive aesthetic experience, I will arrange in this section of the dissertation an array of artworks and theories of art into a blueprint for artistic immersive consciousness by articulating their underlying principles of immersive intent (i.e., their ideal constitution as immersive art).

Concerning illustrement, the copious images accompanying this text (photos selected unrestrictedly to permit a fluid handling of supporting visual data as fully as required) cannot compete with the immersive experience itself, simply because no discrete rectilinear reproduction can. They cannot do the remotest justice to an immersive experience other than to illustrate details of what I am discussing in the text, for immersive consciousness reserves itself for those who go inside and holonogicly look around in every direction for themselves.

BI: The Cavernous Dialectic: Approaching Underground Ambient Aesthetics

...imagination is the foundation of scientific work; there is no escape from it, but the first use to which it should be put is to devise material means for keeping it within reasonable boundaries.
-André Leroi-Gourhan, *The Art of Prehistoric Man in Western Europe*

I've found the term "Paleocybernetic" valuable as a conceptual tool with which to grasp the significance of our present environment: combining the primitive potential associated with Palaeolithic and the transcendental integrities of "practical utopianism" associated with the cybernetic.
-Gene Youngblood, *Expanded Cinema*

The passions which belong to self-preservation, turn on pain and danger; they are simply painful when their causes immediately affect us and delightful when we have an idea of pain and danger, without being actually in such circumstances. This delight I have not called pleasure, because it turns on pain and because it is different enough from any idea of positive pleasure. Whatever excites this delight I call sublime.
-Edmund Burke, *A Philosophical Enquiry into the Origin of Our Ideas of the Sublime and Beautiful*

Particularly germane to our inquiry is the fact that most aesthetic theories argue that art is not a matter of simple embellishment considering its divers appeals to the various cognitive faculties of the eye/mind complex. The critical capacity of art is that it advances conjoined expectations along with cultivated appraisals through discriminating semi-withdrawal. So considered, assumptions concerning ideal immersive sacred zones (and their distinguished semi-removed status) (Eliade, 1959) in regard to immersively spawned states of gesamt aesthetic consciousness will be addressed historically in this section, as it is common for ideal sacred zones to supply acute information on the human race's apparently insatiable desire for transcendence through immersive aesthetics. In this respect Georges Bataille argued that the sacred springs from the same sources as those things we conventionally find repugnant, such as ritual sacrifice and bodily mutilation, and that within sacred zones sublime non-linear interconnected transmissions are meant to transpire, thus provoking attachments between the cavernous unconscious mind and its conscious active comportment. (Bataille, 1988) The marvellous abstract character of such supposed sublime transmissions (which formed earlier world-views through their use of cavernously shaped immersive sites) and their effect on immersive states of consciousness will be explored in this section. But to begin to do so we must keep in mind that all reputed sacred propositions occur within configuring theories of culture. All that we apprehend as sacredly significant resides in cultural symbol, which, as we have discussed, is the gist of art. (Langer, 1953) It is exclusively by our encounters with theories of culture that we style omitted or grasp upheld sacred abstractions. (Burckhardt)

In response to my attempt to grasp the theoretical basis of prehistoric sacred space, on May 5th, 1997 John P. McCarthy, research fellow at the Institute for Archaeology, replied to my questioning concerning the epistemological nature of archaeological theories as opposed to art theories which I had posted on the *theory@mailbase.ac.uk* list, by explaining that archaeology is the study of mankind through material remains, and as such is a parent of art history. Archaeology is one, of several, sets of methods used by scholars to study

aspects of the past whose substance might more accurately be described as relating to history, anthropology, technology, or art history. Although the discipline today sees itself as an exact science and demands laboratories and funding to suit, its academic origins are similar to those of art history. The disciplines of art history and archaeology are especially intermingled in those periods for which records are sparse or missing, such as the one we shall investigate now. What separates them is the greater admixture of theory which archaeologists must apply to make patterns and sense out of their material. While there are no agreed criteria for assessing theories developed from archaeological data, data must exist to support the theory and the interpretations offered must make reasonable use of the data and archaeological theory.

With this in mind, we shall now turn our attention to what I perceive as the genesis of immersive aesthetic space: the adorned prehistoric cave. We shall approach the resplendent prehistoric cave by keeping in mind that, according to Marshall McLuhan, form determines the action of mediation which determines meaning. (McLuhan, 1964)

Caves do not occur in every sort of rock but are most often discovered in limestone, having been produced over millions of years by the washing away activity of subterranean rivers. The *American Heritage Dictionary of the English Language* tells us that the word *cave* stems from the Latin root *cavus* which means *hollow* and that the cave is an aperture in the earth, ordinarily attenuated horizontally, although it may also go underneath and within. As such, a cave is cimmerian and so to set foot in it is to encounter our complex and fascinating supernatural fringes, our dreads, and the ominous areas of our feelings towards the sacred. (Kierkegaard, 1946)

an unpainted cave in Haut Quercy, France

A prehistoric *painted cave* is all that, moreover enhanced through the emotional defamiliarisational powers of art. Over 200 late-Stone Age caves bearing wall paintings, engravings, bas-relief decorations and sculptures have been found in south-western Europe alone. (Ucko & Rosenfeld) Life, in the form of tiny blue algae,

emerged on earth 2 billion years ago, or what is called *BP* (Before Present). The first people who made tools, the basis of technology, were the Homo Habilis, a people who lived in Africa 2 million years ago. People have inhabited the Périgord region of France for about 200,000 years and indeed the cave at Lascaux was discovered by Cro-Magnon people (Homo Sapiens with large frontal-lobes who migrated from the Middle East) about 17,000 BP. (De Beaune) At first their art consisted of intimate body decoration (such as beads, bracelets, pendants and necklaces) and more will be said on this aspect of the immersive perspicacious mind following the discussion on aesthetic cave space.

Gradually during the Gravettian Period (approximately 20,000 to 25,000 years ago) people began to embellish the walls and ceilings of a few small shallow caves (Laussel, Oreille d'Enfer, and the Pair-non-Pair cave in Gironde are good examples). (Delluc & Delluc) Subsequently, prehistoric painted caves became the sites of the humans' first topographical imagings; images which celebrated mortal terror and love of the animal and its world, as well as the passionate and jubilant triumph over that terror/love through the organised hunt and the strategic, co-ordinated, co-operative group adhesion which the hunt necessitated.

However it is important to remember at all times that the animals depicted in the caves were not generally those animals which were hunted and eaten. The Magdalenian people hunted and ate primarily reindeer and a reindeer is only represented once in the cave of Lascaux out of over 2,100 legible images; in the Apse. (Delluc & Delluc, p. 46) The significance of this will be pondered and discussed shortly. But at the outset we can surmise that the animals represented here were depicted in order to serve as spiritual intermediaries or as ideal aspirations. In the terms of Bohm/Pribram's homogeneous, holographic, space/time matrix, the Magdalenians's depicted events can be interpreted as disassociated (in their lack of depicting context) and conflicting (in their superimpositionality) while being immersed underneath at the implicate frequency level (in the Bohm/Pribram understanding) as these scenes depict all things and events as ultimately intangible and connected into one total singularity. It is for this reason that the prehistoric painted cave must be addressed as a place of active immersive cognisance and not as a mere receptacle of discrete utilitarian (magical) images in service of the hunt in any simplistic one-to-one fashion; though some sort of indirect connection to their hunting culture is hard to repudiate, especially after the discovery in Lascaux of a large number of broken spearheads, all of which were engraved, often with a double interlocked herring bone pattern and a star with six rays. (Delluc & Delluc, p. 57)

Most prehistorians agree that visual communications came into being somewhere around 40,000 years ago, about the time when Cro-Magnons reached Ice Age Europe and began decorating their tools and bodies with symbols. Living in small groups, they constructed tents from skins and huts from branches, however (evidently) they possessed an incredible yearning for deep immersive experiences within the dark places of caves. Thus in the caves they embellished it is possible to see an immersive presentation in a collective space,

a space which was not the property of any individual. This expansion from the decoration of the body to the cave is in itself an extraordinary act of immersive intelligence. The period between the invention of drawing, when animal forms and human genitals were engraved in rock 35,000 to 40,000 years ago by the Cro-Magnon on the banks of the Vézère, and the creation of Lascaux, is as long as the period of time which separates us from the civilisation of Lascaux. As much time elapsed between the first ornamental body and the cave paintings of Lascaux (about 17 millennia) as separates Lascaux from the first TV broadcasts. Nevertheless, Stacey Spiegel sees the Lascaux cave as being "the first *total art*" (Hoekendijk, p. 21) and Rheingold speaks of Lascaux as the first virtual reality. (Rheingold, pp. 379-382)

The physical and psychic risks involved in such a seemingly non-essential activity as painting inside a cave indicates that it was done, and indeed savoured, for some antediluvian reason, perhaps sacred, deemed essential enough to fashion an immersive space where human consciousness could plunge into extraordinary immersive experiences. The real threat implicit in the dangerous passage that must be made to enter a painted cave, with its usual remoteness from human habitation, suggests that these are sites of ritualistic loss and re-finding typical of intense love and tragedy. Thus the entrance into an immersive cave is always a movement towards self-interiority. To enter a cave is to move into it, and as such, initially involves a directedness away from the periphery and toward depth, toward density, and away from dispersion.

What frightens humans most about entering a dark cave is death. But as Monica Sjoo and Barbara Mor assert, such an entrance is also a sacred/sexual excursion into the fertile womb. (Sjoo & Mor, pp. 71-76) Indeed for the distinguished prehistoric expert André Leroi-Gourhan (1911-1986), a painted prehistoric cave (specifically Lascaux) was symbolic of the sex of the female. (Ruspoli, p. 81) And according to Camille Paglia, *the female vagina is the prototype of all sacred spaces*. (Paglia)

Thus far away from the light of the sun and stars, far from the daylight world of accustomed life, prehistoric people must have entered the depths of the immersive darkness of a cave to contemplate both the beginning and end of their life. Indeed the cave's lack of light is an insubstantial force whose intensity around the immersant must be carefully considered. The first occurrence we must contemplate in this regard is the dilation of the eye's pupil as entree to a dim cave is achieved. Noticeable is that in terms of vision and light and sex, the pupil's dilation indicates sexual attraction and facilitates it. (Kinsey, p. 615)

Salient here is that the retina registers a field of 160 million points of light. The remarkable richness of natural light is due to the fact that it is a unification of focused and diffused light. Issues of light are issues of clarity and obscurity, issues which constantly vie with one another with an exacting power. The sun, which is roughly 57 million kilometres (about 93 million miles) from the earth, functions as the source of all light of course, but we must recollect that its effects are invariably qualified to a greater or lesser degree by the earth's

atmospheric envelope through which the light must penetrate. The regular waxing and waning of light is often dramatically altered in its character and intensity by the apparent vicissitudes of changing atmospheric conditions. In order to realise how essential this combination of direct and diffused light is to our sense of well-being, one need only recall the deadening aftermath of a heavy overcast day when the whole world seems to be enshrouded in a pervasive melancholy.

The early-Upper Paleolithic period (beginning about 45,000 to 38,000 years ago and ending around 10,000) saw significant innovation in stone tool technology and weapon systems by the early members of our species. (De Beaune) Their invention of sharpened flint blades made the creation of most all of their art possible, via carving and engraving. In painterly terms, the principal techniques of Cro-Magnon art involved brushes made of vegetable fiber or animal hair, tufts of fur, and the use of fingers; along with a blowing of pigment dissolved in saliva onto the wall. (Delluc & Delluc, p. 57) The European predecessors to the Cro-Magnons were the strapping Neanderthals who successfully occupied Western Eurasia from about 200,000 BP up until they were superseded by the Cro-Magnons, sometime around 40,000 BP. Neanderthal culture, known as Mousterian, shows scant inklings of visual representation, however there are traces of immersive symbolism in their burial sites as the corpses were surrounded by pebbles and bones with fragmentary patterns scratched onto them. (Powell) Sometime after 40,000 years ago, at a time when the remaining Neanderthals shared the European landscape with the first Cro-Magnons, there was a relative explosion of ornament and graphic imagery among the earliest Cro-Magnons.

By the Upper Paleolithic period, Homo Sapiens had firmly established their existence based on hunting, fishing and the gathering of plants. In terms of art, the Cro-Magnons left behind dozens of sculpted ivory animals, moulded and fired clay statuettes, hundreds of engraved images on limestone blocks and cave walls, thousands of scrupulously decorated personal body ornaments consisting of ivory, shell, soapstone and animal teeth (Speitz), along with the numerous and widely distributed female (so-called Venus) figurines. The earliest substantial body of surviving material relating to human sexual culture is the art of the Eurasian Upper Paleolithic, including its paintings of half-bestial males with erections, rock-cut vulvas, carved phallic batons, and the previously mentioned super-endowed nude Venus female figurines. (De Beaune) These sculptural miniature statuettes of extraordinarily big-breasted human females are understood as contemplations on sex and fecundity and (if one follows my previous point concerning the infant's rapport with the voluminous breast) a longing for oceanic unity and totality. The Venus figurines are entirely in the round and unconstrained from any physical site, thus hand-holdable and portable. Wonderful examples are the ivory Vénus de Lespuge from Lespuge, France (circa 27,000 BC) and the eyeless and bulbous stone Venus of Willendorf (circa 30,000 BC) which was found in Austria.

Evidently there was adequate time for sexual/spiritual/artistic acumen in the hunter-gatherer society, as case studies from various parts of the world show that sufficient food can be obtained with an average adult hunting, fishing and gathering (in common cause with others) in only three to five hours per day (Rudgley), less than people generally work now in our (so-called) advanced Western civilisation. The leisure time of many hunter-gatherers seems to have been abundant, affording adequate time for the fashioning of the immersive artistic/spiritual cave spaces which concern us here. Indeed André Leroi-Gourhan in his book *The Dawn of European Art: An Introduction to Paleolithic Cave Painting* maintains that the generations of artists who executed Lascaux were very probably released from even this minimum burden of daily work by other members of the group. (Leroi-Gourhan, 1982)

The earliest modern unearthing of a significantly painted cave occurred in 1879 at Altamira in the region of Santander in northern Spain. (Lawson) The credit for the recognition of Paleolithic cave art must go to Don Marcelino Sanz de Sautuola, a landowner who lived near Torrelavega in northern Spain, and his young daughter Maria. Earlier reports of embellished caves had been made, but it had not been recognised for what it was, nor were the discoveries publicised. The cave of Altamira (near Santillana del Mar) had been discovered in 1868 and was first visited by Sautuola in 1876. During this first visit he saw on the cave walls only a large number of repeated black lines, but in 1879 a second visit to Altamira (this time accompanied by his nine year old daughter Maria) resulted in the discovery of an enormous painted ceiling.

Throughout Europe to Siberia when anthropological remnants are discovered most often they are detected just in and about caves, the inaugural human abode. Cave mouths give considerable amounts of information concerning our prehistoric ancestors and in them we encounter evidence of what prehistoric humans ate, what tools they created, and how their dead were buried. We can state with relative certainty that cave mouths offered a position of protection from inclement conditions, of course, and that they provided discrete positions of observation. (Ruspoli, p. 80) While Sautuola excavated for artefacts just inside the cave entrance, his daughter wandered off to play deeper in the cave and looking upwards saw the now celebrated painted ceiling. (Lawson) The graphic ochre and black paintings of bison on the naturally swelling ceiling of the cave were only the most spectacular of the many paintings in the once innocuous cave. Soon afterwards Sautuola published a paper on the find in which he stated his conviction that the paintings were prehistoric. After initial interest from the authorities, his claims were rejected however and it was even suggested that the paintings were forged. However from 1895 onwards, other painted caves were discovered in France and these discoveries altered the views of the critics. (Ucko & Rosenfeld) As the authenticity of the art became accepted, a deliberate search for further caves was made. Consequently many impressive caves came to light in both France and Spain: Bernifal (1903), Teyjat (1903), La Calevie (1903), Cap Blanc (1909), El Castillo (1903), Homos de la Peiia (1903), Covalanas (1903), LaLoja (1908), La Pasiega (1911), Gargas (1904), Niaux (1906), Le Portel (1908), Le Tuc d'Audoubert (1912) and Les Trois Fréres (1914). (Lawson)

Later in the century decorated caves continued to be found with the notable discoveries of Lascaux (1940), Le Gabillou (1940), Cougnac (1952), Las Monedas (1952), Las Chimeneas (1953), and Rouffignac (1956). Impressive more recent discoveries have been made in Spain including Altxerri (1962), Tito Bustillo (1968), Ekain (1969), Cueva del Nifios (1970), Zubialde (1990), and as recently as December 25, 1994, near the village of Vallon-Pont-d'Arc in the Ardeche Valley of south-eastern France, Jean-Marie Chauvet, a guard with the Regional Archaeological Service, assisted by two volunteers, Eliette Brunel-Deschamps and Christian Hilaire, uncovered the hidden entrance to a vast underground network of caves, some decorated with paintings and engravings dating from the Paleolithic including the painted Cro-Magnon cavern now called the *Grotte Chauvet*. The prehistoric dates recently obtained for the paintings of the Grotte Chauvet have focused new attention on the cultural developments of early Upper Paleolithic, the 20,000 or so years between the first traces of symbolic representation (circa 40,000 BP) and the painting of Lascaux (circa 17,500 BP). This long stretch of cultural evolution comprised of two archaeological cultures: the Aurignacian (40,000-28,000 BP) and the Gravettian (28,000-22,000 BP).

Another recently discovered painted cave is Cosquer in the south of France which can be reached only by scuba divers as its entrance now lies below the surface of the Mediterranean. This is so because in the Upper Paleolithic period (from 70,000 BP to 10,000 BP) so much of Europe's water was locked up in glaciers that the sea-level was some 90 metres (300 feet) lower than it is today. The art under discussion was contemporary to the epoch between 35,000 BC and 10,000 BC, the Late-Pleistocene period. (Lawson) Even as this sounds exceptionally old, it must be remembered that we know from radiometrically dated strata in Africa that primitive forms of man had been making stone tools for more than 2 million years. (Chaudhuri)

Although Paleolithic cave art is often discovered deep inside caves quite remote from the cave entrance, it is a mistake to suppose that Upper Paleolithic human communities usually lived in such dark, and inherently hazardous, sites. Customarily they lived in the open air, enjoying the sun and breeze, under skin tents or in the mouths of caves or beneath rock overhangs where they could find refuge from the elements but have the benefit of daylight. (De Beaune) The inaccessibility of the painted chambers and the lack of detected debris therein suggests that deep caves were penetrated only occasionally. Nobody lived in the painted areas of the cave, as analyses of painted caves' contents have yielded no signs of human habitation beyond the traces of animal-fat lamps and torches used by brief visitors, and some mounds of pigmented-earth left behind. These painted caves were presumably meant to be seen by few human beings under conditions of extreme difficulty and apprehension, as many are entered only by crawling on the belly through a hole in the earth down into dark passages in the earth's womb. These are the archaic conditions that, one may surmise, produced an array of immersive ideals connected to sex and death which became deeply implanted in human immersive instincts

and which subsequently became assimilated into Pre-Classical culture (such as the narrative of the mythical Cretan labyrinth in whose belly the deadly Minotaur resided).

Bearing in mind the threat implicit in the hazardous passage that must be made by prehistoric people on entering a painted cave (potentially inhabited by massive carnivores), its remoteness from human habitat, and the expressiveness of the transparently stacked images placed there, I shall suggest that these painted immersive spaces were sites of hypothetical trans-presence. Removed from the illumination of the sun, moon and stars, removed from the daylight realm of accustomed existence, early humans entered into the painted cave's dimness (consequently with maximised retinal dilation) as if returning to the sacred dilated female source of themselves; and simultaneously, to a place of anxious potentiality.

BII: The Necessity of Passage-Fear Receptivity

Whatever is fitted in any sort to excite the ideas of pain, and danger, that is to say, whatever is in any sort terrible, or is conversant about terrible objects, or operates in a manner analogous to terror, is a source of the sublime; that is, it is productive of the strongest emotion which the mind is capable of feeling.
-Edmund Burke, *A Philosophical Enquiry into the Origin of Our Ideas of the Sublime and Beautiful*

In Spain honor is a very real thing. Called pundoner, it means honor, probity, courage, self-respect and pride in one word.
-Ernest Hemingway, *Death in the Afternoon*

The social function of art within the early formative epoch of human history necessitated, and necessitates, a shared conception of a larger amiable whole, thus the basis of human love and reproduction. (Freud, 1958) With art, people are fastened together by aesthetics into a free-flowing compound-total in the interests of their improved survival, pleasure and replication. As stated, prehistoric art has been discovered at various points inside of passages, in niches, and sometimes near cave mouths; but it is in the cave, generally deep within, where prehistoric immersive art attained maximum intensity with its field-of-view encompassing painted murals. These murals will set the precedent for immersive art's penchant for constructing overall aesthetic enveloping hyper-totalities which appear continuous by way of their exceeding the normal FOV with visual interest.

At first glance many of the most lavishly adorned murals seem like a chaos of lines and colours. Animals of miscellaneous species emerge at disparate scales and in divergent colours. Also they are oriented in various directions, even vertically or upside down, some complete, others without heads or extremities. Many are superimposed and thus appear transparent and ephemeral. At some caves, such as Tito Bustillo, though different phases of painting are evident, a corresponding style is used throughout lending it a stylistic consistency typical of the gesamtkunstwerk.

The vast bulk of the remarkably embellished chambers in deep, dark, isolated areas date from the centuries approximately 15,000 BP, the conclusive (but prolonged) phase of the Ice Age. Commonly the walls, which warp and bend overhead (wrapping the immersant in an enveloping total space) are painted and occasionally the floor is put to use also. Always the most immersive salons contain paintings on the walls and, importantly, the ceilings, such as at Altamira, Lascaux and Rouffignac. At Altamira there are sections of the painted salon only little more than one metre (3.28 feet) high, assuring a compressed close-up immersive experience. At the Homos de la Pefiahe cave the immersant must lay on his or her back and slither into low hollows to behold drawings. (Lawson)

With prehistoric painted caves, people penetrated deeply into the womb of dark caves to paint and scratch transparent images of untamed animals on every surface of the roughly rounded space, including the floor. As a consequence we have come to appreciate the sophistication of the omni-spatial perceptual dynamism which this immersive art utilises in the transformation of consciousness at a period in time far earlier than the first written words. Hence a feeling for and knowledge of the cave art of Western Europe is essential to a mature awareness of immersive aesthetics even though it is conceivable that the majority of readers will not have entered any painted caves, as I have had the privilege of doing. However, as is also the case with VR, a personal, experiential understanding of the spatial properties of embellished caves is essential to the development of a comprehensive immersive theory, as their enfolding shape and enclosed feel is indispensable to the power of the art. Sadly, these are features which are impossible to convey through flat rectilinear photos.

The 2 kilometre (1.24 mile) long *Niaux* cave system in the French Pyrenees, 5 kilometres (3.1 miles) south-west of Tarascon-sur-Ariége in the department of Midi-Pyréndes in central/southern France (officially discovered by Emile Cartailhac in 1906) is a good place to start on-site explorations as this ashen limestone painted cave is owned by the French State and accessible to the public. There is no electrical lighting system within and if it were not for the torches provided by the guide the immersant is in absolute darkness and silence with the exception of faint, reverberating, promiscuous drippings. The ambience is dankly cool, as the cave maintains itself at a habitual temperature of 12°C which markedly contrasts with the tepid air and fervent sunlight left outside. Stagnant water, like a pestiferous dark reflecting pool, covers most of the 50 metre long (164 foot) floor of the first antechamber, which is nearly 30 metres wide (98.4 feet). This chamber leads upward into a high-vaulted, sparsely stalagmited, corridor.

One must proceed nimbly and with care as not to skid on the slimy floor which has been coated by calcite. Pools of tranquil water hinder the path from time to time. There are 700 metres (2,296 feet) between the entrance and the first major change of direction of the long cave yet the only human markings of the walls are relatively contemporary graffiti, some dating from the Baroque. Deeper inside, some 450 representations await discovery within a complex of chambers, the most celebrated being the *Salon Noir* (Black Salon). This deep chamber is unforgettable because of the distance of the Salon Noir from the cave's entrance. The entry to the Salon Noir is signalled by a smooth stone surface only 1.5 metres high (4.9 feet) from the floor which is scattered with maroon and ebony blots of colouring. Beyond that point three walls 15 by 20 metres (4.9 by 65.6 feet) are scattered with bestial drawings rendered with jet black contour lines. Moreover, horses, bison and ibex have been etched into the floor at the closure of the space. The subtlty of the 14,000 year old accomplishment is astonishing. For example in 1974 two engraved bison and an arrow-like sign were detected in a small alcove on the right-hand wall of the Salon Noir despite repeated detailed surveys which began in

1906. (Lawson) The stupendous richness of the paintings and etchings of this chamber construct one of the most spectacular achievements in archaic environmental immersive creation.

In one sense the Salon Noir is typical of the prehistoric immersive arrangement in that, like most painted caverns, it is entered only after a prolonged and precarious trip, bypassing far more accessible spaces. This journey of course takes committed time; up to as much as three hours at Montespan. Through the moist darkness prehistoric people passed through unfamiliar spaces (there are no signs of frequent engagement) so as to produce and experience immersive art, even requiring passageway through subterranean lakes at some sites. Also we must remember that caves provided asylum for fierce human predators such as the great prehistoric cave bears, lions, and panthers. (Ruspoli, p. 82) Clearly their presence was a dominant factor when we consider that Grotte Chauvet, for example, was found to harbour the remains of around 100 bears. Indeed, certain bear skulls were repositioned to privileged locations in the cave, in one case onto a rock in the centre of a circular hall.

Verily such creatures were puissant foes to be feared and assuaged by primordial people and in this sense caves were not solely sanctuary spaces but also exploratory spaces of fear and sacred trepidation. Indeed Bataille says that the painted cave of Lascaux, for example, was a "place of anguish" and "religious horror". (Bataille, 1979, p. 46) The death risk involved in penetrating many of these openings is attested to by the cave bear-tracks which have been left in the mud floors and along tight trestles. As the risk of death was real, by passing through the mouth of a cave into its admissible swell, the immersant encountered (via dilated retinas) a wide FOV artistic phenomenon both sacred and fearful through the prismatic intensity of an adrenaline driven consciousness. Certainly the potential risk encountered, which prehistoric people assumed by traversing such labyrinthine passages, must have been palpable in its production of enzymes. One assumes a *highly emotionally engaging level of alert immersive consciousness* was experienced.

Rachel Levy in her book *Religious Conceptions of the Stone Age and Their Influence on European Thought* maintains that such immersive Paleolithic cave feelings have become encoded into subsequent archetypes of beliefs which persist in contouring Euro-American thought and which now, I surmise, continue to move in our regimented grooves of sensibility. (Levy, R.) If I may conjecture here, perhaps this *attainment of such a super-adrenalinised cognisant sensation was the point* of the venture, its objective and *raison d'être*, and as such necessitated the descent into the frightful deep pit so as to prepare a super-conscious arrival into the adorned chambers rich with depictions of intricately wafting, disembodied forms. Thus the opulently painted cavern is *a site of super-conscious transporting capacity*.

Hence prehistoric caves were places in which *consciousness became self-consciously expanded into a larger field of virtuality*. This seems well illustrated by the image-shower found in the *Grotte de Lascaux* with its marks of animal transit intermingled with a sense of death and fertility.

BIII: The Grotte de Lascaux's Sacred Libido

Lascaux is the passage from the work world to the play world, which is the passage from the Homo Faber to the Homo Sapien.
-Georges Bataille, *Lascaux: La Naissance de l'Art*

Any serious exploration of phantasmagoric phenomena presupposes a dialectical intertwinement to which a romantic turn of mind is impervious.
-Walter Benjamin, *Reflections*

The eruption of lived pleasure is such that in losing myself I find myself; forgetting that I exist, I realise myself. Consciousness of immediate experience lies in this oscillation....
-Raoul Vaneigem, *The Revolution of Everyday Life*

The most widely known, and arguably the most splendid (looped, as it is in places with dynamic feral sashes which wind and twist imposingly over its intricate interior shape), is the Grotte de Lascaux (carbon dated circa 17,000 BP) located atop an ancient headland in the Périgord, France, which I attained the uncommon privilege of visiting.

As Georges Bataille says, we cannot know the full meaning of Lascaux but we can "sense its maker's desire to impress by stunning our senses". (Bataille, 1979, p. 37) And indeed in coming into the immersive space of Lascaux my first impression was of being stunned and disconnected from the norm in favour of a psychic space where sex, art, and death meet in an aesthetic discharge.

Lascaux cave was discovered on the 12th of September in 1940 by four local children and a dog and shortly thereafter was thought, by some, to have had served magical imaging functions deemed useful in rousing the psyche in preparation for the hunt. (Breuil) In relationship to immersive consciousness, it is necessary to survey what we can ascertain today (given our highly culture-bound predilections) of visualisation practices which, it is surmised, were utilised in accord with the prolificly decorated galleries of Lascaux. (Lewis-Williams & Dowson, 1988) We can hypothesise that an ability to visually fashion that which is non-visual (or not yet in existence) by allowing unexpected configurations optically to emerge is essential to life; then as now. This symbolic concentration is a sort of idealised schemaisation which can be further characterised as a product of *a priori* imagination through which ideas and actions become imaginable. And truly the creative act of visualisation is immediately obvious on entering Lascaux's initial salon, as the painters of Lascaux took into full consideration the environmental characteristics and qualities of the physical cavern, first by utilising both the encasing ceiling and walls, and then by using the physical bulges and bosses of the stone enclosure to meat out the forms of the animals' rumps and bellies.

The painters, evidently, wished to create a total aesthetic ambience which would convey the all-over presence of animals in close proximity to the human visitor (and to each other) as the depicted beasts merge into each

other with no respect for the relative size of the different species and with no obvious connection outside of their splendid over-all compositional ornateness. This particular voluptuously painted cave is the most superbly adorned of the prehistoric caves, festooned as it is in a wrap-around overhead garland of overpowering bestiality, with even its ceiling painted (with the use of temporary wooden scaffolding). It is not the oldest (some of the paintings in Chauvet cave are over 30,000 years old, 3,000 years older than the oldest cave paintings previously known and nearly twice as old as those found at Lascaux) nor the largest prehistoric cave, but simply the most artistically achieved and thus the most alluring, from our point of view, as in Lascaux most upper-walls and ceilings are resplendently surfaced with sumptuous immersive paintings which depict the quivering apparitions of semi-transparent animals. Mario Ruspoli characterised these paintings as depicting the "spirits of divine animals". (Ruspoli, p. 81) Furthermore, with the *Rotunda Salle des Taureaux* (Bull's Chamber), Lascaux holds the distinction of housing the most colossal Paleolithic frieze (with the largest painted figures) known to us and this fact alone merits our rapt immersive attention. One of the Bulls which festoons the cloud-like Rotunda frieze is almost 5.4 metres (18 feet) in length. Others in the same gallery are 3 metres (10 feet), 3.6 metres (12 feet), and 4.2 metres (14 feet) in length, whereas the largest figures at Altamira are only 2.1 metres (7 feet) long and those at Niaux average about .9 metre (3 feet) in length. (Leroi-Gourhan, 1968)

Verily the leitmotiv of the cave is huge groupings of horses in and around large semi-transparent dominating bulls. But what is particularly noteworthy is that this tangle of animal forms exists in a groundless (virtual) atmosphere where the bodies are not anchored to anything suggesting land. Rather, what is suggested is a 360° non-Euclidean space, which as we have seen, is precisely the arrangement of the ideal range of virtuality in Virtual Reality. There is no attempt at depicting non-virtual Euclidean ground or defining a landscape, and there are no plants, trees or rocks depicted. Moreover the dominating figures here are not simply bulls, but rather bull-apparitions, hung with and interposed by a dainty petticoat made up of smaller animals (stags, horses and bison) all organised in crescents and cruseiforms in and around them in interpenetrating and profuse fashion. Furthermore the mural in the Salle des Taureaux struck me as aesthetically deluxe in its capacity to evoke intelligence through the management of line and its unification of the semi-sculptural with the graphic.


Salle des Taureaux

In that the walls of the cavern have been coated with crystallised calcite due to flooding long long ago, the paintings glimmer with a subtle sparkle which is enchanting to the eye, a bit like what in VR is called *scintillation:* the sparkling of rendered textures (usually undesirable when pursuing photo-realistic effects). Thankfully the congealed calcite served as well as a protective sealing and safeguarding varnish-coat which has kept the painting's colour looking remarkably fresh and well preserved. This glimmering effect was heightened further when my Ministère de la Culture guide dowsed all the electrical lights (designed to reproduce the tallow lamp originals which burned animal fat with Juniper wicks) and lit a cigarette lighter to better convey an idea of the original visual effect of tallow and burning wicks which provided an unsteady twinkling light (as a candle flame does). At that point the calcite twinkle burst into a full-blown flicker.

More than one hundred burned tallow lamps were discovered inside of Lascaux (Delluc & Delluc, p. 47) and even if they were all in use at the same time, which is unlikely, one must visualise how faintly dim the light is inside the cave, and how lovely a warmly soft, etiolate-fat incandescence illuminated its walls, and how this flaxen dimness suggests to the mind a semi-dream state, reminiscent, for me, of how invariably exciting it is to go to sleep in an unaccustomed bedroom where the unfamiliar wallpaper and pictures, faultily grasped in the obscurity of night, are only faintly perceptible and thus open to imaginative interpretations. (Eco, 1989)

What is significant to this study is the psychic effects produced by the dim seductiveness of the cave's friezes. What I felt when caught up in the supernatural ambience of the space, due to the dim glint of the calculate, the smell of the dank earth, the slightly overhead majestic size and sense of transparent movement of the wrap-around painted beasts which were strewn throughout, was a sense of deliriously (and vicariously) identifying with them, even as they burst over the edges of my visual cone without restraint, and of euphoricly running among them as a half-horse/half-man silene (centaur); that jocular classical Greek woodland spirit similar to satyrs (who were half-goat/half-man). This totemistic state of consciousness (Mithen, pp. 165-167) is what Dr. Lilly calls "species-jumping-thinking". (Lilly, 1974, p. 40) Deleuze/Guattari's term for experiences of this nature is "becoming-animal". For them to "become animal is to participate in movement, to stake out the path of escape in all its positivity, to cross a threshold, to reach a continuum of intensities where all forms come undone, as do all the significations, signifiers, and signifieds, to the benefit of an unformed matter of deterritorialised flux, of nonsignifying signs". (Deleuze & Guattari, 1986a, p. 13) Along with this experience of feeling intricated in a becoming-animal "panorama" (Deleuze & Guattari, 1986a, p. 36) by self fashioning a "map of intensities" (Deleuze & Guattari, 1986a, p. 36) I felt enveloped and tangled inside a sensation of sacred/sexual omnijective passion as the fertile abundance of animal spirits covered and absorbed me in a generalised sense of fertility (a fertility which would help ensure the success of any hunt through a plenitude/excess of the hunted).

This silene sensitivity was particularly acute in the Axial gallery, the gallery which follows the vast Bull's Chamber, as here the cavern tapers to form a more compressed overhead ceiling display. Here one finds a tremendous stag 1.38 metres high (4.6 feet) with an enormous rack of entangled antlers flanked by three horses and an abstract door-like form and rows of dots. Particularly here I had this feeling of being included in omnijective frolicsome animality. A sense of tragedy was conveyed there too though by an apparently wounded and fallen horse which concluded the gallery. This pitiable image, mixed with the rest, made me think of Earnest Hemingway's (1899-1961) textbook on bullfighting and its history *(Death in the Afternoon)* as it concerned the function of tragedy in the ritual of the bullfight, as the bullfight too consists of a deathly dangerous inter-connective rapport between men and horses and bulls. (Hemingway, pp. 5-14) Even though Hemingway identifies the tragic aspect of the bullfight as that emotional space located between the bull and the man (a horse's gored death by the bull, in his terms, is comic-tragedy) the important part is that the tragedy of death is necessary in order to convey the feeling of life and death to the cave and hence its sense of *mortality dissolving into transparent immortality*. Soon, however, my frail humanity gratified me and I felt very remote indeed from the tragic animality of my surroundings, almost as if I were a miniature silene carved out of silver and ivory. As I slipped out of the previously keen feral feeling, I felt the flagrant beasts, by contrast, running over me and exploding me; along with a hundred other things.
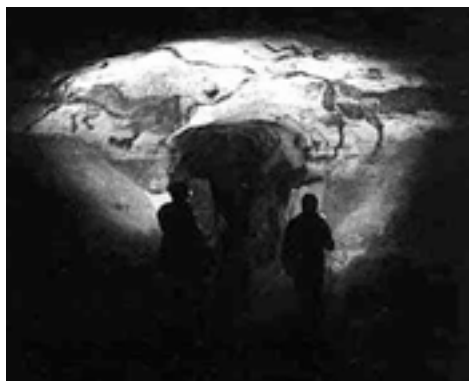
Axial Gallery

Lascaux's friezes, I must assume, had similar psychic/symbolic omnijective meaning to those who rendered them and looked upon them, and that they supplied a framework in which an expanded immersive consciousness could be expressed sociably. As we saw in Section A with the Bohm/Pribram understanding of omnijective existence, expanded immersive consciousness is present in various degrees of enfoldments and unfoldments and dividing space up into ostensibly exterior and interior distance has no real significance.

One thing that is unusual about Lascaux is that access to its galleries are far easier than in most other caves (such as at Niaux) with the exception of the gallery called *The Chamber of Felines*, which I was not permitted to see due to its remoteness deep within the cave. As previously established, the majority of entrances to

prehistoric caves are far from the painted "inner sanctuaries" (Leroi-Gourhan, 1968, p. 163) and require an eventfully hazardous journey which heightens the emotional intensity. Those that are not difficult to reach physically, like Lascaux, start their gallery/sanctuary at the point where light diminishes, creating a transitional emotional and dilational retinal passage adjustment in preparation for a sacred experience (according to Leroi-Gourhan). (Ruspoli, p. 80)

The other gallery inaccessible to me was the *Shaft* or *Pit* which was considered too difficult and dangerous to visit. The Shaft is a 6 metre (20 foot) deep hole, just wide enough for one person to fit in comfortably, halfway along the Passageway toward the Chamber of Felines. It contains the famous scene of the wounded bison who is literally spilling his guts and the bird-headed reclining man with an erection (the sole human-narrative scene in Lascaux). (Delluc & Delluc) I was not allowed to see this however. Nevertheless just prior to the Shaft/Pit is the *Abside* (Apse), a roundish, semi-spherical, penumbra-like chamber (like those adjacent to romanesque basiliques) approximately 4.5 metres in diameter (about 5 yards) covered on every wall surface (including the ceiling) with <u>thousands</u> of entangled, overlapping, engraved drawings (Leroi-Gourhan, 1968, p. 315) for which on request I received an additional unique privilege of seeing, though far too briefly.
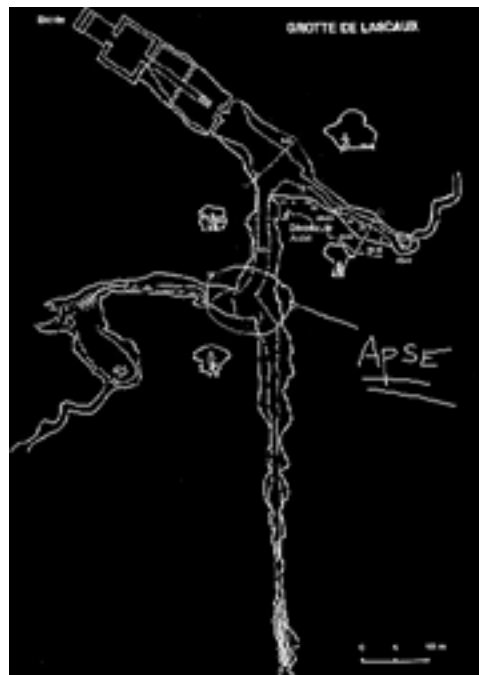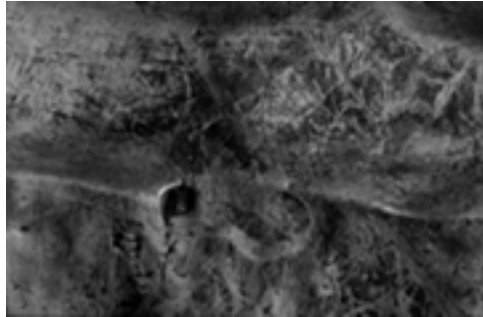

diagram of Lascaux

detail from the *Abside*

The ceiling of the Apse (which ranges from 1.6 up to 2.7 metres high (about 5.2 to 8.9 feet) as measured from the original floor height) is so completely and richly bedecked with such engravings that it indicates that the prehistoric people who executed them first constructed a scaffold to do so. (Ruspoli, pp. 146-147) This indicates to me that the Apse was an important and sacred part of the cave and indeed Ruspoli calls it the "strongest, most richly symbolic, most mysterious and most sacred" of all the inner spaces which make up Lascaux. (Ruspoli, p. 146)

Generally the Apse however has been ignored by art theoreticians (and there is only one widely published scholarly investigation of it per se, by Denis Vialou in Arlette Leroi-Gourhan's *Lascaux Inconnu* even though Abbé Glory spent several years trying to decipher this inextricable chamber) as nowhere is the eye permitted to linger over any detail (even though it holds an immense 2.5 metre engraving (8.2 foot) in its midst). Rather, the gaze is urged on by an all-inclusive flood of sublimated optic information in need of visual stamina. Nevertheless, the Apse holds a semi-legible "comprehensive index" of all of the forms of representation found scattered throughout the entire cave, thus making up what Mario Ruspoli calls Lascaux's "véritable corpus" (real body). (Ruspoli, p. 147) My appraisement, though, is that it is Lascaux's veritable brain and conceptual centre.

Of it, Bataille said that it was one of the most remarkable chambers in the cave but that one is ultimately "disappointed" by it. (Bataille, 1979, pp. 58-59) I was not disappointed however. Indeed, what pleased and fascinated me about the Apse was exactly its cryptic and foreboding over-all hyper-totalising iconographic character granted by its boundless, palimpsestesque, wall-paper-like image explosion (what Bataille called its *fouillis*) of overlapping near non-photo-reproducible stockpiled drawings from which, when sustained visual attention is maintained, unexpected configurations visually emerge. Here animals are superimposed in chaotic discourse, some fully and carefully rendered, others unfulfilled and left open to penetration by the environment, all commingled with an "extraordinary confused jumble" (Leroi-Gourhan, 1968, p. 315) of lines including, remarkably, the sole claviform sign in the Périgord and, even more remarkably, Lascaux's only reindeer, an animal which existed in plenitude during the period of the adornment of Lascaux. Its extensive

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use of superimposed multiple-operative optic perception (*optic perception* unifies objects in a spatial continuum) presents the viewer with no single point of reference, no orientation, no top, no bottom, no left, no right, and no separate parts to its whole. Such visual-thought is *homospatial* thought then, as according to Rothenberg in *The Emerging Goddess,* homospatial thought is visual-thought "outside of space or spatiality" which "transcends differentiation". (Rothenberg, p. 342) This homospatial quality itself is deeply suggestive of the non-spatial character of consciousness itself, as indicated by both Clarke (Clarke, p. 231) and McGinn. (McGinn, p. 220)

As a result of this homospatiality of the Apse, I had the peculiar feeling of being flooded over by a cloud-like image cesspool of deep meanings which I could not uncode, as if I was in the midst of a model of the Bohm/Pribram universe as implicate pattern. As such it seemed an imposition onto Paleolithic culture of the very thing that should unstabilise it: nihilism. Nihilism in that it is no longer a matter of heterogeneous figuration, but of scanning a homospatial criss-crossing and oscillating battle scene between interwoven figures, immersed in their ideational ground with which they have merged in a deliberate process of constitutional defigurisation. There is no longer any space outside of the figures to define them, and hence, in a mental reversal, space is immersed in the overlapping figures. The nihilistic cancellation at work here then seemed to be an attempt to deny the validity of subject/object understanding and to deny that any visual erudition of anything whatsoever is possible, in the interests of omnijective introspection.

Bataille said that what was curious about the Apse was that the artists "abandoned their oeuvre to the next to come after them in an ant-like activity", yet "they did not engrave their figures with less conviction or care". (Bataille, 1979, p. 59) Obviously the artists here did not work from a life model but from the overlapping introspective depths of their visual memories. Indeed likewise, the Apse seems to call upon the viewer to construct a mnemonic psychological interpretation of it based on its tightly woven, intricate abundance, i.e., its latent excess. But even after introspectively synthesising the overlapping imploded individual parts into a mnemonic coherent whole, the Apse retained for me a provocative discord and irritation which tantalised my mind farther towards a withheld (perhaps forgotten) seemingly encoded signification. But as our subconscious is energised by sustained desire that which I sensed to be both obscure and overabundant about the Apse merged into a hybrid interpretation which combined conflicting ideas about abundance and nihilism into an égréore complex chunk of omnijective information which I then viewed as a *single meta-nihilistic mega-symbol*.

With this meta-nihilistic mega-symbol's boundlessness, the Apse appeared to me as the most sacred of the cave's sacred places. Certainly easy conceptions of one beautiful being as distinguished from another (in specificity) are denied and an aberrant invalidation takes place where previous concepts of the finite and the

infinite implode (as do concepts of the voluminous and the vacuous) into a unified field of multiple-reproductive disembodied existences.

This then is a sacred/sexual place of personal intrascoping and transformation (by reason of its creative virtuality and anticipated self-cancellation) as its beautiful representational anti-depictions are neither here nor there but overlap. Clearly what I am saying about the Apse runs counter to the heart of positivism, a paradigm under which we continue to toil unconsciously, as the positivist ideal is a search for rational, systematic thought where images can be broken down, explored, understood, and explained. Here in the Apse we seem to have encountered an irrational systematicism that seems to critique reason, a systematic critique that predates (and in some places overlaps) the modern positivist attitude towards sensation. (Mach, 1914) Here we are inside of a homospatial site of overrunning flux and of hybridisation; a place for the rejection of realism and it's values (or at least a place to save oneself from the futile and finally unreasonable claims of dogmatic realism and rationalism). The Apse then represents a thrusting off of optic and mental boundaries and thus is a complex mirroring of our own fleeting impressions which constitute the movement of our consciousness; the perpetual weaving and unweaving of ourselves. Here we are not static, and we have no use for reductive concepts or practices, but we are inside a dialectical space that carries it's own nihilistic opposite within itself.

Particularly dense with overlapping imagery is the part of the Apse called the *Absidiole*, a small, niche-like hollow (like the semi-spherical small niches which house holy relics attached to the apse in romanesque basiliques) just in front of the drop into the Pit. Here the immersant can ostensibly participate in a play of self-tutorial multiple-immersions as one stands in the Absidiole inside of the Apse which is located inside the groin of the cave itself and introspectively view through sublimated excess an explication of the curved inner-logic of immersion itself: *encased and withheld excess*. Assuredly vision here is no longer the controlling power over animals in nature, but on the contrary, vision itself is engulfed in nature's womb. The motivational force which quickens the Apse then seems to be a desire to undermine perpetual vision and replace it with another type of impregnable (holonogic/immersive) vision, or at least to suggest that there may be other types of vision possible. Its nihilistic excess serves the positive function of questioning the validity of the customary appearance of things and to make connective understanding inextricably felt.

Indeed the basic function of the visual turbulence of the Apse, from the connective perspective, is to precisely shake our conviction that our visual thinking is sound and to hold any such assured convictions, rather, in suspension. Hence it is only routine that formal issues (where consciousness may be said to be self-referential and self-sufficient) would arise over any humanist narrative ethic, as the Apse is more concerned with a recycling of psychological energy than with optically correct (in Virilio's terms) astuteness. Hence, freed from representational obligations, dark chaotic powers of consciousness are unleashed via the Apse's repressed excessive exuberance.

When interpreting my immersion in the Apse we must remember that even the simplest perceptual activity of viewing discrete images utilises higher-level cognitive activity, as perceiving anything involves description and inference. (Hochberg) Indeed perception utilises a plethora of built-in assumptions and hypotheses as it fills in absent information and draws conclusions based on (but not reducible to) incoming data in terms of part/whole regions and figure/ground relations from which there eventually emerges a preferred percept. (Koffka) Keeping in mind that the human's natural FOV is roughly 120° vertical by 180° horizontal and that the Apse's perceptual-field far exceeds these parameters, the resulting *flooding-over effect* of the Apse (which is significant in creating the immersive effect) accounts for some of the visual chicanery experienced here. However, in the Apse the level of evasive mono-complexity (given the uniform shading in which the one sombre value dominates the complex visual arena) of the fouillis also challenges preconceptions of legibility based on our ability to identify and locate figures in their ground, and this made me wonder if the visualisation chamber I was in was not perhaps a training spot for the hunters to improve their discerning vision, so as to aid them in visually discovering animals from within their tangled natural camouflage. But also on scanning the systematic, intricate and perplexing inert spread of the Apse, one cannot but sense that in some way one is looking at a representation of the metaphysics of orgasm and death, and that by absorbing its visual code one was looking sex/death in the face. To be, or not to be: that is the paradigmatic choice when visualising form into and out of existence when examining the elusive alternatives made manifest here. Being, beings, or nothingness: all are tentative conditions of resolution (or forestalled resolution) here; all spout their own ontological/neurological preferences.

In this purging atmosphere of imploded meta-nihilistic sacrilege, spontaneous reflexes only go so far and reflection necessarily takes over in search of an expansive meaning. Yes, nihilistic amanuensis and jubilant Baudrillardian catastrophic implosion are here, not only in how this staggering image-dump can be read, but also in terms of how its creation entailed the task of disrespecting the care with which marks achieve representational artistry in an apparent desire to achieve and contemplate radical negation. This scouring of assertive vision must have been deemed necessary only precisely here, as in the other galleries, very often, superimposed images respected the marks previous laid down and sensitively incorporated them into the ensuing hybrid super-impositional compositions. By ransacking representational vision so, the Apse paradoxically partakes in the category typical of major art (regardless of its marginal standing within the cave and within Prehistory) as it seemingly rejects the figurative tradition in order to reinvent it as entrancing meta- (or supra)-representation. Thus it is major in the way that John Cage's musical composition/non-composition *4'33″* is in forcing us to astutely consider silence as sound. And as such it is a meditation on fullness and emptiness: on the emptiness of fullness and the fullness of emptiness. And this is its key immersive exemplary value.

On further reflection I found the Apse encounter to be in rapport with the philosophy of Hegel where he maintains that *our absolute sense is first a pure being identical with non-being*. (Hegel, 1949)

Archaeologists are continuously undertaking to understand the marks left here from this inaccessible epoch as they analyse its dishevelled iconography in hopes of ascertaining why this tangled impulse was consummated. Most do not see however that the Apse defies the common assumption that visual art is associative, that it is based on the human mental capability to make one thing stand for and symbolise another, in agreement with society. The usual assumption is that art-marks on a surface denote content, not just to the mark-maker but to others as well. As example, the Abbé Henri Breuil (1877-1961) (speaking generally about Lascaux) maintained some of the mystifying, abstract, geometric marks represented the hunting paraphernalia of traps, snares and weapons (Breuil) and Leroi-Gourhan placed these abstract marks into a category based upon sexual duality where dots and strokes represented male signs, and ovals, triangles and quadrangles, female. (Leroi-Gourhan, 1968) There is mixed agreement on these two interpretations, but all we know for sure about the abstract constitution of the Apse is that its dynamic cluster of representational/anti-representational operations (and the meta-nihilistic/mega-symbol boundlessness which it contains in its kitty) were reworked over the span of many centuries. However by no means do all of the superimposed figures date from different times, thus their overlapping is not a simplistic function of time nor is it for lack of space. Thus its abstract intentionality assumes a certain degree of lucidity.

The Abbé Glory, who lived in the Lascaux cave for several years while making an inventory of its contents, discovered that in the Apse there are several *re-engraved figures* (Leroi-Gourhan, 1968, p. 316) which is again baffling as it cuts against theories of anti-social resistance to figural thought and places us in the functional realm of *cognitive dissonance*, the psychological term denoting the mental state in which two or more incompatible or contradictory ideas are held to be equally sustainable. (Festinger) Hence the Apse's cognitive dissonance served a virtual function if we remember Brian Massumi's definition of the virtual as "a lived paradox where what are normally opposites coexist, coalesce, and connect...". (Massumi, 1995, p. 91)

If the Apse functioned as a mnemonic devise, or as a site of hegemonious non-being severed from any practical purpose, we shall never know. But it is my hypothesis that the Apse chamber functioned as a cognitive dissonance visualisation field and defocal virtualising area which adjusted-up the expanding and dilating eye/mind to the awareness of conflicting, non-rational omnijective realities involving sex and death through the use of deeply creative virtual visualisations.

We know that most of our cognitive functions and perceptual processes are carried out by the neocortex (the largest part of the human brain) and that the primary visual cortex is the part of the neocortex that receives visual input from the retina. What we can conjecture is that the subterranean aesthetic visualisation process at

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work in the Apse may have been used to feedback optic stimulus to the neocortex in a foreseeing enterprise, an attempt to look into the future, as this process of feed-backing impartial stimulus to the neocortex is roughly the basis for magical gazing. (Eliade, 1964) It is imaginable that such a foreseeing enterprise (Huxley, F.) would also be deemed of help in prognosticating the existence and movements of prospective herds of game which would facilitate the success of the hunt, among other things.

To represent the process of this state of looping neocortexual stimulus and to fasten a cluster of spirit-images on a wall (immersed and hidden among a plethora of others) is in some sense to snare and overpower the image and, ultimately, to have Hegelian power over it (i.e., Hegel's notion of the absolute consisted in *becoming other in spirit)*. (Hegel, 1949) It is curious however to note that in the few depictions within Lascaux where animals have been wounded by spears or have fallen, they do not appear to be in pain. Perhaps what the seers did here was a way of passing into a virtual world beyond the wall by penetrating through the crowded palimpsest-like clutter and joining with the animal's vital spirits.

David Lewis-Williams and Thomas Dowson make a case that after coming out of a trance, enchanters artistically recreated their visions, both as memory aids for later ritual travels and as portals through which they pass into the spirit world. They view cave markings as powerful ritualistic processes, not just as static pictures, and they maintain that the abstract patterns that occur in parallel with the animals found in such prehistoric caves as Lascaux are representations of the phosphenes that accompany meditative and trance states which accompany seer's practices, particularly those associated with psychoactive plants. (Lewis-Williams & Dowson, 1988) These enchanting practices entailed, it is surmised, trance states which were in some instances produced (in part) by natural chemicals when ingested by an enchanter in order to induce a trance for revelatory purposes. Altered states of consciousness induced by hyperventilation, rhythmic movements or psychoactive drugs universally produce *entropic* visual image-fields (phenomenon derived from the basic structure of the human optic system (anywhere from the eyeball to the visual cortex of the brain) *within vision*). In his book *Alchemy of Culture*, Richard Rudgley gathered supporting evidence (based on the detailed knowledge of local flora and fungi) from several researchers, that Paleolithic cultures utilised the natural distributions of psychoactive species in their locale as an early feature of their cultural development. *Cannabis sativa* was a known intoxicant in prehistoric Europe and hemp seeds have been found at a variety of Neolithic sites. (Rudgley, p. 28) Trance states too were created and augmented by the utilisation of hyperventilation and almost always in the context of rhythmic repetitive singing, drumming, dancing and clapping. According to Lewis-Williams/Dowson's adapted three-stage neuropsychological model, people who hallucinate in the later stages often experience a sensation of a vortex or rotating tunnel around them (vortex or tunnel shapes often appear as individuals enter the deepest stage of a trance fostering a sensation of travelling through a passageway). At that point subjects come to inhabit (rather than merely witness) an hallucinatory immersive world. (Osmond & Aaronson)

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One may speculate that the Apse served (and/or reflected) such a surrounding process where the self is experienced as capacity rather than existential identity, and where the evaluation of self has been revised from bound to boundless. Such consciousness represents a paradigm shift which relativises other recognitions of self-consciousness. It is pertinent that in *A Thousand Plateaus* Deleuze and Guattari describe this shift towards boundlessness as one's becoming a *body without organs* (BwO) in terms of our self-shifting representational planes emerging out of our field of compositional consistency, for the BwO (according to them) is an *insubstantial state of connected being beyond representation which concerns pure becomings and nomadic essences.* (Deleuze & Guattari, 1987, p. 510) Deleuze and Guattari go on to say that the BwO "causes intensities to pass; it produces and distributes them in a *spatium* that is itself intensive, lacking extension. It is not space nor is it in space; it is matter that occupies space to a given degree - to the degree corresponding to the intensities produced". (Deleuze & Guattari, 1987, p. 153) According to Brian Massumi, the aforementioned translator of *A Thousand Plateaus,* the BwO is "an endless weaving together of singular states, each of which is an integration of one or more impulses". These impulses form the body's various "erogenous zone(s)" of condensed "vibratory regions"; zones of intensity in suspended animation. Hence the BwO is "the body outside any determinate state, poised for any action in its repertory; this is the body in terms of its potential, or virtuality". (Massumi, 1992, p. 70)

The above scenarios suggest a merging of awareness into first a more restricted, and then an expanded, intense statement, which is the principle of entering a virtual world. This fact, and it is a fact in terms of VR, surprisingly corresponds to Paul Virilio's central pessimistic message concerning technology: that *nothing is acquired without loss*. (Virilio, 1991a) Thus it is possible to say that such states of manifestation are distinguished according to the degree to which potentiality is energised through restriction, similar to the construction of a *metaball*, which in VR is an *equipotential surface created around a particular* made possible after specifying a tacit point and assigning it a radius and intensity for the metaball to adapt. When approached in the virtual world, metaballs blend their surface shapes to form a smooth equipotential surface. (Psotka & Davison, 1995) To apply the metaball model to consciousness would suggest that a possible criterion for making qualitative distinctions is the degree to which the potential states of consciousness are unfolded and experienced as a smooth totality.

Support for Lewis-Williams/Dowson's visualisation account has come from the influential archaeologist Jean Clottes, scientific adviser for prehistoric art at the French Ministère de la Culture. Clottes has joined Lewis-Williams and Dowson in an investigation of their neuropsychological model in an attempt to fill a need for testable theories of why people inconvenienced themselves to such an extent as to create these intensive, highly seductive, immersive spaces. I have taken interest in their work as from it we might extract possible immersive intentions and gesamtkunstwerk principles from the prehistoric painted and etched inner spaces.

The research which Lewis-Williams and Dowson first published in 1988 has been refined more recently by Jeremy Dronfield in respect to the passage tombs of the Irish Neolithic, one of which, Newgrange, will be discussed below in immersive terms.

The neuropsychological literature (Gazzaniga, 1995) teaches us that trance states proceed in their deepening in stages. Shimmering, incandescent, shifting patterns (referred to in the neuropsychological literature as *entropic phenomena*) have been shown to be produced early on in the trance process when syncretistic vision takes on an all-over field-like quality. Resulting entoptic form-fields contain grids and lattice designs, dots and flecks, zigzags, curves, and filigrees or thin meandering lines (all apparent in the Apse). In deeper trance states, these fields, depending on the state of mind and cultural penchant of the enchanter, are often, according to Lewis-Williams & Dowson, experienced as a rotating vortex or tunnel that seems as if it was completely sealing off and surrounding the subject in an immersive subjective world. The objective external world is progressively excluded from vision and consideration and this field of inner enclosure grows ever more florid. (Lewis-Williams & Dowson, 1988)

These researchers now hypothesise that the art adorning caves, stone shelters and tombs, delineate trance induced immersions stimulated by congesting particular natural molecular arrangements which produce psychoactive effects in the human brain; molecular arrangements which have had a significant cultural history of religious use in inducing visionary, mystical trance states. Accounts of hunter-gatherer and foraging groups include descriptions of enchanters who occasionally conduct rituals that they believe allow them to travel to parallel worlds set out in local belief systems. In these realms, deceased ancestors, deities, and miscellaneous delicate creatures await the enchanter, who deals with them in ways intended to meet indispensable communal needs. (Leroi-Gourhan, 1964) In preparation for their mysterious interchanges, enchanters typically took steps to instigate trances through isolation in dark places, by frenzied dancing, through rapid breathing, and/or through the ingestion of hallucinogenic plants. (Boas)

The validity of exploring theories of altered states of consciousness depends on our capacity to overcome that quixoticism which enthrals the mind and takes it no further. That in turn depends on the understanding that the subject experiencing an altered state of consciousness remains in principle the same; the consciousness is essentially that of the same person, and the content of consciousness, the ideas and dreams, are those of the same person also, albeit revealed at a heightened level of intensity by the removal of inhibiting agencies and habits of mind. (Osmond & Aaronson) It is on this basis that Walter Benjamin demanded that the revelations of ecstatic visions be made subject to the same criteria of knowledge as those of the sober state, just as *the conventions of conformist ideology must be treated to the same scepticism as one applies to raptures and dreams*. (Benjamin, 1978)

If one accepts most of what I have said thus far as concerning the alteration of consciousness in the Apse, we may now surmise that this altered consciousness (further altered by the meta-nihilistic chaos of repressed excess) within the Apse would have at least two aspects to it. First, similar to the consciousness shift sometimes experienced when engaging in sex, it is an unleashing liberation and a breaking free from the world's ordinary representational space. This immersive domain is one where one not only transcends narrow conceptual territories, but where one also frees oneself from all the desires of security which limit the familiar experience of everyday life. But it is also an enraptured experience which brings BwO fusion-vision into a larger abstract reality, i.e., life's covert implicate order where boundaries which make up various territories are transcended by our relation to the desire for totality. (Godin)

In seeking to understand early immersive aesthetic impulses then, I came away from Lascaux's Apse with an incisive trust in its conjectural goal of serving as a vehicle for BwO *inter-special disembodied connectedness*. Supporting such a theory on my part is the so-called sorcerer panel in the cave of Trois Frères, also in the French Pyrenees. Deep underground in a cramped cavern (like the Apse) a rendered half-human/half-animal figure dominates the space. The human/animal figure is staring directly out of the wall (which is unusual for Upper Paleolithic cave art). Just underneath are several heavily engraved panels, a commotion of animal figures with no apparent order or pattern (as again in the Apse). In the midst of this chaos of muddled excess is another human/animal figure and directly in front of this image is a reindeer's hind-legs and rear-end with its female sex prominently displayed. The sacred/sexual immersive (trans-special) potency is palpable.

This proposed explanation for the dark excess of the Apse cannot be proven, nor, I think, disproven and thus it remains a moot point, however fascinating. Though obviously imbued with meaning, we unfortunately are unlikely ever to know the true meaning or function of the image-space of the Apse (or the other marks of the Magdalenian people for that matter). What I know though, with certainty, is how the immersive amplitude of the Apse operated on me in the year 1997, and what it did was to collapse the inherited meaning of human image making into a more inclusive and available sense of excessive ebullition and into a dynamic feeling of wanton sexual climax. The shrouded scatter stirred my desire to seemingly unfold and deliver forth a sanctioned libidinous pathos where forms of salacious creative ferment and levels of self-indulgence are concurrent. From this state of floridity it might be possible to further define immersive states of consciousness as those which *contain a condition in which reality is perceived as consisting of more than that which everyday vision brings to light*. Such immersive states bypass discursive counterintuitive processes and confer a greater scope to holonetric vision and therefore an enhanced and expanded unanimity with ideals of totality.

Bolstering this contention is the fact that before leaving the Apse I had looked around down the Passageway and into a portion of the Salle des Taureaux and I recall these chambers taking on the character of a moist orifice. At that point I felt like a BwO ravisher about to act out some unfathomable, risqué, multi-genus sexual

act, as if I was emancipated to ford my human anthropocentric sexual frontiers and burst out of my specific species identity and into that of a bull, horse, peacock or peccadillo; just as I have frequently imagined myself doing when engaged in sexual union. It is this sense of inhabiting a new corporeality in obbligato that is entirely unnatural, preposterous, and variegated which, as we shall see, holds importance when uncovering the idealised desires and onastic qualities of the immersive art experience.

What additionally fascinates is that this fine jumble of delicate lines, some beautifully representational and others again not, corresponded to the prolonged series of greyish drawing with which I began my carrieer as an artist some twenty years ago: drawings which had partially been conceived of as a shadow of our nervous system's meshed neural signals.
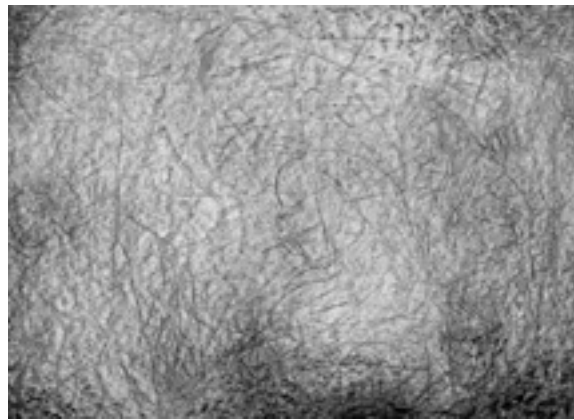
Joseph Nechvatal, *XS 1986*

Thus the Apse seemed as an idealised shred from my own memory and I nearly felt that from the ceiling angelic divinities would pelt garlands of roses down on me. We should note however that it is common to find prehistoric stones of various sizes that were incised with a jumble of overlapping animal drawings in no apparent order, piled on-top of one another to the point of illegibility. (Leroi-Gourhan, 1968, p. 33) However we can say with assurance that the Apse's brimful-room style is almost unprecedented, save for certain panels in Les Trois Frères and at the cave of Combarelles, a nearby Périgord cavern which I subsequently visited the next day.

On exiting the cave of Lascaux, striking was the sense of openness experienced as one returns into the light, one's eyes reconstricting as one passes through the sparsely wooded area and emerges into homogeneous light on top of the hill with a magnificent vista at one's feet. It was there I spent the night in an auberge in preparation for a visit to Combarelles.

The cave of Combarelles, like the Apse, contains an enormously doleful pile-up of almost imperceptibly engraved drawings deep, deep within the once almost inaccessible wet belly. A prolonged walk inside the cave preceded any encounter with the art, but once encountered, like in the Apse, depicted forms start snowballing and overfeeding on themselves. Here too our visual-mental system self-devours the assumed reality principle (Freud, 1974), ultimately causing its downfall by absorbing realistic representation into a homospatial dissolution of form. Like the Apse, it too is colourlessly elaborate, heady, and intricately composed, but here I felt not ravished nor aroused nor stretched by the hyper-fastidiousness of the obscure excess but rumpled and crushed beneath the cave's monotonous dark and inaccessible logic. Indeed here, as in the Apse of Lascaux, representation was problematic and the normal linear depiction of figurative assurance failed in favour of a multi-linear non-sequential processing. Certainly the etched walls did not have one singular classical point of view or a fixed position from which it depicted being and that it too operated on the dynamic of a supra/meta-dataload; but this operation was never mitigated by other colors of thought which might have allowed Combarelles to transcended the limitations of its own pictorial assumptions via a critique of them, as Lascaux had managed to do.

What the open-endedness of the piled-up BwO disembodied fabula at Combarelles suggested to me, was the collective abstraction of the production and distribution of every possible representation along with the super-human desire for existing pluralisticly in many orbs simultaneously. When I thought of the hyper-connectivity of its indistinct veneer of interlaced lines, I saw Combarelles as a meta-idea cove which functioned by criticising the discourse of traditional understanding by measuring the distance and difference to which coherence goes, and indicating from whence it has come; complicated blurriness.

In 1980 a simulation of the Salle des Taureaux was created by the transfer of life-sized colour photographs onto a base made to reproduce the shape of the original chamber. This immersive exhibition can now be seen in the Musée des Antiquités Nationales in Saint-Germain-en-Laye. In 1983 another reproduction was completed near the Grotte de Lascaux in an enormous concrete bunker which copies the shape of the Salle des Taureaux and the Axial Gallery, called *Lascaux II*. Here painters have reproduced the figures and symbols of these two galleries exactly as possible using the same painting materials as the Magdalenians used. Lascaux II also contains a small museum which is educationally informative. There is no sense in calling it a copy. It is an educational tool.

The same is true of the artist Benjamin Britton's 16 million colour, high quality definition *VR Cave at Lascaux* which utilises an HMD system to view high-resolution image maps. Britton's immersive VE is an educationally rewarding experience, and like Lascaux II shows something of the cave to those (almost everyone) who may not enter it. However we would be deluding ourselves in pretending that these

simulations approach in any meaningful way the experience of immersive consciousness which can be gained during incautious moments within the actual Grotte de Lascaux.

BIV: The Eros and Thanatos of Newgrange and Egyptian Embellished Burial Tombs

 Long live the immaterial!
-Yves Klein, *The Chelsea Hotel Manifesto*

Through this hole
at the bottom of the cavern of death,
the imagination escapes intact.
-William Carlos Williams, *Paterson*

Never again will the real have to be produced: this is the vital function of the model in a system of death, or
rather of anticipated resurrection which no longer leaves any chance even in the event of death.
-Jean Baudrillard, *Simulations*

Immersive ornamental funerary space (the burial chamber tomb) typically implies a belief in a disembodied afterlife involving the corpse in some transformed way. Characteristic of the burial envelope is the sarcophagus; a vessel, more or less decorated, which contains the corporeal remains of the deceased which itself is placed within an embellished burial chamber tomb. For my investigation into immersive attributes I entered some admirable early examples of this inclination in the Luxor region of Upper Egypt known as the Theban necropolis, most notably the recently opened (to the public (1995)) tomb of Queen Nefertari (located in the Valley of the Queens), the tomb of Anerkau (nearby in Deir El-Medina), the tomb of Sennofer (at Qurna-Thebes), and most spectacularly, the tomb of Ramses VI (in the Valley of the Kings). All of these tombs, plus that of Seti I (which was closed for renovation), at their inner core contain shimmering immersively-favorable wall paintings which include overtures towards fashioning an overall, continuous, and enveloping hyper-totality. This ancient approach of painting the surrounding inner walls first appear in Egypt in the 24th century BC in the pyramid of Unas at Saqqara.


detail from the tomb of Ramses VI

All the above mentioned tombs share the visual belief that the tomb was the eternal dwelling place for the consciousness (and/or life-force) of the deceased (the *ka*) and as such was elaborately painted so as to create a satisfying everlasting abode for their disembodied remains: their kas. These kas (which were considered animate doubles of the deceased) gained their own identities with the death of the flesh. A Pharaoh's ka would either continue to exist in the tomb or would travel off into the underworld. To help achieve this possibility,

illustrated texts from the *Book of the Dead*, the *Book of Amdut*, the *Book of Gates*, and/or the *Book of Litany of Ra* would be painted in the tomb's inner rooms on all of its walls and the ceiling. For the king's tombs the structure of the tomb itself was designed to resemble the underworld, with a prolonged, inclined rock-hewn corridor descending into either an antechamber or a series of sometimes pillared halls, ending with the burial chamber. But it is the burial chamber's painting which concerns us most.

With the 15th century BC tomb of Nefertari we gain entrance into the best preserved immersive painting from ancient Egypt in existence. It is unquestionably considered the finest painted Egyptian tomb now known. Every metre of the tomb is painted in its three chambers and connecting corridors, adorning the walls with colorful scenes of Queen Nefertari (one of which shows her offering a bowl of milk to the Goddess Hathor, the cow/woman hybrid goddess of joy and pleasurable love whom the Greeks later associated with their Aphrodite) in association with the *Book of the Dead*. The ceiling is festooned with a field of tightly organised golden stars.
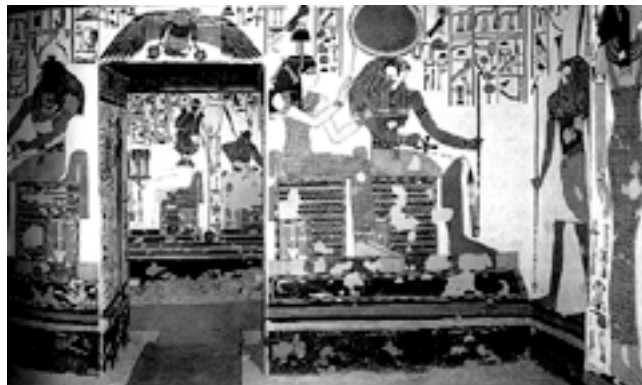
antechamber in Nefertari's tomb

Nearby are the two smaller painted tombs of Anerkau (a functionary) and Sennofer (the 15th century BC chief gardener at the Temple of Amun), both which charm the holonic eye with their intimate immersive qualities. Particularly Sennofer's tomb's ceiling, painted with an all-over network of grape vines which curl down slightly over the top of the walls, is immersively fetching in comparison to Anerkau's tomb's haunting but far more rectilinear treatment. But most immersively impressive of them all was the burial chamber in the tomb of Ramses VI, particularly with its mammoth umbrella-like barrel-vaulted ceiling portraying the mother Goddess Nut, in split mirrored grandeur, integrated into the swelling sapphire sky. Its arching ceiling, which breaks us out of the boxy confining structure of most tomb chambers, and huge surrounding wall paintings, similar in many ways to the tomb of Seti I, overwhelms the FOV, even while maintaining its quasi text-based legibility. Here one attains close to the self-evaporating feeling which we saw typifies the psychic immersive condition at Lascaux.

Following the pharaonic era in Egypt (3000-341 BC) the classical Greeks cremated their dead, so they used urns or vases to encase the remains, however the Hellenistic Greeks often buried their dead in sarcophagi, often with full-size representations of the deceased (and sometimes spouse) on the lid, and with magnificently cut representations of the actual or imagined life of the deceased (or mythological stories) on the front and sides (and more rarely the back) of the vessel itself. The Romans, although they oscillated between cremation and inhumation, imitated such forms of burial encasement. (Panofsky, 1992)

Indeed belief in a disembodied afterlife (in one form or another) has been an efficacious impulse since prehistoric times occasioning imposing sacred mounds, funerary temples, chapels, funerary reliefs and murals. If the presumption is that the BwO will live continuously in a more excellent supplementary world, it will presumably require clothes, jewelry, utensils, furniture, vases and other utility implements, all of which are commonly found in funerary sites. Indeed, without funerary space our knowledge of the past would be proportionately less the further we go back in time. (Murray) A prime example of prehistoric immersive funerary space built atop a small hilltop (originally constructed circa 3100 BC) is the passage-tomb found unexpectedly in 1669 called Newgrange.

Near Newgrange, in the same 7.8 square kilometre (3 square mile) area of the Boyne Valley, are grouped more than thirty prehistoric monuments, including the tombs of Knowth and Dowth. Newgrange is a vast stone and turf mound about 85 metres (280 feet) in diameter and 13.5 metres (44 feet) high (in restored form) which contains a thin passage leading to the central apse-like burial chamber. Outside the base, 12 out of the original estimated 38 large boulders (up to 2.4 metres (8 feet) high) form a ring of about 104 metres (340 feet) in diameter which circle the mound. (Lippard, 1983)

This stone circle was built about 1000 years later than the original mound structure which is retained by 97 large horizontal stones, many of which have beautifully engraved patterns of spiral, lozenge, zigzag and other abstract symbols. The most famous of these is the stone marking the entrance, with carvings of a triple spiral, double spirals, concentric semi-circles and lozenges similar to those found in Brittany (France) at Gavrinis.

Above the entrance passage is a rectangular roof-box opening which precisely aligns with the rising sun at the winter solstice on each December 21st so that the rays of light caress the soil at the center of the tomb for approximately 20 minutes. Many of the upright stones along the walls of the 19 metre (62 foot) passage, which follow the rise of the hill, are richly decorated. The roundish cruciform chamber inside the mound measures 6.5 by 6.2 metres (21.5 by 17 feet) with three recesses and is roofed by a magnificent corbelled ceiling reaching to a height of 6 metres (20 feet) above the floor. In the recesses there are three Absidiole-like massive stone basins which presumably had some ritualistic use. Excavations in the central chamber produced

the remains of two burials and at least three cremated bodies as well as seven marbles, four pendants, two beads, a flint flake, a bone chisel and fragments of several bone pins and points.

Entry into its inner space was arduous, though in a different way than most prehistoric caves, in that it was not a long passage, but a difficult one because one must slither energetically through a very narrow passage corridor before reaching the pivotal opening. Once there, it was a substantial immersive experience for me, as being inside Newgrange I detected an antediluvian consciousness which contains an emotional enlargement concerning the sad sacredness of death along with the bliss of sexual union. Indeed this consciousness consisted of a morose intensity concomitant with a joyful confidence in human oneness. The tomb's configuration clearly suggested the female sexual reproductive system: the outside suggested the brimful breast; the entry and portal, the vulva; the passage, the vagina; and the inner chamber, the womb. This double realisation is particularly clear when the womb-like chamber is brought to illumination by the penetration of the sun's rays (which were simulated by a warm electric light for demonstrative purposes).

Newgrange interior

Such sexual indications recall Beatriz Colomia's statement in the "Introduction" to *Sexuality and Space* that "the politics of space are always sexual". (Colomia, p. i) So accepted, the sexual politics of Newgrange are then feminist in that Newgrange (for me) is indicative of the underlying poignancy of pre-natal being/non-being. Its protuberant roundness seems to represent this being/non-being (i.e., becoming/leaving) indicative of pregnancy. Its internal structure suggests the female reproductive anatomy penetrated by the life-giving sun (which reveals). Yet the sun's rays are rare and fade and thus represent non-being. Indeed these fading rays are the true monument to death in this tomb. Hence Newgrange's magnificence is the sacred dynamism of the libido in face of death.

Newgrange's virulent fertility is both absorbing and elongating then and, as such, it frees being and non-being from touches of commotion and horror and includes them in its cavern of serene pathos. Here Eros inverts into Thantos, and Thanatos inverts into Eros. In this onerous dual existence, contemporary consciousness

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feels an unaccustomed attraction for, and a new delight in, the spaciousness of fusion, not through the sole fusion of sex and death, but from the saturated magnitude of Newgrange's artistically construed sense of decomposed transport/union which I found to be characteristic of its hybrid art/life/sex/death viractuality.

BV: The Expansion of Prehistoric Ornamental Sheathing

Art perhaps begins with the animal, with the animal at least who carves a territory...
-Gilles Deleuze from Gilles Deleuze and Félix Guattari, *What is Philosophy?*

Is the next step in evolution to be the transformation of man into nothing more than electronic patterns?
-Alan Watts, *The Book: On the Taboo Against Knowing Who You Are*

No image satisfies me unless it is at the same time knowledge...
-Antonin Artaud, *Manifesto In Clear Language*

We shall now turn our attention to an aspect of immersive mind which predates the painted prehistoric cave space and the prehistoric immersive passage-tomb while also outliving it; the aspect of body (and eventually environmental) ornamentation. This is an aspect of the instinctive immersive inclination which the literal-minded might dismiss as superfluous, but which I take as pivotal. It is pivotal in that as immersive art depends on an overall enveloping visual hyper-totality, ornamental spread-distribution of visual incident (which therefore calls upon the optic procedure of spatial summation) prepares holonic vision-cognition for the continuous but coherent quality essential to immersive art.

The word *ornament* in Latin means *significant embellishment*. In its humble, early form it usually is constructed of intimate but visually elaborate designs added to adorn a body or (by extension) a tool. Less intimate, it is used to festoon an edifice or an environment, enlivening the expansive space with visual interest. The Sanskrit term for ornament used by generations of Indian aestheticians is *alamkara*, a term which has been traced back to the Vedic period where its meanings ranged over notions of adornment, beautification, ornamentation and enhancement in order to *invigorate* or *make fit for a purpose*. (Havell) Thus, apparently, ornamentation not only serves to please the eyes of the beholder but also fulfils a beneficial metaphysical purpose. This I take as part of the immersive metaphysical impulse towards omnijectivity.

As heretofore mentioned, the Cro-Magnons practised body ornamentation, however scholars have not yet been able to agree on the origin of body ornamentation as the field is too complex and ubiquitous (while superficially similar manners serve diverse ends). However, it is assumed that its beginning must be sought in the need to adorn and/or sanctify the human body for metaphysical reasons. (Smeets) Tribes of the Mount Hagen area of New Guinea practised an art that existed only in terms of bodily adornment, practising no pottery, no carving, no decoration of homes or burial-grounds (Henri, p. 7) so there is nothing superfluous or gratuitous about the human desire for body ornamentation per se. Clearly it has a symbolic significant essence (sadly often forgotten today and hence turned into mere eye candy) so fundamental as to be shared by nearly every ethnic group on the planet since human time began. (Borel, p. 20) The lavish amount of time and

patience encoded into the world history of adornment suggests an alternative sense of continuance freed from the sense of pressing urgency that currently dominates Western mechanical (turned digital) experience.

Ornamental marking allows the individuals inside a tribe to be ascertained in sanctum by defining themselves from the outside in terms of their own ornamental criterion. (Auge, p. 33) Tribal culture is collective and its ornamentally marked spatial domain, therefore, is essentially public to the members of the tribe as they pass through the various phases of crescendo and diminuendo of their lives. In ornamentally marked tribes, each and every member is doubly conceived and doubly understood in spatial terms as blending into the inner circle of the tribe while being separated out from that which is outside of its constructed periphery (with the possible exception of psychic attempts to penetrate the animal spirit). In this respect tribal ornamental designs are not decoration but indispensable immersive art in that they are expressions of passionately embellished borders which entail encircling conceptions and ambient thinking.

Karos tribal body painting

Though ornamental body-marks may functionally indicate to the outside onlooker (and mirrored self-beholder) beauty, status, group identity, wealth and even virility; from the inside we have what looks to be an intensely immersive art, as one is literally wrapped (sometimes) in the markings on all sides, even while being hindered from seeing its totality (as with full body scaring, painting and tattooing).

Sumas tribal body painting

Body ornamentation appears to be, then, a primary global human expression tantamount to the expression of immersive ideals, in that it is often implemented ritualisticly in an encircling way through its distribution within a community. The impetus to adorn seems to stem from a deep rooted sensibility to mark incidents of life all around one with auspicious symbols and designs. (Ableman) Its goal is not only to indulge perceptual stimulation, but also to "impregnate and transform it" as immersive space. (Langer, 1953, p. 62) This makes space appear rapturously metaphoric and necessitates an act of immersive interpretation.

Ornamental design (body or otherwise) generally assembles a repetitive intertwining visual logic which ensnares the eye and establishes the impression of an enveloping heightened concern which suggests immersive ambience. As such, ornamentation is almost mesmeric. What it already always expresses, even when not as an actual immersive space, is an unequivocal notion of plethora in terms of its reproductive and distributive feeling (and its ardent efflorescence) which strives to express the basic vital rhythms of motion, rest, and rhythmic unity reminiscent of voluptuous human sexuality.

Such is the case explicitly with the Maori men who ornament jade sculptures and then turn them over to their women who rub them between their oiled thighs to give them their final shine. (Borel) Through the bountiful repetitions of ornament then, by way of its general animated linear motif, ornament expresses self-conscious immersion in the pulsations of the biosphere with its throb of the heartbeat and its repetitious breaths and copulating rhythms and female sexual cycles. As such, ornamentation imitates through its unconstrained

graphology the pulsation of the reproductive human biosystem, and it is against this invariable repetitive order of things that we can gauge our appraisement concerning the immersive qualities of its consciousness.

This raises the issue of ornamentation out of the opinion that it is mere superficial decoration and into the arena of understanding living and its basis in organic forces which surpass (while using) beautification in the interests of need. And a need it apparently is for some, as we can see by the fact that even during famines the Kalahari Bushmen continued to decorate the naked bodies of their woman with animal fat. (Brain, p. 186) However, all that we can say with assurance is that the transformational decorating and treating of the body appears to be a basic human compulsion which is widely practised and that there is an apparent human obsession for immersive ornamentation as evidenced throughout the history of humanity by peoples everywhere compatible with the range of human spatial intuitions. Otherwise we would not detect it so thoroughly throughout the world.

The oldest tattooed body known to date was discovered in 1991; that of a Bronze Age man who died over 5,000 years ago when he was apparently caught in a snow storm during a hunting trip on a mountain between Austria and Italy. His skin supports several tattoos: a cross on the inside of the left knee, and six straight lines 15 centimetres long (about 5.8 inches) above the kidneys. Also there have been found an excellently preserved tattooed mummy priestess of the aforementioned Egyptian love Goddess Hathor from circa 4,160 BP. Hathor is interesting in lactative immersive terms in that she supposedly breast fed Horus (sky God to Lower Egypt) before wedding him. The priestess' markings consist of a series of dots and dashes tattooed on the lower abdomen below the navel and on the thighs and arms. (Bianchi) Considering the number of tattooed mummies that have been discovered, it is apparent that tattooing was widely practised throughout the Egyptian world.

Moko tattoo is unique in that the face was decorated with intricate spirals which were not only tattooed but incised into the skin to make scars in the form of parallel ridges and grooves. With the exception of slaves and commoners, all men were tattooed on the face and most were also tattooed on other parts of the body. An elegantly tattooed face was a great source of pride to a warrior, for it made him fierce in battle and attractive to women. Women were also elaborately tattooed on their breasts, thighs, and legs. (Robley)

The traditional Japanese tattoo differs from the Western tattoo in that it consists of a single major design which covers the back and extends onto the arms, legs and chest. Each design is associated with an attribute such as courage, loyalty, devotion or obligation. By being tattooed in the round the individual symbolically makes these virtues part of him or herself by fully entering into them.

The art of tattooing in Europe barely survived its disapproval by the Christian Church and for all intensive purposes died out in Europe during the Middle Ages. It only reflourished again in the 19th century after increased Western contact with the South Seas and the Far East. In 1870 David Purdy established the first Western tattoo parlour in London. (Brain, p. 52)

BVI: The Psychic Thermidor of the Ornamented Body

Beyond deterritorialisation, another character is often associated with virtualisation: the passage from the interior to the exterior and the exterior to the interior.
-Pierre Lévy, *Becoming Virtual: Reality in the Digital Age*

It is not my own consciousness I yearn for, but that connection with other consciousnesses that tells me beyond a doubt I am here.
-Carol Gigliotti, *What is Consciousness For?*

We shall now turn to see how the radical ornamentation of the body (and its relevance to space) become transferred and extended outward onto the body's external sheathing and its surrounding environment. Along with distinguishing psychic or demonstrative frontier significance relevant to immersive art applications, there is apparently, from the beginnings of human culture, unequivocally an exultation in rhythmic embellishment itself which functions somewhere between the reality principle and the pleasure principle. Motifs of ornamentation have appeared in thousands of variations on pottery and other utilitarian articles since prehistoric times. The Bronze and Ice Ages often utilised circles and spirals and in ancient Egypt images of the lotus flower, palms, and papyrus plants were widespread. In the reliefs of the Persians, Hinites, and other peoples of the Middle East, scrolling plant-forms were often used to formulate an immersively suggestive, all-over, visual unity. (Speitz) The Greeks, Romans, and Etruscans accented their edifices, vases, and implements with geometric ornamentation suggested by nature. In India, both the sacred and the profane are decorated with ornamental designs that embellish the person and the home; including the floors, walls, doors, and windows.

As demonstrated in the Temple of Horus at Edfu (237-37 BC) - the largest and most completely preserved pharaonic (albeit Greek-built) temple in Egypt - ornament unquestionably can be a discernible recurrent pulsation which registers an all-over splendour which accentuates sacred space. Here carved reliefs (once painted) depict a variety of complex scenes and enigmatic texts which encase one on every side. This effect is even more harmoniously unified today, as the painted colors which defined the complex shapes from each other has disappeared over time, leaving only the gesamtkunstwerk-like attributes of mono-hued gray (like in the Apse of Lascaux).

This gesamtkunstwerk-like ornamentational phenomenon pervades too the history of India's art, architecture, sculpture, crafts, textiles and interior-decorative arts. Ornamental spread is deemed essential in India's metaphysical space, in both its private shrines and in its vast public temples. It can be a certain motif rhythmically repeated (used in a band or border) or scattered rhythmically over an area (which is the usage most applicable to defining an immersively inviting space). It can be, like at Edfu, an all-over use of lines and forms in which it is difficult to recognise a pattern immediately but which nevertheless exhibits a certain

sustained rhythm and lucid equilibrium. Certainly, like at Edfu, it can be a meaningful symbolic language laden with conjuration for those who understand its ocular tongue.

From one point of view, ornament is essential to culture because it adds stylishness to functionality; but from the opposite view, it is in no sense intrinsic to the body or space or object and is therefore non-essential, indeed possibly detracting from any requisite operation. (Loos) However, whether it be a vessel from the Stone Age or an urn from antediluvian Greek culture, celebration through embellishment has been the energetic impetus behind the culturalisation of humanity. Over thousands of years, since the beginning of recorded history, rudimentary forms have been, at the least, bordered with a rich stream of oscillating visual inflection.

Ornamentation generally addresses environmental forms of nature, features such as flowers, vines, butterflies, grapes, wild animals, or the lapping of sea waves or the rippling of fields of grain. And as such it necessarily imposes an artificially stylised simplification of nature, usually by stilling, exaggerating and flattening her. By emulating nature's cycles and rhythm, ornament however, in its suggestive optic movement, propounds something of the repetitious cadence observed in the movements of nature; a cadence within which we intertwine when engaged in the pleasurable activities of music, dance and libidinous demeanour. Occasionally this human inclination toward repetition and reiteration is blended and made manifest, as with the ornamental buttock flourish, with its stimulating raffia pom-pom, which African Mongo women don as they prance to the drum beats at festive occasions. (Borel, p. 35)

As stated and exemplified, adornment is one of the oldest expressions of human creativity, adding resplendence, desirability, and opulence to appearance. The visual language of adornment usually hovers between abstract geometry and modes of repetitive graphic presentation based on nature, from the simplest border of dots or stripes to the very complex animal ornamentation of the Celts (Green, M.) and the mercurial forms of the Rococo. (Scott) Its function as symbolism stems from its many-in-oneness sense of unity and in its marking off social boundaries, either of which may rise into the province of luxurious value. (Brain) Adornment's relevance to immersive consciousness is obtained when it is specifically employed to create, supplement or complete the expression of a gesamtwerk through its voluminous all-over but unified treatment of space with an articulated seductive opticality.

Towards these ends, in a modest way, textiles have been created and used to dress either a person, a corpse, or a dwelling for almost as long as humanity has existed. (Ginsburg) Here colour is likely to be of significance and certain kinds of textiles may be produced specifically for circumscribed purposes. One of the most obvious features of the material culture of Africa is cloth and the most obvious use of woven textiles is as articles of clothing. In Africa and India one or more lengths of cloth may be draped around the body, or

tailored to make gowns and tunics. Modesty, whatever that may mean to a particular people, and protection against the elements are, however, not the only purposes of clothing. (Ableman) Particular colors or decorative/symbolic embellishments may have cultural value such that the wearer is immediately associated with tribal status. Particular colors or patterns may also have political or ritualistic significance. The tribal affiliation of a Moroccan Berber woman, for example, can be seen in the pattern of stripes of her cloak, as I observed in the Moroccan village of Tata. In Benin, Nigeria, chiefs wear red cloth as part of their ceremonial court dress and red (by its association with anger, blood, war and fire) is regarded as threatening. By the wearing of such cloth a chief protects himself from evil, that is to say from witchcraft and from the magical forces employed by enemies. (Ginsburg)

Unquestionably, we can see an ornamental gesamtwerk treatment of space in the splendour of Moorish ornamental work with its interlacing and interweaving of geometric arabesques. Most recently I experienced an exquisite immersion into such a gesamtwerk handling at Saâdiens Tombeaux; a 17th century Moslem family tomb in Marrakech whose elaborate walls vibrate with a translucent (spiritually suggestive) demeanour. This effect also may be readily seen in southern Europe in the buildings of the Moorish Kings of Spain (9th to the 14th centuries) especially the Italian influenced 14th century Alhambra palace in Granada. Here in the Salle des Abencérages on a sunny day, such as the one I experienced, one's specific locus of visual involvement is sharpened and then thrown into embossed relief by the broad scan of detached awareness which cannot easily locate contours of individual events due to their abundance. Hence we can view its gesamtwerk ornamental adroitness as a generative set of relations rather than a closed visual statement. As syncretistic awareness, it contains the attributes of all-over organisation and as such promotes the ability of perception/consciousness to see itself *per se*. It thus promotes the generative power for thinking within new frames of reference. As frictionless flow of all-over visual awareness, the Alhambra is more than perceptible, it represents the *sine qua non* of perception. Thus it inevitably gives rise to immersive states of consciousness in which increasingly implicate orders of manifestation are recognised within its sprawling (implied infinite) confines.

Indeed, it is such a recognition of immersive levels (or orders) implicit in Arabic design which evoke infinite spread that interests us here. In such a situation of implied infinity, immersive consciousness cannot be surpassed or added to, but the latent powers of omni-perception which it unfolds may allow it to identify two important aspects of the immersive order. The first of these is the ability to perceive increasingly fundamental immersive principles hidden within the ways we think, and to see evidence of similar principles in the implicate orders enfolded within suggestive levels of infinite manifestation. Ultimately this implies being aware of immersive placement at its most delicate and subtly concentrated level, sensing the blueprint for immersive awareness as an intuitive wholeness. The second level is one where immersive aesthetic space is seen to exist as transformational dynamism and as part of the entire expanding field of vision. Here immersive

consciousness reaches an awareness of its own constitution through art as our FOV potential is united with an aesthetically suggestive state of energy-filled void. (Nishida, 1958) Hence we may come to understand self-construction as "an intensive magnitude starting at zero". (Deleuze & Guattari, 1987, p. 153)

BVII: The Omphalos, the Pudendum, and the Polymorphosic Labyrinth

...which most endures? The world of the imagination most endures...
-William Carlos Williams, *Paterson*

What is fascinating and exercises such an attraction is perhaps less the search for information or the thirst for knowledge than the desire to disappear, the possibility of dissolving and disappearing into the network.
-Jean Baudrillard, *Philosophy Discussion with Jean Baudrillard: Interview by Claude Thibaut*

Examined through the hermeneutic tradition of communicative symbolic interaction, immersion's prevalent territorialising/deterritorialising configuration thus far appears to me to be roughly the *inscribed parabolic space* as we saw in the Apse of Lascaux, in Newgrange's vault, in the psychic circle of ornament and in the domes and niches of Arabic sacred spaces, in that they all suggest the cultural construction of a rounded geographical/non-geographical sense of an extra-sensory field, or in other words, a returnable virtual space embedded within an actual location. And as such, they begin to create an immersive cultural domain which is half illusionary and half real, just as any symbol is. (Jameson, 1980) Their rounded order seems an attempt to encircle vast shapeless infinity into a symbolically distinct scope and location through parabolic configuration (indeed what seems to be the case at the circular formation of Stonehedge). Hence, immersive consciousness seems thus far to be primarily a function of a desire to create a convincing illusion of non-self-containment through a semi-enclosed parabolic mental space which heralds back to the sanctum of the tribal magic circle, the circle which interpiercingly severs a space of sanctity from the profane. (Pfeiffer) According to Nigel Pennick, the circle is one of the most ancient symbols used by humanity and is seen through the history of humanity as the embodiment of the universal whole, representing the perfect totality of the macrocosm. (Pennick, 1979, p. 119) It symbolises the perfection of totality in that the circle is a geometric figure formed with one line with no beginning or end. (Lethaby)

The central spot of the symbolic immersive circle is the *omphalos,* the pivotal, still, capacity-point within the sacred circle. Inside of the sacred immersive circle the outside world is dominated and indeed defined by the omphalos' psychological protectoratship. The conceiving mentality behind the omphalos was that it marked the fixed point of the earth about which the spherical spiritual heavens whirled. Thus it represented a central place which remained steady and enduring while all else moved about it. (Pennick, 1979) Today we know that the earth rotates on its axis once a day, and that it revolves around the sun once a year. In early times however, astronomy was based on an ideal geocentric cosmology according to which the earth was fixed and immovable. The earth was conceived as being at the centre of the universe and everything spun around it. In this cosmology the universe itself was imagined as being bounded by a great sphere to which the stars, arranged in the various constellations, were attached. So while we today understand that the earth rotates on its axis once every day, in antiquity it was believed instead that once a day the great sphere of the stars rotated

around the earth. As it spun, the cosmic sphere was believed to carry the sun along with it, resulting in the apparent movement of the sun around the earth once a day.

The omphalos' quintessence may have been only a scant central fire within a circular placement of stones on the ground which carved out the immersive space of emotional sanctity. However an interpretation of this hoop of stones with centred still-point may be quickly conceived in terms of recognising a point of view within the cyclical arrangements to the surrounding cosmos, as we see with the omphalos' evolution into the classical Greek maypole. (Schroeder) A circle with a marked centre and circular design elements emanating out from the central point is almost universally found in the world and it forms the basis of the floral rosette, one of the oldest and most widespread of ornamental designs. (Langer, 1953, p. 69)

Accordingly, since its Mediterranean origin, Western philosophy has fundamentally presented itself as a theory of the omphalos. And with this idea of the fixed sacred central spot we see the nucleus of the city/state, as the sacred staff of the seer (which was used to inscribe the perimeter of the sacred round circle) turned into the phallic obelisk (rather than the female pudendum) and begins marking the convex power point around which all is organised.

We shall quickly see in this and the next section how the sacred circle (constructed around a central omphalos) connects to the sanctuary of the encircled sacred grove which itself connects to the origins of art in the West and to the maturation of the city/state. Thus far we have established that a parabolic immersive site is interiorly and conceptually encircling in aesthetic immersive sites, in order to enable the swallowed/semi-assimilated subject no avenue of self-protective flight from its excess of signification. What we have seen with the pudendum-like prehistoric embellished cave, passage-tomb, and spatially distributed ornamental enrichment, is that the prehistory of immersion is primarily a history of assertively embellished aesthetic space in service of the virtual, the peripheral and the mercurial. It is for this reason that we will turn our attention now to certain aspects of the nymph myth continuum which make up the enchanted *nymphaea* garden grotto (*grotte* in French and *grotta* in Italian) legacy, for the phenomenological awareness which such a lissom simulacra provides this discourse shall be serviceable in flushing out the extensive meaning of immersive expectations.
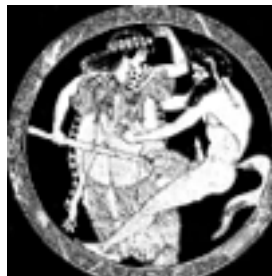
Nymph and Satyr as depicted on a 5th century BC Greek vase

Nymphaea is the Roman term used to describe temple fountain-shelters consecrated to the nymphs which were based on simple Agora grotto water spots. A *nymphaeum,* under the Romans, became a formal temple dedicated to the cult of a nymph. This temple often related to the source of a stream, but because these structures were based upon on the Greek natural grotto grove (with spring), the term later became applicable to both artificial fountain grottoes and to monumental public fountains. (Miller, N., p. 17) Descended from classical and eastern Hellenistic prototypes, grottoes proliferated in the late-1st century BC and spread further during the Imperial era when they became a common feature in the gardens of wealthy landholders. A rigorous definition of the term *nymphaea* would limit its designation to sacred semi-enterable edifices that served as sanctuaries of the nymphs, and this is the sense which I am using the term here. Another important distinction to maintain however, is that between the public nymphaeum and the private nymphaeum. Two principle types are evidenced in both cases: the rustic grotto niche, in imitation of the Arcadian cavern, and the architectural fountain-temple type (for example the, now chiefly collapsed, immense Nymphaeum Hortorum Licinianorum, or the extant Castell dell'Acqua Marcia, both in Rome). In private hands the interior nymphaeum was often located within an architectural apse or in a large niche comparable to the *cavea* of the theatre. The apse/nymphaeum constitutes the primary feature of the House of the Great Fountain in Pompeii, for example. (Miller, N., pp. 18-20)

Clearly entry into strict virtual space is not so much an entrance into earthly expanse as it is a representational passage into non-space, as it does not utilise the land nor develop the physical space amid things and thus is not immediately caught up within the limitation or scarcity of our earth. In fact it metaphorically occupies a pudendumic heaven/moon/satellite space far more than any omphalos-phallicly marked terrain, a space which can (and will) expand theoretically *ad infinitum*. (This is the vast virtual space of *Iridium*, the satellite project now underway which is placing close to 300 communications satellites (at about $20 million dollars a piece) in low-orbit around earth allowing instantaneous telecommunications from anywhere to anywhere on our planet.) Yet just such adjoining celestial/lunar attributes are encoded into the nymphaea origins of the garden grotto with its legacy of immersive exaltation of the feminine and its endorsement of sumptuous love. Thus it is upon the garden grotto's roots as a sacred/sexual nymphaeum grove (based on the sacred omphalos-pudendum) where we shall begin to build upon the previous section's immersive recognitions by continuing to trace the outgrowth of like immersive ideals detected in arcane archaeological sources and philos-theological traditions, both of which are open to interpretation of course. What is stimulating about the nymph and the omphalos-pudendumic nymphaea tradition for our purposes, is its usefulness in tracing the cast-around 360° ideal aspect of unhindered virtual space within an enclosed, or partially enclosed, container.

The grotto is an especially puissant space to study the extenuation of cavernous discernment and emotion, in that a grotto can be interpreted from a number of contextual counterpoised positions. It can be seen to embody

the bucolic or the idyllic, the sacred or the profane, the mythological or the prescient, and/or simply be eloquently ornate. The grottoes' space is the space of tranquillity, coupling, solitude, seclusion, obscurity, and cool pathos; but most significantly it is traditionally a metaphorical space symbolising the human vector within the unbroken universal matrix. (Miller, N., p. 7) As such, it constitutes a peerless artifice when explicating the annals of immersive ideals and holonogic optics.

Any metaphorical topos for the universe must be in its very constitution indeterminate, complex, unified and unsatisfactory in its denotation. The nymphaeum is that, as its various definitions and types are capriciously broad while all sharing an accordant meaning. In general, a nymphaeum in ancient Greece was a natural sanctuary hollow consecrated to the water nymphs. Indeed the presence of moisture is the *sine qua non* of the grotto. The name, though originally denoting a natural vault within a grove with spring, pool or stream (traditionally considered the habitat of nymphs), later referred to artificially fabricated grottoes; either private and intimate, or in Roman hands, institutionally grandiose.

In the 16th century the nymphaeum/grotto became an important feature of Italian gardens. Then the site of a spring was usually enclosed in a small building, as at the Villa Giulia in Rome, but sometimes in a natural or semi-natural cavern. The line of demarcation between a nymphaeum and a grotto is not always clear, but the nymphaeum puts greater emphasis on the presence of a supposed semi-transparency.

So as to better understand the nymphaeum's general cultural setting I now shall recall a short history of the garden in general and the labyrinth in particular, as they will inform our understanding of the nymphaea's unique function in delineating immersive benefaction with its accompanying wealth of speculative theories and hypotheses.

All accessible gardens (given their multi-sensorial, encapsulating shaped space and full-scale walk-through range) take immersive awareness to another level of self-consciousness by manner of their contradictory split configuration as penetrable *contrived natural* space. Surely this double paradoxical aspect of the garden space and its inherent self-contradictory self-consciousness may excite and reformat feelings, memories, conceptions and fancies in the way they connect an actual site with a virtual mental space. Hence garden space can be demonstrative of formational viractual models, particularly in the case of the garden grotto; contrived natural spaces predominantly allied with the female, intuition, love-making, and babbling water.

According to Anthony Huxley, the interrelationship between mind, perception and terrain forms the central conception of any weltanschauung world-view. (Huxley, Anthony) From the birth of civilisation gardens have been among humanity's preferred immersive sites in terms of their scale's ability to deliver an excess of surrounding visual detail. This is doubly true for the gardens of classical China, for example those in Suzhou,

where the metaphysical Taoist position places the self in the centre of the garden no matter where one stands, as the ontological self, according to the teachings of Lao zi, exists in essence distributed within and throughout all of nature. (Lao zi)

It is significant that in many religious beliefs, paradise, the place of perpetual existence after death and the place of eternal joy, is depicted (with no concrete evidence to support it) as a garden of eternal delights. In arid zones, such as Persia, the garden is the very symbol of heaven. Indeed all through the Islamic tradition the organic garden, that basic element of human delectation and vitality, is virtualised into a blissful place where plants flower and yield fruit, trees and caverns shade and shelter, and where water cools and moistens the post-human evermore. (Harrow)

Persian miniature depicting the garden of paradise

Moreover, perhaps oddly, the same is true of the *Garden of Eden*, the mythological cradle of humanity. Eden too was a place of perpetual blooming and fertile reproduction. As described in *Genesis*, the Garden of Eden was the mythical place in which humanity emerged to begin its conspicuous cycle of sex and death. According to *Genesis*, following a fall from grace and subsequent expulsion from the garden, woman began to suffer the pain of childbirth and men the necessity of manual labour in making the land fertile.

If we take the garden to be a microcosmic symbol of immersive configuration, the labyrinth may be viewed as the symbol of immersion itself as the entire point of a labyrinth is in getting lost and searching about. (Weiss, p. 48) That, along with the self-discovery encountered through the search, seems to be the whole point of them. That and their necessarily willed abandonment, all of which is salient to immersive spatial consciousness. Hence, labyrinthine understanding offers an understanding of immersive works of art in that it grants us experience by penetrating space/time and, in a sense, secures that space/time for us.

The labyrinth is a cultural garden space blending both landscape and architecture into an intricate search, not unlike the human search for love-making. Primarily a Pagan conscientious tool (like the grotto), its sexually symbolic fertile centre is connected to the maypole of ancient Greece. Certainly the labyrinth embodies the powerful sexual imagery of the seed entering and penetrating the egg and the life of the new-born emerging from the birth canal. Indeed a direct connection with the feminine sexuality of nymphaea and garden grottoes is maintained, in that a fountain or pool of water is most often the objective and terminus of a labyrinth, but the labyrinth's female sexual imagery can only be fully understood if one accepts the insinuation that primordial people imagined that birth was achieved through the intestinal tract. In ancient times, when pregnant animal carcasses were cut open and disembowelled in preparation for consumption, there inevitably would be a great out-pouring of the winding intestinal tract mixed up with the foetus. Not knowing anatomy as we do, it is supposed that primordial people took the winding intestines to be the birth canal. (Mattews) As a result these beliefs became part of Pagan lore.

Indeed it is the tacit connection between female reproductive organs and the labyrinth which made the labyrinth seen and used in the past to draw upon spiritual or magical powers in search of fertility. (Pennick, 1945) As evidence of this legacy, several labyrinths in Finland and Sweden are named *lungfrudanser*, which means *virgin dances*. In one of these dances, a virgin stands at the centre of the labyrinth while others dance towards her along the paths of the labyrinth. In another, a young man would run through the labyrinth, and then dance with the girl at the centre. In another variation, a boy would try to reach the girl and then carry her out of the labyrinth. If he did this without making any mistakes, the girl was his to woo. (O'Brien, K.)

The earliest surviving labyrinths, all of classical seven-ring design, are rock carvings and graffiti and patterns on coins, seals and ceramic vessels, rather than being full scale forms that could be walked through or upon, as full-size labyrinth were too vulnerable to survive thousands of years against the combination of neglect, erosion and overgrowth. Early surviving labyrinth designs are found carved on part of an ancient dolmen at Padugula, Nilgiri Hills, in southern India which dates back to 11,000 BC, on a 1,300 BC ceramic vessel found in Syria, and on a 1,200 BC inscribed clay tablet found at Pylos, Peleponnesos, Greece. (Pennick, 1945) The labyrinth carving found inside the *Tomba del Labirinto*, a Neolithic tomb (Bersani, pp. 38-39) at Luzzanas, Sardinia, could conceivably date to 2,500 BC if it is contemporary with the tomb, but later burials make this uncertain. There are at least five labyrinths carved into rock faces above the town of Capo di Ponte, Val Camonica, in northern Italy, ascribed to the Late Bronze Age or Early Iron Age (1,000-500 BC).

Crete, considered as the place of origin of all the Greek Gods and Goddesses, was a highly developed Pagan civilisation before its volcanic destruction in circa 1400 BC with active trade routes to and from Egypt and other lands in the Mediterranean. Various Cretan coins between 43 BC and 67 BC bore the classical seven-ring labyrinth design, both in square and circular forms. (Reed Doob) This classical labyrinth design is

believed to have originated with the Cretan parable of Theseus and the Minotaur. According to Greek mythology, King Minos of Crete had a craftsman (Daedalus) construct the labyrinth in order to conceal the Minotaur; the half-bull/half-human progeny of Minos's wife Pasiphae and a bull-Zeus. Queen Paisiphae, evidently sexually unsatisfied by King Minos, had ordered the inventor Daedalus to construct a convincing full-size model of a cow in which she could conceal herself, exposing only her vagina. Zeus, greatest of the Gods (who was born inside Idean Cave on the island of Crete) descended in the form of a bull and mounted and impregnating her, resulting in the birth of the half-man/half-beast Minotaur.

There are several variations to the legend of Theseus and the Minotaur, but the main story is certain. Crete had won a victory over Athens and as a cruel tribute required that every nine years seven young men and seven maidens should be sent to Crete to be devoured by the Minotaur, who was now confined in the labyrinth. The fourteen victims were chosen by lot, bringing terror to every family in Athens whenever the tribute became due. Finally, Theseus, son of King Aegeus, volunteered to resolve the matter by slaying the Minotaur. Aided by a ball of golden thread provided the King's daughter Ariadne, Theseus entered the labyrinth, slew the Minotaur and exited the complex space by following the golden thread he had unravelled on his arrival, thus finding his way out and ending the cruel tribute. (O'Brien, K.)

This myth was widely known, as Zeus is a central figure in Greek mythology, and hence became familiar in the subsequent Roman culture. At Pompeii (Bersani, pp. 90-91) there was found a square shaped seven-ring labyrinth scratched onto a crimson painted pillar in the House of Lucretius some time before the city was destroyed by the eruption of Vesuvius in AD 79. It has around it the cryptic words *Labyrinthus, hic habitat Minotaurus*. This example demonstrates that the Romans were well aware of the Greek Minotaur's sinuous labyrinth.

Although not in the classical design, the labyrinth motif was used in mosaic pavements throughout the Roman Empire and these are the oldest surviving full-sized labyrinths we have. A significant variation to the classical labyrinth design is the addition of a second entrance (or exit), so that a procession can enter by one entrance, reach the centre, and then emerge by a short exit without turning round. The design is still essentially unicursal however. The most enduring Roman labyrinths were built in mosaic as such mazes. Other Roman mazes are complicated networks of paths, like a labyrinth, however they are unlike a labyrinth in that they have multiple openings and possible directions (not just one as in a labyrinth) which succeed.
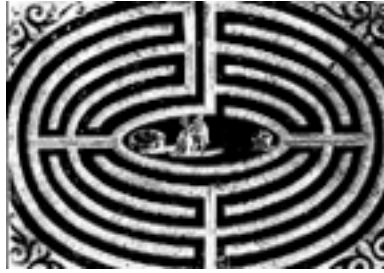
16th century maze design by Hieronymus Sperling

The medium of mosaic offered much in the way of permanency to labyrinth and maze design. As well as being durable, many Roman mosaics were shielded from subsequent erosion by the collapse of the very buildings they once adorned, thus many examples have survived. Roman mosaic mazes consisted generally of a rectangular grid for most of the area which they filled, using the central area for pictorial illustration. (Reed Doob) Normally square and the size of a room, the most popular subject was the slaying the Minotaur, but some Roman labyrinths simply portrayed the Minotaur, or other half-human/half-animal creatures such as centaurs. Eventually maze patterns were incorporated into the floors of some Catholic churches and cathedrals (less the Minotaur) such as in the nave of Chartres Cathedral which contains a majestic maze 9 metres (30 feet) in diameter which penitent Christians peregrinated on their knees.

BVIII: The Nymphaeum as Immersive Model

Since the end of the last century, philosophy has made a series of attempts to lay hold of the true experience as opposed to the kind that manifests itself in the standardised, denatured life of the civilised masses. It is customary to classify these efforts under the heading of a philosophy of life. Their point of departure, understandably enough, was not man's life in society. What they invoked was poetry, preferably nature, and, finally and most emphatically, the age of myths.
-Walter Benjamin, *On some Motifs in Baudelaire*

Grottoes are recesses to be looked at transiently.
-Horace Walpole, *The History of Modern Taste in Gardening*

In the Bohm/Pribramian view, the fertile earth is a kind of vibrational arena in which one omnijectively experiences the pleasures of the flesh while cognisant of the fact that one is an expanding holographic projection immersed in an amplifying holographic orchestration. The effectiveness of such an aesthetic omnijective realisation depends upon advancements in the area of intellectual and emotional spatial conceptions, however. Fortunately, the omphalos-pudendum based grotto is possibly the site *par excellence* in which to scrutinise this obviously thorny province of voluptuous viractualism.

To concentrate on the grotto is to summon all that was said concerning the archaic painted cave. Like in the treated cave, the art of the grotto uses (and then surpasses) nature to concoct an apparatus deemed suitable for shaping cognitive-vision/consciousness along the lines of the attributes of the omnijective expanding universe by modelling dilating connectivity in miniature. The discovery in the late-1920s by American astronomer Edwin Hubble (1889-1953) that the universe was expanding implies remarkable things for the immersive space of the arcane grotto, as, like the painted cave, the grotto is a miniature zone of expanding liminality and cognitive crossing. It is a space of escape from the world of naive naturalism (for example that proposed by the Italian theologian/philosopher Thomas Aquinas (1225-1274)) and a zone of entry into the fluid, rhizomatic, and elfin world of connectivism where the spatial restrictions of conventional realism (think of the paintings of Jean-François Millet (1814-1875), Thomas Eakins (1844-1916) or Winslow Homer (1836-1910)) need not apply, even while biological nature remains the grotto's starting point. Withdrawn into this zone of fay interchange, the immersant joins consciousness, not so much with the world outside, but with the classical Arcadian inner world of unconscious preterhuman existence, with its mantric cerulean rites of birth, pubescent passage, coupling, incantation and death. (Freud, 1958)

Porphyry, the previously mentioned neo-Platonic and Neo-Pagan author of *De Antro Nympharum*, tells us in the French translation that, even in the earliest times, certain caves and natural grottoes were consecrated to the Gods and Goddesses; way before temples were conceived of and built (citing the cave of Lycean Pan in Arcadia, among others). (Porphyry, p. 20) By way of preparation for the grotto, archaeological evidence has indicated that there are traces of a 15th century BC Egyptian sacred garden grove in the temple complex at

Karnak. (Wilkinson & Henderson) I visited the garden spot, which is tucked away deep inside the complex behind the sacred sanctuary temple of Amun (the hidden one), and found it barren but most immersively suggestive with its inner placement and diminutive scale.

Also, it was from the Assyrian civilisation in northern Mesopotamia that we find *sacred groves* within which modest shrines were contrived for supplication. Moreover, archaeological evidence shows that some Mesopotamian structures had pits positioned into their rooftops which were planted with a variance of sprouted ferns and flowers which constituted a minute garden site for contemplation connected with the cult of Tammuz and/or Dummuzi; sacred cults later imported into Greece where similar sacred groves were claimed in the wild, but now based on dissimilar female divinities called *nymphs*. (Kostof) Vecellio Titien's (1488-1576) painting from the Renaissance era, *Nymph and Shepherd* (1576), now at the Kunsthistorisches Museum in Vienna, illustrates the nymph concept beautifully. The grotto's poetics of sacred moisture displayed through immersive space can particularly be traced to the coves dotting the coasts of Greece, such as the dazzling caverns in the Peloponnesus along the bay of Diros. (Miller, N., p. 13)

Inland, the sacred grove came to house what have come to be called *heraea*. A *Heraeum*, in ancient Greece, was a temple sanctuary dedicated to the nymph-Queen Hera. The most important of these was the Argive Heraeum, 8 kilometres north-east (about 5 miles) of Argos, Greece, where Hera's cult was established in around 750 BC. A number of successive temples occupied that site, the last and best known of which was a limestone structure in the Doric order constructed in 423 BC. It housed a famous gold and ivory statue of the Goddess Hera. Other major heraea were at Olympia and Samos in Greece, and at Lacinium near Crotone in southern Italy, however only ruins of these sanctuaries survive.

Exactly from where the Greek concept of the abounding sacred sexual nymph stemmed is not known. I assume it is a descendent of the cult of Hathor from North Africa, but why this concept arose there in North Africa, we do not know. Perhaps it is because in most ancient African tribal cultures it is the female who worked the land to produce and pick the fruits of their agricultural labour. (Mack & Picton) African tribal agriculture is the province of the female, and thus the conflation of the fertility of the female and the fertility of plants is well established since the beginning of human time. A hoary example of this conflation is seen in the Paleolithic relief carving called *Venus of the Horn* which was found in the Dordogne and now rests in the Musée d'Aquitaine in Bordeaux. It depicts a curvaceous and corpulent female torso holding what appears to be a horn of plenty in her right hand as she fingers her portly abdomen with her left.

Ostensibly, in ceremonial observance of this long fertile tradition, there emerged the previously mentioned pudendumic nymphaeum; an ancient Greek secluded area dedicated to the nymphs which typically included an extemporaneous grotto with waterfall or spring, nestled in a grove of trees (or sea cove) with a central

devotional arena. This reminds us again of the Greek temenos, the spot removed from the common land, dedicated, in this case, to nymph Goddesses. The pudendum provides the nymph worshiper a full or semi-encircled sacred immersive space in which to enter into communications with the nymphs, for example with Syrinx, an Arcadian nymph who turned herself into a reed to escape the advances of the shepherd God Pan (depicted in human form with the legs, horns and ears of a goat). Pan, who lived in caves, was son of the nymph Penelope and is thought of as the God of fertility and unbridled male sexuality, known for engaging in sexual activity with various nymphs in the form of a goat. No cave dedicated to Pan and the nymphs is more renown than the Corcyrian Cave on Mount Parnassus which is celebrated as the site of numerous Bacchic orgies. (Miller, N., p. 15) Yet Pan is not to be confused with *satyrs*, who were Greek woodland spirits. Satyrs had a human upper body and the lower body of a goat and were generally depicted as having dishevelled hair with goat horns and ears, and with an exacerbated erect penis (ithyphallic). In early Greek art they were portrayed as offensive in appearance, but later they were represented as being handsome and sexy. (Thomson) Greek vases occasionally depict post-coital sleeping or sexually active nymphs such as Thetis (who attempted to make Achilles, her son, invulnerable by dipping him in the waters of the river Styx).

Few places testify more vividly to the development of the grotto than does the cavern rich Bay of Naples. In that the sea-based nymphaeum was incorporated by Roman culture into Italian gardens in the form of small grottoes with fountains or limpid pools of water (Wilkinson & Henderson) it advanced an eventually widespread European garden tradition (as Italy set the model for all early sophisticated European gardens). (Huxley, Anthony) Grottoes in the Italian style generally present a pastoral, semi-nude nymph from Pagan fables (frequently Venus, the Roman adaptation of the Greek Hathor-based Goddess of love and beauty Aphrodite, whose myths she took over) tucked into a niche and accompanied by ferns and spouting or bubbling water. Venus, it must be remembered, was the Roman Goddess of love, originally associated with the biological fecundity of vegetal gardens. Amor, Roman God of love (the equivalent to the Greek Eros) was the son of Venus. Venus's cultural importance rose with the political fortunes of the clan of Julius Caesar (circa 100-44 BC) who claimed descent from Venus via Aeneas and Julia. Indeed Caesar instituted the cult of Venus and proclaimed her as the Goddess of marriage and motherhood, Venus Genetrix; under which name he constructed a temple at the Forum in her honour. Her festival, Veneralia, is celebrated on April 1st. Most people today know of her from the 2nd century BC Hellenistic sculpture *Venus de Milo* which was purchased by France and brought to the Musée du Louvre after her discovery in 1820 on the island of Melos or from Tiziano Vecellio Titian's (1485-1576) 1519 painting *Worship of Venus* at the Museo del Prado.

In classical Greco-Roman times, nymphaea pudendums were widespread in the Mediterranean region and were considered the designated immersive space in which to honour the nymph Muses and to seek philosophical inspiration and cool physical relief and pleasure. A small watery lagoon or languid fountain or soppy ambience is traditionally found in the grotto as a tribute to its origin, the effeminate sacred nymphaeum

of the wooded grove (or sea cove). (Miller, N.) In that the grotto suggests entry into the orifice of ornamented caves, which as we have determined symbolises for many the female reproductive system, we can say that the grotto loosely depicts the idealised female vulva with its semi-encompassing labia (the lips of the vagina). Thus with grottoes there is a ubiquitous and deeply encoded reference to ideas of the female vulva, nymphs, lunar Goddesses, love-making, pleasure and fecundity.

Under the hegemony of the Roman Empire the modest nymphaeum of the Athenian Agora became institutionalised and disseminated as an imposing building decorated throughout with fountains, tufa, shells and female statues. However grottoes in private gardens retained their traditional character as intimate nymphaea-shrines to the Muses. The rotunda nymphaeum, common in the Roman period, was borrowed from such Hellenistic structures as the Great Nymphaeum of Ephesus. Nymphaea existed at Corinth, Antioch, and Constantinople and the remains of about twenty more have been found in Rome (while still others exist as ruins in Asia Minor, Syria, and North Africa). The nymphaeum at Corinth, which is still in (a decayed) existence, represented a transitional type of nymphaea which became incorporated into the Grand Roman fountains.

Later in their tradition, garden grottoes, generally speaking, emerged as an artificial cavern/niche built in a garden or park on or around a natural spring or artificial fountain such as those which came *en vogue* in the 16th and 17th centuries in Europe. But in Roman antiquity there was a distinct contrast between the *natural grotto* (decorated with pumice stone, tufa, and shells and punctuated with sculpture and a diminutive pool of water) and the *architectural grotto* (where interior walls are coated in a mosaic of coloured pebbles, shells and coral in union with frescoes and sculpture). (Elderkin, pp. 125-37) The Grotte of Thetis at Versailles, designed in 1664 for King Louis XIV (1638-1715), represents the epitome of the architectural grotto type. (Girard) This breed of grotto began being built as a folly in England with the 17th century (for example at Woburn Abbey (circa 1630) in Bedfordshire) and flowered in the splendid folly Grotto of the Nymph created in 1748 by John Cheere (1709-1787) at Stourhead, Wiltshire. (Miller, N., pp. 85-87) Also a surviving example of the English grotto from this era can be found at Clifton, near Bristol University. It is a sensationally dazzling grotto (teeming with shells) completed in 1764 for the tradesman Thomas Goldney similar in style to the grotto at St. Giles House near Wimborne which was built by the fourth Earl of Shaftesbury in the mid-1700s to please his wife Susan. (Miller, N., pp. 90-91) But the grandest English folly grotto is the Grotto at Ascot Place in the Royal County of Berkshire. Indeed it is considered by some experts to be the finest in Britain. (Headly & Meulenkamp, p. 215) What astounds the visitor is its well preserved non-institutionally precise elegance.

John Cheere, *Grotto of the Nymph*

The nymphaeum at Hadrian's Villa (AD 134) at Tivoli is regarded as the most famous and influential grotto from Roman antiquity. Also the 1st century BC Temple of the Sibyl at Tivoli, which stands on a ledge of naturally caved rocks which were fitted-out as grottoes, served as a model for a good many of grottoes over time; explicitly for that at the Schloss Schwetzingen at Baden-Württemberg. The Blue Grotto at Capri served as a clear-cut model for the neo-rococo Venus Grotto (1877) at Linderhof, of which more will be said in BXIII.

As established, most all of post-renaissance European garden design was massively influenced by the Italian garden and its grotto, for example at Versailles, Karlsruhe, Schönbrun, Charlottenburg, Nuremberg and Nymphemburg. In the grand garden at the Château de Vaux-le-Vicomte, which was created in 1661 by André Le Nôtre (1613-1700) (designer of Versailles's and Sceaux's gardens) a (what in French is called) *nymphée* is the apex of the vast geometric optical-perspective which defines the garden. (Miller, N., p. 72) Such nymphées establish a direct connection with Greek sacred grove nymphaea, as a nymphée is by definition an artificial grotto sanctuary dedicated to the nymphs connected with water. However, during this period we also see the appearance of grottoes dedicated to male figures, for example the grotto of Apollo and his nine Muses at the Villa Aldobrandini at Frasscati (Miller, N., p. 68) and the Hercules Grotto at the Château de Vaux-le-Vicomte.

Clearly the first centre of the spreading fashion for grottoes was Rome, where from the beginning of the 16th century ancient sculptures or architectural elements were placed within sacred natural grotto settings (often in imitation of the grotto to the nymph Egeria). In Italy however, the garden grotto was generally integrated into an overall architectural framework, appearing in niched walls or in hollows dug out of terraced steps. Also they served at times as the obscure entrance of a garden, such as at the 1569 Villa d'Este, Tivoli. Indeed the Villa d'Este provides a host of nymphaea, including the inventive Oval Grotto and the interior Sleeping Venus Grotto. (Coffin) However the original conceptual focus of the villa's various grottoes was a corpulent dryad of breast milk: Diane of Esphesus, a 16th century sculptural copy modelled on the classical *Artémis from Ephese*. (Miller, N., pp. 45-47) Also grottoes might appear as part of a building; such as at the Appartamento della Grotta at the Palazzo del Te, Mantua. (Turner, J.)

Artémis from Ephese

By the mid-16th century, almost every large garden in Europe, every cognoscenti, had a grotto. In that century there evolved the autonomous *pavilion grotto* in France, a detached diminutive fabrication coated in tufa (e.g., Noisy-le-Roy (1599)) and this form, less the tufa, became widely adapted in Germanic culture, for example at the Orpheus Grotto at Schloss Hellbrunn. Also in France during this time there developed a *grotto-hill*; an artificial hill constructed to hold the grotto (Elderkin) (reminiscent of Newgrange in many respects) which was followed by a *grotto-basin*; a grotto-fountain arrangement such as the one we can still see in the garden of Versailles in the 17th century *Basin of the Nymphs of Diana*. An example of the grotto-hill construction is the Hermitage at Gaillon which was built in 1560 but sadly destroyed in 1798. The ceramist Bernard Palissy (1510-1589) left us a written dissertation from the era which describes grotto-hills created on artificially created lakes containing interior rooms lined with gleaming glazed terra-cotta. Ceramic mosaics were used a good deal during this period for such effects. For example the grotto in the Tuileries garden was so brightly glazed that the interior shimmered with an iridescent shine.

The history of semi-immersive shrines to Venus (which crop up throughout European cultural history) is one of increasingly isolated and solidly constructed versions of the nymphaeum's spatial and ideological format. For example the natural caverns along the Tyrrhenian Sea were imitated and transformed into elegant, cool chambers for Roman villas, such as the Sperlonga caverns (only discovered in 1957) which are believed to have been part of the 1st century villa of Emperor Tiberius (BC 42-37 AD). (Wilkinson & Henderson) This Roman grotto, which surrounded a serene pool of sea water in homage to Venus, was finely stuccoed, painted,

and inlaid with seashells. Hellenistic grottoes of the 3rd century BC often were semi-circular fountain types, such as those found at Pompeii and Herculaneum, for example the nymphaeum in the House of Neptune in Herculaneum. It is known that the grotto of the nymph Egeria in the villa of Herod Atticus (circa AD 215), which was situated on private land, was one of the most frequently visited shrines in Rome. (Turner, J.) Owing to its good state of preservation, its slumbering nymph became an influential model during the Renaissance.

When one speaks of the Renaissance one speaks, by and large, of an Early-Renaissance (late-15th century), a High-Renaissance (1500-1530), and a Late-Renaissance Mannerism (second and third quarters of the 16th century). With the High-Renaissance's unearthing of classical Greco-Roman culture as a direct result of excavations executed in the 15th and 16th centuries (for example the nymphaeum at Albano) nymphaea inspired grottoes became even more widespread, crossing the entire span of Europe and often taking on idiosyncrasies connected with magic, alchemy, and later with the Christian Virgin Mary. As early as 1511 the nymphaeum found its successor in the Genazzano (Lazio), which is attributed to Donato Bramante (1444-1514). The Fonte Basso at the Villa Giulia in Rome (1555), by Bartolomeo Ammanti (1511-1592), stems from the same tradition. From the 1530s on, there was, however, a change in emphasis towards the mannerist imagination, with, for example, the Grotta degli Animali in the Medici villa at Castello (1575) by Niccolò Tribolo (1500-1550).

Mannerism (generally the art of the period of Late-Renaissance circa 1530-1600) was an aesthetic movement that valued highly refined gracefulness and elegance; a beautiful *maniera* (style) from which Mannerism takes its name. The term usually means an art in which lavish attention is paid to stylisation and to the superficialities of semblance. Hence a mannerist work will be anti-naturalistic, often with elongated figures and/or unaccustomed colors and rather intricate in composition. It often dealt with themes of religious abandon, as exemplified by the paintings of El Greco (1541-1614), specifically his 1595 painting entitled *Resurrection* which I saw at the Museo del Prado in Madrid.

It is enticing to note here that during this mannerist period (in 1553) Giovanni Battista della Porta (1538-1615) published details for the construction and use of the *camera obscura* (Latin for *dark room*). As an artistic visualisation mechanism, the camera obscura consists of a darkened box (into which the artist climbs) with a small aperture in one wall through which light passes, projecting an inverted image onto the opposite wall. For his efforts Battista was later brought to court on charges of sorcery. Regardless, the invention of the camera obscura excited interest in the mechanism (mechanical model) of the human eye. Hence, both seeing and depicting were viewed more narrowly as the camera obscura "necessarily defines an observer as isolated, enclosed, and autonomous within its dark confines". (Crary, 1994, p. 39) According to Jonathan Crary, it was

in the late-1500s when the camera obscura begins to assume a "preeminent importance in delimiting and defining the relations between observer and the world". (Crary, 1994, p. 38)

Leonardo da Vinci (1452-1519), painter of the grottoesque canvas *La Vierge aux Rochers* (The Virgin with Boulders), had previously written about the principles of the camera obscura following 10th century theories of the Arabian scholar Hassan ibn Hassan (although even as far back as the 5th century BC various Greek philosophers described the optical principles of the camera obscura and its working principle: a dark box or room with a hole in one end where, if the hole was small enough, an inverted image would be seen on the opposite side). According again to Crary, "what is crucial about the camera obscura is its relation to the observer to the undemarcated, undifferentiated expanse of the world outside, and how its apparatus makes an orderly cut or delineation of that field...". (Crary, 1994, p. 34)

Inside of a few decades, the camera obscura was no longer one of many instruments or visual options, but instead "the compulsory site from which vision can be conceived or represented" as it indicated "the appearance of a new model of subjectivity, the hegemony of a new subject-effect". (Crary, 1994, p. 38) Concerning this burgeoning scopic regime of the camera obscura, Crary moreover writes that one must however "be wary of conflating the meaning and effects of the camera obscura and the techniques of linear perspective. Obviously the two are related, but it must be stressed that the camera obscura defines the position of an interiorised observer to an exterior world, not just to a two-dimensional representation, as is the case with perspective. Thus the camera obscura is synonymous with a much broader kind of subject-effect; it is about far more than a relation of an observer to a certain procedure of picture making." (Crary, 1994, p. 34)

Later more sophisticated camera obscura models added lenses to the aperture, increasing its affinity to the human eye. Its strength as an aid to drawing resides in its ability to reduce onto a flat surface the complex holonogic visual information which fully enters the eye. It was much used by topographical painters who focused on the mapping of a view. A sub-genre of topographical painting is panorama painting.

Scott Wilcox in *The Dictionary of Art* tells us that the name *panorama* is bestowed upon several forms of large-scale pictorial displays which enjoyed widespread popularity in the 19th and 20th centuries. The term was applied to artificial installations which utilised a 360° view of a landscape or cityscape which was painted on the inside of a large cylinder and viewed from a platform at the cylinder's centre. This mode of optic display was officially invented and patented by Robert Barker (1739-1806), an Irish artist who lived and worked in Edinburgh. (Turner, J.) Barker first exhibited his invention in 1787 in Edinburgh and in London in 1788. These presentations were considerably well received by the public (the audience is immediately surrounded on all sides by a three-dimensional interior) and their success enabled Barker to open a permanent

rotunda for the exhibition of his panorama in London in 1793; the Leicester Square Panorama, which operated continuously for seventy years.

The original name for the panorama was the French term *la nature à coup d'oeil* but in advertisements for its exhibition in London in 1791 Barker adapted the term *panorama*, which derives from the Greek words for *all* and *view*. This choice of words (all-view) indicates to me that what was strived for was an attempt at a total-view reminiscent of the omni-perspectivist ideal I discussed in AII. Prior to Barker's achievement several antecedents were put forth in Britain however. In 1777 Thomas Hearne (1744-1817) produced a sketch of Derwentwater 6.1 metres long (approximately 20 feet) for George Barret (circa 1732-1784) who intended to have the scene painted on the walls of a circular banquet room and in 1781 George Barret painted the walls of a room at Norbury Park (Surrey) with a continuous vista of the Cumberland Hills.

Ensuing Barker, Louis-Jacques Daguerre (1787-1851), inventor of the daguerreotype, together with the architect/painter Charles-Marie Bouton (1781-1853) created the *diorama* in 1822. Like the panorama, the diorama was an attempt to recreate the appearance of 360° nature by means of painting and the mechanical regulation of light. The diorama consisted of a delicate cloth measuring about 14 by 22 metres (approximately 46 by 72 feet) painted with landscapes in a manner of the idyllic sublime. (Gernsheim & Gernsheim) The audience sat in near-darkness as the picture was shown by means of daylight admitted through the windows concealed both above the spectators and behind the painting by a system of shutters and coloured filtering screens. They were first shown at the Paris *Diorama*, which the two men constructed (seating 350 people) at the Place de la République which opened July 11th, 1822. On September 29th, 1823 the partners opened a second *Diorama* (seating 200) which could show two dioramas in succession by rotating the audience 73° in London's Regent's Park. The Diorama also made a tour of Britain and the east coast of America. (Gernsheim & Gernsheim)

Getting back to grottoes, in 1584 Bernardo Buontalenti installed a grotesque grotto at the Medici villa of Pratolina which was famous for its water-driven mechanical automata. The *Grotesque* (in Italian *Grottosesco*) became an arabesque style of all-over decoration based on a linked mêlée of fantastic, diminutive figures deriving from Roman mural and vault decoration which had been unearthed during the Renaissance (such as at the Golden House of Nero); mural decorations which themselves suggested ancient expressions of religio-sexual inter-penetrability. (Kayse) This fanciful imagery involved mixing animal, human, and plant forms together. First revived in the Renaissance by the school of Raphaël Sanzio (1483-1520) in Rome, the Grotesque quickly came into fashion in 16th-century Italy and subsequently became popular throughout Europe.

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typical 16th century Grotesque design

Mannerist renaissance grottoes were placed in various locations; in the ground floor of buildings, as separate stand-alone structures, or tucked under terraces. In style, the mannerist Grotesque is deliberately anti-actual, often including elaborate depictions of multiple figures bound in tendrils. Mannerist interior decorators esteemed the style inasmuch as it was suitably hoary in derivation, whimsical and playfully erotic, and, most importantly from this studies perspective, capable, due to its all-over field approach, of fitting any required expanse because it had no solitary subject-matter and hence *no central focus*. (Kayse) Many late-renaissance grottoes were decorated in just such a grotesque syncretistic fashion, but moisture was always present, just as it is always present within the roundness of every enceinte mother's womb. Grotesque grottoes were created in a variety of extravagant shapes, but all were dedicated to the impulses of sex and love. (Miller, N. pp. 43-44) Often the inside simulated an underwater cavern, replete with a mosaic coating of opened sea-shells suggestive of female genitalia. As Miller explains in *Heavenly Caves: Reflections on the Garden Grotto*, grottoes represented the reverse side of renaissance rationality by introducing into the ordered garden space of the formal garden a niche dedicated to the irrational realm of the mystic world in which rationalist rules need not apply. (Miller, N. p. 53) It is this aspect of the grotto which is the most relevant characteristic in formulating comparisons to VE's immersive space.

This anti-rationality of the grottoes became an integral part of the mannerist pleasure garden, and their suggestive pursuit of sexual pleasure became encoded into the metaphysical content of the garden. Clearly mannerist grottoes were meant to evoke the antithesis between nature and art and the Dionysian and the

Apollonian realms. (Elderkin) The Dionysian nature was represented by the grotto itself while the well-ordered formal garden represented Apollonian framing-order, typical of the Renaissance.

All through Europe large grotto sites were laid out in the 16th century and early-17th century, such as Thomas Francini's (1571-1651) Pratolino at Saint-Germain-en-Laye's (1600) and the mannerist grotto site (lamentably lost to us except through the detailed drawings) of Saloman de Caus (1576-1626) (the garden's 1619 creator) which are found in his 1620 book *Le Jardin Palatin: Hortus Palatinus*. (de Caus) Saloman de Caus fabricated sumptuous grounds for the Schloss in Heildelburg in Italian late-renaissance style, similar to those at Meudon and St. Germain-en-Laye, replete with a number of lavish flora, water, rock, shell, and even coral grottoes, the largest measuring 21 by 9.6 metres (70 by 32 feet) in scale. (Strong, 1979, pp. 73-112) Saloman de Caus's younger brother, or son, or nephew (it is not known which) Isaac de Caus (?-1655) continued Saloman's grotto work in both theory and practice, most notably at the existent shell grotto at Woburn Abbey in Bedfordshire, England, created in 1627. Elaborate arabesque patterns of sea shells in concentric rows form the ribs of the vaulted ceiling and the arched niches. (Miller, N., p. 65) Also in 1624 he had contrived a grotto at the Banqueting House in London.
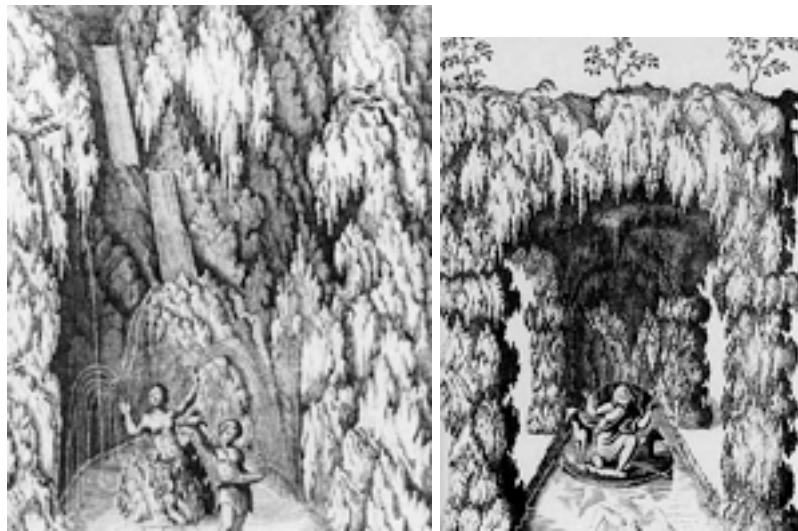

Saloman de Caus, drawings for grottoes in *Le Jardin Palatin: Hortus Palatinus*

The spectacular characteristic of the Renaissance's Villa Orsini Bomarzo (1552-1580) Sacred Grove of Bomarzo is another good example of myth-based immersive fabricating. In this pleasure garden extrodinaire, the *sacro bosco* (sacred woods) are scattered with colossal sculptures and grottoes which recount the yarn (derived from a popular publication in 16th century Italian literature) of the lunatic Orlando and his trials and tribulations in love and strife.

By contrast, the interior grotto had a great reception in France, starting even with the regime of King François I (1494-1547). For our purposes, its importance resides in the fact that the interior grotto inspired the fully immersive attributes of the rococo rocaille style.

Rocaille is the French word meaning *rock-work*, which became the term of use when describing a type of 16th century ornamental decoration evocative of the superannuated cavern. Typically rocaille work resembled, or suggested, the irregular edges and texture of porous craggy rocks (recalling the cave), and/or coral and shells (recalling the cove). The motif was used widely in the 16th century in the creation of interior grottoes, which, as I have suggested, were meant to imitate the rocky formation of archaic caves and thereby invoked their encoded immersive significance. Rocaille had originally referred to the shell-work employed in exterior garden grottoes, but as of 1736 the term began to be used to designate a total, over-all design for the indoors. (Miller, N., p. 101)
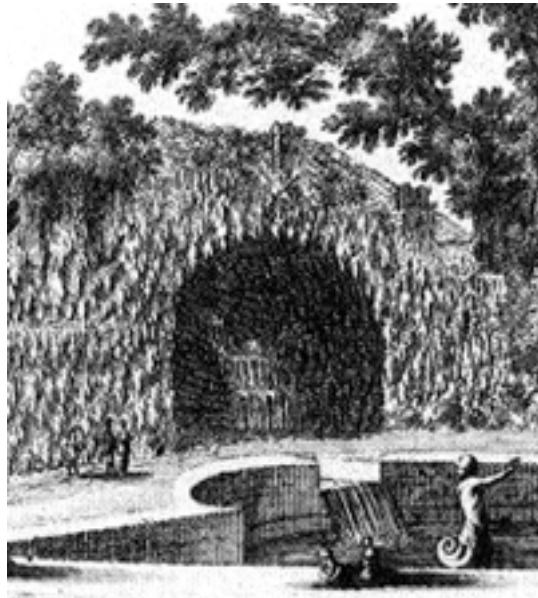
1638 rocaille style grotto drawing from Ruel

Additionally, for the mannerist mind, the interior grotto represented the strained alliance between nature and culture, a strain articulated through the idea of the *construction of nature,* which really represented the *apotheosis of the artificial*. (Negrotti) Outside, some garden grottoes from this era were created with rocky, seemingly natural, façades which concealed cleverly an indulgently opulent interior. For example, there was a mannerist adaptation of the grotto which simulated ruin and decay at the Schloss Hellbrunn in Salzburg created in 1615 by Santino Solari (1576-1646) as part of an elaborate surrounding garden (including the Neptune Grotto) laced with iconographical models based on neo-Platonic ideals (as was the case with the Pratolina and the Hortus Palatinus). Francesco Primaticcio's (1504-1570) Grotte du Jardin des Pins (1543) at Fontainebleau exemplifies similar Italian mannerist influence in its deliberate *non finito* (unfinished) quality.

There also developed a more mannerist, sea inspired, version of the grotto such as the Grotta Pavese at the Villa Doria alle Madre Franzoniane created in 1594 in Genoa, the garden grotto at Château Nassau d'Idstein, and Friedrich Sustris's (1540-1599) extraordinarily 1586 mannerist Grottenhof at the Residenz in Munich.

Around the same time the architect Galeazzo Alessi (1512-1572) and his followers in northern Italy were producing grottoes in the more classically restrained style, for example at the Villa Pallavicino della Peschiere. However, in many grotto projects of the era there was room for experimentation, such as at the Mirror Grotto at Schloss Hellbrunn; where mirrors were used to replace and suggest still water. (Miller, N., p. 113) The mirror became used widely in this respect. In the Boboli gardens in Florence, particularly in the Grotta Grande created in 1585 by the artist/architect Bernardo Buontalenti (1536-1608), the grotto form reached certain mannerist heights of artificiality. The painter of the great Sistine Chapel immersive fresco *The Last Judgement* (1541) Michelangelo Buonarroti's (1475-1564) sculpture *Slaves* (circa 1523) was displayed in the Grotto Grande after 1585 for a time. Indeed one imagines that the *non finito* character of these sculptures harmonised splendidly with the rough-hewn, sponge-like, qualities of the grotto and its cupola in the construction of a gesamtkunstwerkesque efficacy. Also the Boboli's 1555 Grotticina di Madama experimented with combining the 'natural' and the 'architectural' type of grotto.

Grotticina di Madama

The 18th century was both an age of reason and pleasure as the general Pan-European enthusiasm for classical antiquity encouraged the reappraisal and readaption of the Pagan grotto redirected towards romantic ideological ends (i.e., a nostalgia for the antiquated past embellished with a sublime tingle of fear so as to yield a heightened sublime feeling much prised by the romantic mind for its poetic and metaphysical merit). (McGann) One might here allude to Charles Bridgeman's (?-1738) Dido Grotto at Stowe, begun in 1713, in this respect. (Miller, N., pp. 79-80) Moreover the 4' 6" hunchback poet and philosopher Alexander Pope (1688-1744) in 1718 built a private grotto at his manor in Twickenham, on the banks of the Thames, in which he could retreat from the world into a space of dedication to the Muses. (Miller, N., pp. 81-84) Sadly it has been substantially pilfered.

In Germany a reinterest in the grotto blossomed as part of the general Gothic revival which itself was inspired by romantic neo-Platonic ideals. (Schenk) The earliest example of this tendency is to be found at the grotesque Magdalenenkluse which was created in 1728 by Joseph Effner (1687-1745) at the Schloss Nymphenburg in Munich (the birthplace of Ludwig II of Bavaria, creator of the proto-décadent Venus Grotto at Linderhof).

1877 drawing of Ludwig II's *Venus Grotto*

The baroque interior grotto shared with the Baroque era the following characteristics: the expansion of a precise formal visual idea, a taste for astonishment and special effects, the inflation of form, and an excessively self-confident premeditation. (Bazin. G., 1988, p. 163) In the early half of the 18th century, when the impact of the Baroque could still be felt, an independent type of grotto architecture came into being in Germany whereby the grotto was associated with a garden green-room. Sea shells and glistening minerals, combined with painted frescos and stucco, is typical of this trend. *Stucco* is created when dehydrated lime is mixed with marble dust and glue and formed into palpable forms. The technique, which goes back to the Egyptians, was immensely popular in Hellenistic and Roman times and, by this very token, enthusiastically revived during the Renaissance, perhaps peaking during the Rococo in France and southern Germany. There was also in Germany a rococo rocaille style of grotto architecture which emerged in the form of a grotto pavilion. It differed from the French pavilion grotto in being richly decorated in shells and pebbles outside, as well as in. Examples are to be found at the grotto pavilion in the garden at Falkenlust and the Great Grotto Hall in the Neues Palais at Potsdam, built in 1769. Also one might point out the late-18th century Neptune Grotto at Sanssouci (also in Potsdam) and the Belvedere Grottoes at Veitshöchheim, Bavaria (1773).

Hubert Robert, *Laiterie de la Reine* nymphée

18th century French nymphées linked in certain instances directly to the theme of fertile female reproductionability and the female breast (and its understood psychic onement) with the dairy and its milk production. The French painter Hubert Robert (1733-1808), for example, constructed at Château Rambouillet in 1788 the Queen's Dairy (*la Laiterie de la Reine*) which featured a nymphée in a neo-classical mode. (Miller, N., pp. 95-96) A related grotto was constructed at the dairy at Méréville. Indeed nymphées were constructed relatively frequently and in a variety of settings in the 18th century, such as the architect Germain Soufflot's (1713-1780) 1774 Nymphaeum (inspired by the ruins at Herculaneum) at Chatou, a village located on the banks of the Seine River. Soufflot also designed a small but ravishing nymphée in 1771 at Ménars. (Miller, N., p. 96) François-Joseph Bélanger (1744-1818) also fabricated an eccentric, hybrid, cave-like neo-classical nymphée in circa 1780 at Neuilly-sur-Seine called *La Folie de St. James,* indicative of the late-18th century shift in taste from the profusive Rococo towards an austere Neo-Classicism. (Gombrich, 1979, pp. 30-31) A century later, under Napoléon III (1808-1873), Baron Georges Haussmann (1809-1891) erected a nymphée grotto at what he took to be the source of the Seine River. The source had been identified 40 kilometres (about 2.5 miles) north-east of Dijon where a 2nd century AD Gallo-Roman temple dedicated to the nymph Sequana was unearthed in the year 1838. In the ruins of the temple was found an even older, small bronze sculpture of a voluptuous female from the 1st century. This archaeological evidence has been transferred to the Musée Archéologique of Dijon and the area (a sacred spot where people have come for centuries in search of fertility and relief from their woes) has been sealed off from the public. In its place Haussmann commissioned the sculptor François Jouffroy (1806-1882) to construct a nymphée in the year 1868.

During this late-18th century period, French taste at times determined that grottoes be rustic both inside and out so as to metaphysically refer to the qualities of antique nymphaea. However, no matter what the period

style, always in garden grottoes there is a contrast between the harsh, bright, hot sunlight reality and the cooling, dreamy, semi-darkness of lunar otherworldliness.

By the 19th century neo-grotesque ornament was frequently featured in Anglo-Saxon renaissance revival interiors, such as those at Chatsworth, Derbyshire, Longleat, and Wiltshire created by the Crace family of decorators, and the nymph/grotto tradition can be seen periodically in the 20th century as well. In the mid-20th century there was completed the eccentric grotto complex of Clarence Schmidt (1897-1978) whose life-work was the formation of a cession of grottoes, faux caves and a House of Mirrors near Woodstock, New York (now destroyed). (Schuyt, Elffers & Collins, pp. 201-202)

Clarence Schmidt, *Grotto*

More recently, on January, 20, 1998 I saw the Spring *haute couture* fashion show of Christian Lacroix entitled *Que votre volonté soit fée* held at the Grand Hôtel in Paris. It took place on a stage decorated to appear as a facetious forest grove and the clothing and accessories, dripping with elaborate finery, made the beautiful bucolic models appear as if they were flitting fairies (nymphs with wings); diminutive, dubious, debonair celebrants of nature, most probably inspired by the same show I saw of *Victorian Fairy Painting* which was held at the Royal Academy of London in late-1997/early-1998.

The school of British fairy painting on which Lacroix apparently based his Spring collection stemmed from the late-18th century works of Henry Fuseli (1741-1825) who established the basic vocabulary of the fairy/nymph *genre* in painting. (Tomory). Fuseli used William Shakespeare's (1564-1616) fairy play *Midsummer Night's Dream* as the initial inspiration for far-fetched fantasy scenes that immersed mannerist-derived nude figures into a maelstrom of incubusian incidents. William Blake (1757-1827) also incorporated fairy imagery into his non-conventional cosmos. For example, in his *Oberon, Titania, and Puck with Fairies*

Dancing (1785) Blake depicts a fairy emperor and his queen/consort presiding over a *fairy ring.* During the epoch of Romanticism the artists Henry Singleton (1766-1839), Henry Howard (1769-1847), Frank Howard (1805-1866), and Joshua Cristall (1767-1847) all carried on the tradition in small-scaled fairy works. Francis Danby (1793-1861) painted *The Wood-Nymph's Hymn to the Rising Sun* (1845), and earlier, two water-colour versions of *Scene from a Midsummer Night's Dream* (1832) containing a view of fairy affairs daintily being enacted in a dew-drenched amphitheatre. This is most enticing for our concerns, as the dramatic panoramic sites where the Greeks built sunken bowl-like amphitheatres (for example at Akrai and Dodoni where the theatre's shape echoes the basin between the surrounding hills) is most probably a descendent of the moist Mesopotamian sacred garden-groves cum nymphaea. (Brookes)

Daniel Maclise (1806-1870) exemplified the nymph heritage with his 1832 painting *The Disenchantment of Bottom;* a depiction of an ominously frisky fairy-ring of sprites dancing circuitously about a central (omphalos) toadstool. Following Maclise is the now recognised school of Victorian fairy painting, a school which had as their spirited admirers such luminaries as Lewis Carroll (1832-1898), William Makepeace Thackeray (1811-1863), Charles Dickens (1812-1870), Queen Victoria (1819-1901), and the previously mentioned John Ruskin, who gave widely a lecture called "Fairy Land" in the early-1880s.

The term *Victorian* literally describes the reign of Queen Victoria which spanned the years 1837 to 1901. The Victorian aesthetic is exemplified by its extremely ornate and cluttered interiors as shown at the 1851 Crystal Palace exhibition. Under Queen Victoria, fairy paintings appeared systematically in Royal Academy exhibitions (replete at times with their soft, dreamy, erotic imagery) throughout the 19th century; exhibitions which included works by John Simmons (1823-1876), John Atkinson Grimshaw (1836-1893) and John Anster Fitzgerald (1819-1906). (Schindler) Fitzgerald's 24.8 by 29.7 centimetre (approximately 9.6 by 11.6 inch) painting entitled *The Captive Robin* depicts an embellished nymph-fairy group tucked into their own enchanted fairy niche, hovering over and nurturing an appropriated egg/grape. By contrast, Simmons and Grimshaw presented forthrightly amatory works, usually emphasising a lone denuded dame enclosed in a natural grotto, commonly encircled by a frail fairy forum (as in the Fitzgerald). In some of these works, the inclusion of a toadstool adds a phallic/hallucinogenic enumeration to the amatory subtlety.

John Anster Fitzgerald, *The Captive Robin*

J. M. W. Turner also painted his versions of fairyland, however the style, for the most part, transferred into the area of illustration following the Victorian period. Nevertheless, the subject never fully dies. In 1922, the Russian designer El (Eliezer Markovich) Lazar Lissitzky (1890-1941) designed a book which used Suprematist imagery to tell a socialist fairy tale. Witness too the 1978 painting *Titania* by the British Pop artist Peter Blake, for example; a painting which updates the fairy/nymph scenario by making an explicit intimacy between naked women and their surrounding scenery through the ornamentation of the Fairy Queen's bare breasts and genitalia with flowers, stems, and pasture stalks in recollection of ancient Greek agrarian sacred/sexual jubilations. It even appears now in publicity as evidenced by the current 1998 Lolita Lempicka perfume advertising campaign.

But we shall turn now to the source of this tradition in the ancient past to grasp a better understanding of what the fairy/nymph's sacred grove engendered in terms of immersive art.

Akrai

In ancient polytheistic Greece, sacred rites were in certain cases enacted on or near sacred grove sites. One such well recorded rite was the ecstatic Dionysian rite. The Dionysian rite was directed not to the nymphs however, but to Dionysos (also known as Dionysius, Bacchus and/or Bakchos), the God of wine, intoxication

and creative ekstasis. Dionysian ecstatic festivities were based, however, on an even earlier form of ritual; the ancient Springtime Spree which was a three day agricultural gala which involved the uncasking and drinking of that year's wine, the planting of seeds, and the encountering of ghosts. (Harrison, p. 80) By intoxicatingly mixing seeds with memories of their dead in the earth (which was viewed as the domain of the deceased) the ancient Greeks were able to incorporate their departed into the drinking and planting festival of the Spring Dionysia.

Subsequently the Spring Spree evolved into the even more intense rite of Dionysian ekstasis which intensified consciousness through drink and ecstatic prancing. The culmination of the Dionysian ekstasis rite was an ecstatic frenzy in which the dancers tore apart and devoured raw a sacrificial animal, such as a goat or a fawn. At the centre of the rite are the mental states of *ek-stasis* and *en-thusiasmós*; states where psychological frontiers are torn down in preparation for the immersive divine dive into a world of animalistic unity (somewhat reminiscent of what I had felt inside Lascaux). The rite was seen as a communion with Dionysius in that the worshiper consumed a part of raw nature which was identified with Dionysius himself. (Faas) In like sacred manner, the semi-nomadic Masaï people of Africa still today take to the volcanic mountain of Ol Doinyo Lengai a chosen goat to sacrifice to their God Enk-ai and the men drink the goat's fresh blood.

What is important to immersive theory is that the character of the thrice sacred impulse of the ancient agricultural Springtime Spree of drinking, planting and encountering ghosts is that from it the classical Greek chorus drew its associative power. The Greek chorus is a remnant left over from the above mentioned ritual forms, in which all male community members participated freely, for which Jane Harrison uses the terminology *dromenon* (the thing done). (Harrison, p. 64) This ritual action turned communicative presentation is consistent with what Emmanuel Levinas, in *Totality and Infinity,* says is the basis of the social relations: free gift-giving (so that referents can be held in joint to crystallise their communicative reciprocity). (Levinas, pp. 72-77) But what is most significant to immersive theory is the circular *orchestra*, the space on which the chorus freely sang and danced. The relationship of that circle to eventual spectators shall illuminate just how art arose out of immersive ecstatic ritual and framed itself in non-immersive terms in the West. One must remember that the tragic dramas of the poets Aeschylus (525-456 BC), Sophocles (495-406 BC), and even Euripides (480-406 BC), it is thought, were played not upon the theatre stage but within the circular orchestra; a circular orchestra which marked out the sacred patch of the Gods and Goddesses.

Originally a tragic drama in Greece consisted of a single actor and a large chorus which suggests that tragic drama began as a choral celebration in memory of a dead hero (a replacement for the fawn or goat) in which someone, probably the leader of the chorus, at some point began to act out the exploits of the person being celebrated (after being symbolically eaten). In roughly 550 BC, the Greek Classical age began with Aeschylus, a notable participant in Athens' major dramatic competition; the Great Dionysia (a part of the

festival of Dionysos). Aeschylus's influence on the development of tragedy was fundamental in that previous to him Greek drama was limited to this one actor and the chorus. Aristotle tells us that Aeschylus was the first to introduce a second actor. Aeschylus's tragic production work was followed by that of Sophocles; work typified by tragic reasoned thought and polished phrasing. Aristotle tells us that Sophocles was the first to introduce a third actor into the tragedy. Sophocles's work was followed by that of Euripides, the tragic poet who is most responsible for severing the chorus from the action of the play. Aristotle tells us that by Euripides's time it is clear that the number of main actors has increased and the importance of the chorus decreased. (Decharme) Euripides's work also interests us in that he was predominantly an investigator into intense viractual conceptions. A relevant example of Euripides's work, which was brought to my attention for its viractual importance by Miranda Aldhouse Green, was Euripides's play *Bacchae,* the last and greatest work of Euripides. Through briefly looking at this play I hope to show something of the viractual nature of Greek tragic dramas as they were experienced by the Athenians at the Great Festival of Tragic Drama, an annual religious festival in honour of the God Dionysius. (Parke)

Dionysius Theatre

The *Bacchae,* which is given narration by the chorus (who in this case consists of female worshipers (played by masked men) of Dionysius called *Bacchae*, a name derived from *Bacchus*, the Lydian name for Dionysius) tells the story of Dionysius, the Greek God of wine, revelry and of nature in all of its organic and bestial prodigality. The Bacchae refers to a group of *maenads* caught in Dionysius's Bacchic frenzy, whipped up by the exacerbating attractive enchantments of Dionysius.

In the *Bacchae*, Dionysian ritual is consistently connected with exultation and liberation as the chorus sings of the raptures of Dionysian bliss. Such Dionysian worship was only one of the mystery cults which flourished in ancient Greece however, the most widely known being Eleusis and the Eleusinian Mysteries. (Mylonas) The word *mystery* here refers to the fact that these cults required that their rites be kept secret from outsiders. Most scholars believe, on the basis of testimony from Clement of Alexandria and Tertullian, that the Greek Mysteries were comprised of three main components: the *deiknymena* (things shown), the *legomena* (things said), and the *dromena* (things done). (Burkert)

In the play, by enflaming the Bacchae, Dionysius deliberately rouses the anger of the disrespectful but authoritative youthful King of Thebes, Pentheus, who vows to put a halt to the Dionysian orgies (the Greeks called the rites of mystery cults *orgia* (i.e., orgies)). Enraged by Pentheus's refusal to accept his ecstatic authority, Dionysius whips the women of Thebes into a deranged and furious delirium as to castigate Pentheus's impertinence.

The play's course covers attempts by Pentheus to dissolve the tenacity of Dionysius's necromancy and his eventual humiliating demise at the hands of Dionysius when the disguised Dionysius shrewdly causes Pentheus to challenge (and ultimately relent to) the full force of his powers. By so doing, he compels the King towards his own destruction, notwithstanding efforts made by his grandfather, Cadmus, and an eyeless augur, Tiresias, to discourage Pentheus from his agenda. Dionysius deludes Pentheus by making the King see him as a bull, to think that the palace was in flames, and to think that a phantom Dionysius, which the King was trying to stab, was the God himself. Dionysius appears at the end of a tragedy as *a deus ex machina* (God from the machine). (Decharme)

The orchestra in which this work, and others, first were played consisted merely of a circular plot beaten flat and sometimes edged by a stone periphery. This is perhaps best seen today at the Epidaurus Theatre where the circle is now surrounded by a *theatron* (the spectators place) which was subsequently added on. The theatre, for the Greeks, was simply *the place of seeing*, (where the spectators sat) and the *scene* (or *skene*) was a hut or tent in which the actors dressed. (Harrison, p. 65) The central focal point of the whole was the *orchestra*, the circular dancing/playing/singing arena for the chorus of men to perform their tragic dithyramb in. It is from this active arena where the ideal (an ideal ironically for both the totality of the gesamtkunstwerk and for non-art) of the non-differentiation between artist and non-artist, between art and life, between various art disciplines, and between the final work of art and the spectators, originated in the West. All these impulses stem from the group revelry taking place in an immersive sacred circle which sprung from the hoary shrine. It is this relationship between the space of the chorus and the space of the spectator where we can observe, with the shifts of time, the emergence of art from its roots in participatory ritual; the move from *dromenon* to drama.

The space is circular because its quintessence is the, heretofore mentioned, circular arrangement of stones on the ground which procured a sense of fervent sanctity in which the undifferentiating dance-rite revolved around some sacred/sexual focal point at the circle's centre. As previously outlined, this centre point (omphalos) represented the place where heaven joined with the earth and where communications with the Gods and Goddesses was made possible. It is from this metaphysical hoop's omphalos that occult perception generally looked inward at cocooned inner immersive space and outward towards an expanding immersive space of the vast cosmos. (Karatani) At first this point was marked by bundled stalks of reaped oats which sat

in the centre of the circle and only later became a stylised male phallus or female pudendum or the figure of a *homo erectus* God or Goddess, and then still later their extra-representational maypole or alter. This sacred centring point of encircling immersive space reflected the community member's believed centred place in the cosmos.

In the circular space of the proto-orchestra circle the entire licit Greek male society would gather and circuitously rotate ardently around the omphalos cum stave. (Harrison, p. 66) There is no division at first between actor and spectator, as all Greek men participated in the dance-worship with its consolidated emotion. This, of course, is reminiscent of what Brenda Laurel argues is the case with VR's immersive interface. She points out in her book *Computers as Theatre* that VR resembles just this kind of unity between theatre and audience where the audience members becomes a part of the action. (Laurel, 1991) In any respect, the amphitheatre seating, which we know well today, developed when the Greeks moved the omphalos based sacred orchestra circle up against the side of a slopping hill so that those excluded, but watching (the uninitiated, the women and the children), would have an unobstructed view of the Dionysian festival. The Theatre of Dionysos at the Acropolis is a chief example.

With this new arrangement more and more uninitiated people would gather to watch the ceremony and it is precisely at this period where the Dionysian ritual, the thing actually done, turns into the abstraction of art, and into show. *Thus the bulk of Western art as it has been conceived for about 2,400 years begins with the demise of immersive participation and the advent of passive contemplation* through the watching of something prepared worthy of attending. Now the holonetric eye has been removed from the action of the rite and separated from the whole and placed at rest, aloof and detached through distance by the mounting stone seats which semi-circle the spherical omphalos-based orchestra pit. (Demargne)

What an emphasis on aesthetic immersion does, is to replace the severed eye back into the ritual position by dragging it down into the felt 360° omni-perspective of the enthusiastic and participatory. It is through just such holonogic-visual procedures (whether corporeal or conceptual) that immersive cognition excels pat representation.

Thus through the non-holonogic, non-participatory severed eye, the rounded holonogic-visual procedure which complimented and facilitated the unkempt activities of the Dionysian ritual, eventually gave way to the ordered, linear, theatrical framing-box organisation of artistic vision due, paradoxically enough, to acoustical considerations, when the revelry ceased and the choral staged presentations began. (Mitchell, W. J., p. 60) We shall see nevertheless how this sacred, circular, visually-holonogic form of the omphalos-based (sacred circle) orchestra pit is maintained throughout the history of immersive space through sacred vaulting and doming

architectural achievements beginning with the geometry of the niched and domed Persian and Greek temples. Hence we have arrived at a solidified rendering of sacred nymphaea and sacred circles.

Sacred circle inspired shaped architecture directly moulds visual-cognitive responses by not cutting holonogic vision on the way to the intellect. (Savile, 1988, p. 180) Savile's sacred circle assertion goes along with Nikolaus Pevsner's statement that the history of architecture is primarily a history of shaped conceptual-vision. (Pevsner, 1957, p. 23) This is significant in that most all ancient cities are built on a sacred central temple where the population originally met and thought itself swathed and protected by a version of the magic circle. (Karatani) As examples, there are Babylon and Mecca; cities constructed on and round sacred sites, as well as Jerusalem, which was built on the supposed pivotal rock of the earth. (Scully, 1990, pp. 141-144) The city of Rome too was legendarily shaped around a sacred Pagan alter. (Scully, 1990, p. 25)

The first known rounded temples in proto-Western culture, consisting of columns topped with a dome, originated in Persia where they were used to venerate flame. The Greeks later built similar rounded structures to venerate their Goddesses and Gods. (Boardman) Such domed, circular, sacred space expanded and circumscribed most Greek cities, as Greek cities were often filled in from a circular defining peripheral circumscription whose radius orbited around a central devotional shrine, generally based upon a circular space marked off for divination by the augur with his staff. Indeed, actual circular temples were relatively widespread in ancient Greece (at Delphi for example) (Hood) and the pattern was transmitted thereafter to Roman culture. Moreover, there were hundreds of Mithraic temples in the Roman empire (called *mithraea*) which were habitually built underground in imitation of rounded caves. These subterranean temples were filled with an extremely elaborate iconography: carved reliefs, statues, and paintings, depicting a variety of enigmatic figures and scenes. This iconography is our primary source of knowledge about Mithraic beliefs, but because we do not have any written accounts of its meaning the ideas that it expresses have proven extraordinarily difficult to decipher. The typical mithraeum was a modest subterranean chamber (on the order of 22.5 by 9 metres (75 feet by 30 feet)) with a vaulted ceiling which, on average, could hold twenty to thirty people at a time. At the back of the mithraeum was always found a representation, usually a carved relief but sometimes a statue or painting, of the central icon of Mithraism; the *tauroctony* bull-slaying scene in which the God of the cult, Mithras (accompanied by a dog, a snake, a raven, and a scorpion) is shown in the act of slaying a bull. The tauroctony depicts the bull's slaying as taking place inside a cave. (McEvedy)

Too, we might consider the Tarxien temples at Malta, places of worship used first in the Copper Age and again 1000 years later (in approximately 2500 BC) as a burial place during the Bronze Age. With their beautiful spiral and dot motifs, the Tarxien temples are undoubtedly marvellously embellished. The first temple one may enter is the third temple that was built, dating back to 3300 BC. As one enters one comes across a stimulating Goddess of fertility. (Baring & Cashford)

The visual and associative power of the circular space was deemed apt for the greatest shrine dedicated to all of the Pagan Gods of ancient Rome, the phenomenal Pantheon built by the Emperor Hadien in 125 AD, with its breathtaking 43.2 metre diameter (about 47 yards). Its name, precisely enough, stems from the Greek expression which means *all-Gods*. The Pantheon is almost monolithically enclosed as it is a fully coffered dome with only a central pudendum-like oculus directly open to the sky. The dome is in fact a hemisphere set upon a cylindrical wall of the same height, so that the interior of the building contains a thoroughly spherical space. (Karatani) Thus the immersant on entering is immediately within a realm of absolute spherical symmetry and sacred totality. This totality, however, is drilled open to the sky (via the round oculus) thus diffusing it with light and transforming it into an enormous globule of palpable light (if not being pierced by a column of rain clamouring down and splashing on the hard marble floor with breathtaking abandon, as I once observed). On sunny days the direct rays of the noon sun enter the Pantheon as a cone or shaft of pure radiant light-energy and as one light-headedly steps into it, one feels at the very heart of some golden alveolus.

Pantheon

Pantheon
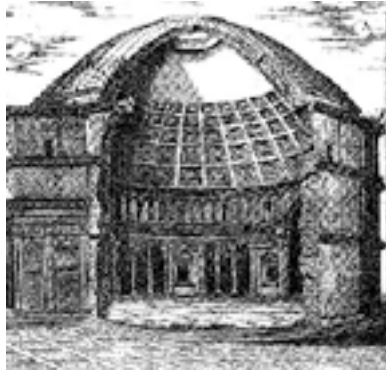
drawing of the *Pantheon*

An earlier dome built to the Goddess Venus in the 3rd century AD at Baalbek requires mention here too as it sports a 10 metre (32.8 feet) dome in diameter. Additionally, Roman round temples at Tivoli and at Spalato have survived up to this day. The temple at Tivoli is a circular rotunda surrounded externally by columns - after the Greek fashion - while that at Spalato, which was part of a the palace complex constructed by the fanatical Pagan emperor Caius Diocletian (AD 245-313), was the forerunner of many enclosed octagonal shapes and is considered the prototype for the ensuing round Christian churches to follow.

As we have established, round buildings constructed in the West have most often centred around some focal point of great importance (omphalos) and hence circular Christian churches share the same microcosmic modelling function as Pagan temples. (Pennick, 1979, p. 121) One admirable example of this, which still stands today, is St. Michael's Chapel at Fulda, Germany, with its central omphalosic stone. Also the church at San Vitale at Ravenna was designed to model a microcosm of the world and it is also interesting to note that it holds a pavement labyrinth. This church served as a later model for the famous centred Chapel Palatine of the Emperor Charlmagne (747-814) at Aachen, Germany, which I had the privilege of visiting twice.

Indeed, many early Christian churches were built in a circular fashion before taking on the crucifix form, but perhaps the least remembered were those built by the Templars, the group of knights who created an occult chivalric order in the 12th century AD for the ostensible purpose of protecting pilgrims on their voyage to Jerusalem. By serving as protectors, and consequently pseudo-bankers, to the fortunes of Christendom, the Templars grew wealthy and powerful and with their wealth commanded the construction of circular churches all over Europe and the Near East. For the Templars too, the circular configuration of the space was seen as a microcosm of the macrocosm. Unfortunately, most of their churches were destroyed when the Templars themselves were destroyed under Papal order (whether for insubordination, Gnostic heresy or pederasty, it is not clear). However, during the Renaissance round churches achieved something of a renaissance themselves, as renaissance architects began to rediscover, after centuries of disuse, the circular principles through the study of forgotten texts and ruins. A good example of this is Donato Bramante's circular *Tempietto* of St.

Peter Montorio (1502) in Rome, erected on the reputed site of St. Peter's (circa ?-66 AD) upside down crucifixion.

Another earlier psychically encircling sacred space that followed the continuum of the nymphaea is the totally enclosing monastery gardens of the 12th, 13th and 14th centuries; gardens which were determined to be the favoured province of the Christian Virgin. Known as *Ortus Conclusus*, the enclosed cloister garden embraced the irrational and paradoxical miracle of Virgin conception itself as its paradigm and hence offers us the characteristic immersive space of the European Middle Ages. The impenetrable cloistered garden, with its nymphaea-like central fountain, was considered a place of metaphysical enclosure which opened up a space of communications with a holy majestic scope. Once again we see the connecting of secluded space and the presence of moisture in connection to feminine traits and disembodied communications. This adaptation of the pagan sacred grove would seem to be consistent with the diverse metaphysical systems and practices of the Middle Ages which represented various attempts over the 5th century through the 15th century to assimilate theoretical traditions inherited from antiquity into early Christianity. This would be consistent with the central theme of medieval theory, which was *translatio studii*, the preservation of ancient learning through continuous commentary. (Eliade, 1991) The neo-Platonist tradition, for example, endured by this medieval procedure and made adaptive to a variety of Christian theoretical and theological positions as it too offered viractual propositions concerning the immersion of the human into a higher-order immutable unity.

Medievalism spans the centuries between the first sack of Rome (AD 410) up to the start of the Renaissance with Christianity being the dominant (but by no means sole) ideological force. Gothic art is art from Medievalism's northern Europe from the 12th into the 15th century and successor to the Romanesque (however there is little gothic art in Provence, or in Italy itself). During the 15th century Italian intellectuals and artists such as Leon Battista Alberti (1404-1472) and Lorenzo Valla (1407-1457), who were attuned to the newly rediscovered classical aesthetic, began to use the adjective *gothic* to convey their sense of disappointment in architecture of their day, which they viewed as rustic and crude compared to that of ancient Rome. The word was overtly pejorative as it derived from the Goths who had sacked Rome in AD 410 and again in AD 455, but it eventually outlasted its role as an epithet of derision.

In architecture the Gothic is characterised by experiments concentrating on reducing the proportion of the structure needed for the supporting framework through the use of broken arch vaulting on the inside and buttressing on the outside. The result was height and lightness of construction, enormous vaulted spans of space, and vast window areas which encouraged stained glass, such as seen at Notre Dame de Paris. Notre Dame de Paris, with its great rose window spreading nearly 9 metres (30 feet) across, began construction in the mid-12th century (1163) and was substantially expanded under the architect Pierre de Montreuil (1200-1266), along with other architects. Its construction was followed by a string of cathedrals which, taken

together, have been heralded as the great age of gothic building: Strasbourg (circa 1176), Bourges (circa 1185), Chartres (circa 1194), Rouen (1200), Reims (1211), Amiens (1220), and Beauvis (1247).

Within Chartres, coloured light drifts extravagantly into the interior core which creates a sense of an immersive spectral reality. Indeed stained glass clearly promotes immersive phenomenon due to its translucency, its intrinsic luminosity, and the persuasiveness of its radiance in creating a distinct visual mood which floods and fills the FOV. With gothic churches walls were opened up to admit more and more light until one feels as if one were inhaling and exhaling the moods of the sky. We must take notice however that Chartres's absorbing ruby/blue windows were designed to be seen from close at hand. Originally they had opened not into the church proper but into the upper story of a narthex and hence were seen, more or less, at eye level and at quite close range. (Sowers) Therefore the sense of immersion was encompassing and intensely pervasive.

The Sainte Chapelle de Cité (1248) in Paris is an exceptional *tour de force* of atmospheric lightness in that its closely aligned windows reach nearly 15 metres in height (about 49 feet). It was built by Pierre de Montreuil in less than thirty three months to house Christ's rumoured crown of thorns. When standing in the Sainte Chapelle one promptly notices that the subjects pictured in the 1,134 scenes dissolve into the window and that the individual windows themselves dissolve into a continuous immure of colour that surrounds one on all sides with a total spread of glass ranging 618 square metres (6,672 square feet). The stained glass practically is the wall and one finds oneself standing in a mercurial luminous pool of energy topped off by a 15th century Apocalypse, the crowning flamboyant rose window. Correspondingly, oneself feels radiant, disintegrated, and diaphanous.

With the advent of the end of the 14th century, a heightened flamboyance shapes the atmosphere of the Gothic, thus lending this attribute to the style's name, the *Flamboyant Gothic*. This flamboyant gothic style exaggerated the tendencies of the Gothic and took them to new heights, as we can see in Paris with the Tour St. Jacques (Tower of St. Jacques). This 52 metre (171 foot) 16th century belfry is dripping with figures, gargoyles, and flames-and-fruit ornament. Other Parisian examples of the Flamboyant Gothic are the beautiful Hôtel de Sens (which holds the Art Library, Bibliothèque Forney, from which I write) and the ceiling of the Chapelle de l'Hôtel des Abbés de Cluny.

During and following the flamboyant gothic period we witness the expansive force of larger and larger scaled altarpiece paintings, most notably, in the great altarpiece of Mathias Grunewald (circa 1475-1528) whose real name was Mathis Neithart Gothart. Grunewald's 269 by 307 centimetre (roughly 8.75 by 10 feet) oil on wood multi-panelled masterpiece *Isenheim Altarpiece* (circa 1516) (now at the Musée d'Unterlinden in Colmar, France) is teeming with high-pitched, electrifying immersive suggestion conveyed through huge format in

unison with agonised/ecstasised human emotions. It mixes a deadly serious plague consciousness (as a result of the Black Death bubonic/pneumonic plague) and a high-transcendent visionary impulse together with really dark, macabre, irrational aspects; similar to the outlandish Flamboyant Gothic orb typical of Hieronymus Bosch (1450-1516) as seen in Bosch's 220 by 195 centimetre (nearly 7 by 6.3 feet) *The Garden of Earthly Delight* (1504), which I gazed upon at the Museo del Prado in Madrid.

Hieronymus Bosch, *The Garden of Earthly Delight*

The Isenheim Altarpiece was executed for the Antoinite monastery hospital chapel of Saint Anthony's Monastery in Isenheim (Alsace). It is a carved shrine with two sets of folding wings and three views. The first, with the wings closed, is a crucifixion showing a harrowingly twisted, bloody and scabby figure of Christ on the cross flanked on the left by the lamenting Madonna (who is being consoled by John the Apostle) and Mary Magdelene and on the right by John the Baptist. Christ appears hideous; his skin swollen and torn as a result of the flagellation endured. When the outer wings are opened, three scenes of celebration are revealed: the annunciation, the cherub concert for Madonna and Child, and the resurrection.

Concerning the expansive impetus of larger-scaled altarpiece paintings, we need consider briefly Jan van Eyck (1385-1441) of the Netherlands school, who is recognised as having been the first to exploit the full potential of the new medium of oil painting towards immersively suggestive ends in his altarpiece masterwork *The Adoration of the Lamb* (1432) at the Church of Saint Bavo in Ghent, Belgium; a polyptych consisting of twenty panels. This monumental work still hangs in its original setting at the Cathedral, though now sadly covered with reflective glass. Also Rogier Van der Weyden's (1400-1464) immense altarpiece *Judgement Dernier* (Last Judgement) (1452) at the magnificent late-15th century Hôtel-Dieu in Beaune (Côte-d'Or) impresses with its vast scale mixed with penetrating clear light. It is perfectly displayed with no interfering glass barrier.

During the 12th, 13th and 14th centuries, as the hazard of barbarous assault lessened, the medieval cloister gardens, which, as established, in part evolved out of sacred nymphaea-groves, began to expand out of the confines of monastic space (with its slow psychic accentuations) and into the exterior premises of the monastery or castle. As the orders of knighthood became consequential in modelling the sociable regimentation of movement, the knight's gallant tradition of courtly love and chivalry developed outward and the medieval exterior garden became a setting for many secular activities. Hence the link to sacred nymphaea-groves was nearly lost.

Eventually though, the abstemious cloister garden - turned medieval outdoor garden - was replaced by the renaissance pleasure garden, which as we have seen reinstated the existence of nymphaea-based grottoes in no uncertain terms. Here a seductive loquaciousness replaces the joys of the solitary mind as the renaissance humanist imagination opts for a conception of fertile nature which celebrates humanity's sensual appetites.

BIX: The Anti-Immersivism of the Renaissance Logocentric Apparatus

Representation is not defined directly by imitation: even if one gets rid of notions of the "real," of the "vraisemblable," of the "copy," there will still be representation as long as a subject (author, reader, spectator or voyeur) casts his gaze towards a horizon on which he cuts out a base of a triangle; his eye (or his mind) forming the apex.
-Roland Barthes, *Diderot, Brecht, Eisenstein*

...our previous history is not the petrified block of single visual space since, looked at obliquely, it can always be seen to contain its moment of unease.
-Jacqueline Rose, *Sexuality in the Field of Vision*

...the gaze of the painter arrests the flux of phenomena, contemplates the visual field from a vantage-point outside the mobility of duration, in an eternal moment of disclosed presence.
Norman Bryson, *Vision and Painting: The Logic of the Gaze*

Early renaissance optics arose in the first quarter of the Quattrocento (the 15th century) in Florence from where it spread to Milan, Venice and other towns in northern Italy, and towards the end of the 15th century to Rome. (Holmes) The French word *renaissance* is the counterpart to the Italian catchword *rinascita* (rebirth) and as such it summarises the sweeping changes that took place in European culture during the 15th and 16th centuries. Sweeping because they followed the dissolution which took place during the Middle Ages due primarily to the Black Death, the previously mentioned bubonic/pneumonic plague which devastated Europe in the mid-14th century (reducing its population by as much as one-third) and the sacks of Rome (which temporarily ended the city's role as a source of patronage and compelled artists to travel to other centres in Italy, France, and Spain). The consciousness of cultural rebirth following such dissolution was itself a characteristic of the Renaissance linked with the rediscovery of classical culture. Consequently with the revived interest in antiquity came a new repertoire of Pagan subjects for art and this interest in Pagan matters facilitated the re-emergence of the grotto within the renaissance pleasure garden. (Croix & Tansey)

Concurrent with the renaissance pleasure grotto however, is what came to dominate the Italian Quattrocento, the development of rational, linear point-perspective: the technical perspective rendering of a scene from one fixed and tapered eye-point. (Romanyshyn, pp. 83-93) As Robert Romanyshyn describes in his book *Technology as Symptom and Dream,* linear perspective vision "achieves a kind of geometrisation of the space of the world, and within that space we become observers of a world which has become an object of observation". (Romanyshyn, p. 33) This "objective" rendering, with its emphasis on the horizon-line and vanishing point, formed the pictorial ideals for painting and drawing, of course, but also it formed them for the Italian, French and German renaissance garden itself. Walking into a renaissance garden, such as the Ville d'Este, Château de Champs at Marne-la-Vallée, the Château de St. Germain-en-Laye, or any of the sumptuous gardens of the châteauxs of the Loire Valley (such as at Chambord, Blois, or Azay-le-Rideau), one has little question about the key values they amplified: human reason and power justified by a Godly transcendence in

reunion with classical antiquity. (Girard) These values are articulated by what Romanyshyn sees as the central function of linear perspective, its "celebration of the eye of distance" which becomes elevated into a cognitive methodology. (Romanyshyn, p. 33)

By looking over the orderly formal garden through a tightly focused perspective, a sense of visceral but distant scopic power is made evident. Samuel Edgerton in his *The Renaissance Discovery of Linear Perspective* characterises this focus as "a means for organising the visible world itself into a geometric composition, structured on evenly spaced grid co-ordinates". (Edgerton, p. 119) Unfortunately with geometric organisation any holonogic sense of intimate sacred/aesthetic vision/contemplation is lost in favour of the metaphysics of scopic power. (Weiss) The strict formal gardens of the Renaissance represent a large step then in the domineering, framing and rectilinear boxing-in of holonogic vision and a repression of the scope of allocentric immersive propensity which we have been exploring thus far. Worse, according to William Ivins, this repressing framing tendency moved "from its discovery or invention as a quasi mechanical procedure to a logical scheme or grammar of thought". (Ivins, 1964, p. 69) Moreover, according to Norman Bryson in his *Vision and Painting: The Logic of the Gaze,* perspective thought followed the logic of the fixed *gaze* rather than the unstable and shimmering *glance,* thus yielding a visuality that was reduced to a settled and single point of view (Bryson, 1993) and in this sense the fabrication of linear perspective was, and is, anti-immersive and anti-holonogic in disposition. Romanyshyn strengthens Bryson's contention. (Romanyshyn, pp. 97-101) Clearly this reduction of our actual wobbly vision (Pylyshyn, 1988, pp. 210-238) into one absolute point of view can only be achieved by negating the beholders' peripheral visual attention. Only by establishing the fiction of the viewer's partial absence and lack of glance can enthralment by fixed perspectivism be secured. (Romanyshyn, p. 42) The perspectivist viewer is thus excluded from immersive participation in the art, held at bay as it were, and excluded in the interests of objectiveness through the methods of exclusion and voyeurism. Correspondingly, according to Lev Manovich, the world as seen by this immobile and atemporal gaze becomes stagnant, reified, fixated, inert and deadened. (Manovich, 1995)
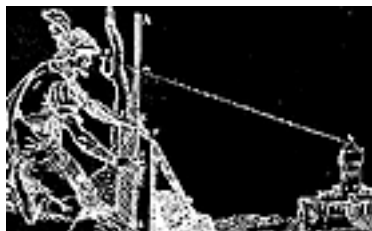

optic apparatus to help achieve the renaissance ideal of linear trompe l'oeil perspective

In the renaissance ideal of linear trompe l'oeil perspective, infinity, mathematics, and theology met on a unified plane whose grandeur and rational perfection symbolises a faraway, mighty and incomprehensible God. This perspectivist symbolisation is explained in Erwin Panofsky's *Perspective as Symbolic Form* as the

ideal image of infinite distance. (Panofsky, 1991) The theoreticians of the Renaissance went so far in pursuing this ideal as to expurgate Euclid, omitting from their translations his 18th theorem which was inconvenient to their theory of ocular *perspectiva artificials*. However the theory of perspectiva artificials not only shored up the Quattrocento religious ideal of a distant Godly infinity, but as a result enhanced the detached spectator, who (like God) exists and observes distance now from afar by isolating and cutting ambient vision off at its edges and retracting it to a frame. Viewing through the renaissance intentional window, the onlooker holds an exclusive singular viewpoint and hence space becomes geometrically isotropic and rectilinear. We now have a detached transcendental subject constructed by ignoring the holonogic optic characteristics of immersive space and by repressing peripheral attention to the encircling atmosphere.

But not only supposedly transcendental in its ideological origin, this rectilinear vision represented also a nascent scientific understanding of the world that motivated the dissecting of optical immersive space. (de la Croix & Tansey, p. 433) The fragmentation of the immersive world is now underway as the geometric grid divides and subdivides sight and the world into smaller and smaller manageable portions. (Romanyshyn, p. 77) Of course the vast majority of media images (and most visual art) produced today still cleaves to this horizon-line based Quattrocento framing operation, as opposed to the immersive FOV span where horizon and frame dissolution is desirable. The invention of photography, and the astounding rapidity with which it spread, is closely connected to the fact that perspective, and its specific corresponding intellectual configuration, had pervaded visual habit since the Renaissance. (Kemp, pp. 167-220) Renaissance linear perspective however, it must be remembered, is only a convention which, as Panofsky argued, is a cultural attribute comprehensible only for a quite specific sense of space or perception of the world and definitely not an absolute perceptual truth. (Panofsky, 1991, p. 34)
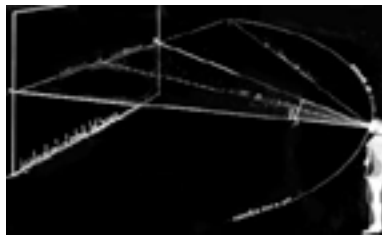
Though Christianity primarily shaped the ideology of the period, no solitary philosophy or ideology dominated the cerebral liveliness of the Renaissance. (Shumaker) Interest in neo-Platonic theories, the occult, sorcery, and astrology were widespread even as the authoritatively endorsed subjugation of magic began during the Renaissance. (Denning & Phillips) At the same time renaissance proto-humanist scholars and critics proclaimed that their age had progressed beyond the brutality of the past and had found its inspiration, and its closest parallel, in the civilisations of ancient Greece and Rome. By the 15th century, intensive study

of Greek as well as Latin classical history gave quattrocento scholars a more sophisticated view of antiquity and eventually renaissance ideology spread north of the Italian Alps to all the courts of Europe. (Strong, 1973)

However, we must keep in mind that the high renaissance style in art (created by primarily Leonardo da Vinci, Donato Bramante, Michelangelo Buonarroti, Raphaël Sanzio, and Tiziano Vecellio Titian) endured for only a brief period, from about 1495 to 1520. To periodise, we can say that the High Renaissance ended when Mannerism began (as previously stated, about 1525) but this is only partly accurate, for all movements in European art up to J. M. W. Turner, Impressionism, and particularly Paul Cézanne (1819-1877) depended on renaissance spatial ideas (Romanyshyn, pp. 216-221), a hegemony maintained for centuries by the widespread institution of the Art Academy.

One rare aspect of the art of the High Renaissance which has immersive characteristics similar to those we previously saw in the Apse of Lascaux, is its seeking for a general, unified effect of *sfumato* composition; a smoky technique used for decreasing the separating dramatic force and physical presence of isolated figures in a work of art through immersing them in a fumey, semi-imperturbable equilibrium. Sfumato is the subtle, smoothly imperceptible, gradation of dark colors which approaches a smoggy unity useful in the creation of psychological atmospheric effects evocative of the immersive display in the Apse of Lascaux. Through sfumato, complimentary contrasts (*contrapposto*) find a unity previously absent and it is this unity that lends renaissance vision its most significant self-alternative to the soon hegemonic point-perspective. This is so as sfumato invites and promotes an expanded, diaphanous, dilated focus and necessitates a more expansive FOV (which as we have seen is consequential for experiencing total-immersion). Thus an immersive (anti-perspectivist) characteristic of high renaissance art was *sfumato unity* particularly because it depended upon a balance achieved as a matter of intuition and hence was beyond the reach of rational knowledge or technical manoeuvres. With sfumato we see the seeds of an immersive counter-tradition in opposition to the crisp, detached, geometricised optics of point-perspective. This oppositional optic practice of sfumato visualisation, which brings receptive vision to a state of sympathetic languor, was taught by Leonardo da Vinci to his students in his *Treatise on Painting* where he encouraged languid attention to the ambiguous grubbiness of cracks and smudges on decrepit walls which may suggest faces and forms to the viewer in order to aid artistic imaginative and visionary ability. (Vinci) Thus sfumato offers another type of management of vision and an expenditure of the incognisant exploration of immersive latent excess. Leonardo da Vinci's painting is regarded as a landmark of unified sfumato pictorial composition, as typified in his large, pre-scrubbed, 1497 fresco at the Santa Maria delle Grazie, Milan, Italy, *The Last Supper*.

However, far more overruling an artistic strategy was the pursuit of the ideal of "true" point-perspective which developed during the early-15th century (the early Quattrocento) in Florence. Filippo Brunelleschi (1377-1446) (Florentine architect and engineer and mastermind of the distinctive dome that crowns the

cathedral in Florence) is traditionally accorded the accolade of being perspective's pragmatic designer, as he created a sense of depth that integrated (by implication) the spectator outside of the framed pictorial space. Brunelleschi was certainly the first to carry out a series of optical experiments that led to a mathematical theory of perspective. Unquestionably Brunelleschi in 1425 contrived the first painting in "true perspective" when Brunelleschi insisted that his friends stand exactly where he himself had stood while painting the panel of the Baptistery of St. John in the Piazza del Duomo of Florence, and directed them to look upon the original scene he had painted. Then he held the painting up with its backside directly in front of the viewer's face. A tiny eye-hole was drilled through the middle of the panel. Gazing through the eye-hole, a viewer simply witnessed the original scene. But if a mirror was held up in front of the painting, the viewer now beheld the painting instead, and it was so accurately done in perspective that it was supposedly indistinguishable from the original.

Moreover, Brunelleschi analysed human vision mathematically and by so doing discovered the suppositional central vanishing-point that the horizon-line passes through (which is also the line on which two-point perspective is defined by the oblique vanishing points). With this schematization begins the emanation of a perspectivist scheme for envisioning and depicting range that remains paradigmatic to this day. (Shanken) Such a trompe l'oeil, linear perspective casts a system of single-point co-ordinates over the actual far-reaching manifold sphere, in the fabrication of an illusionism which deceives visible perception. This perspective tradition, according to Hal Foster, "was based upon the premise that the spectator's eye was singular, rather than as double as with normal binocular vision". (Foster, 1988, p. 7) Hence it represents vision through geometric perspective by projecting and holding holonetric 360° vision to a single, fixed-eye point and it is just these fixed rules of perspective that construct an <u>anti-immersivism</u> and creates and expresses anti-ambient divisions between the subject and the space.

The previously mentioned Leon Battista Alberti is avowed as being perspective's inaugural theoretical interpreter with the 1436 publication of his text *De Pictura* (On Painting). (Alberti, 1966) According to Edgerton, from that point on Western artists conceived of their subjects in terms of an imposed "spatial homogeneity" as determined by the horizon-line and the fixed gaze. (Edgerton, p. 9) Whilst it is possible to indicate the sources for perspective in Euclidean optics and geometry and in late-medieval/gothic versions of (and commentaries on) Arabic works on optics, the application of such theoretical material into the creation of a working system, and its transfer from the realm of physiology, philosophy and theology to that of painting's conceptual *window* is what constitutes Alberti's achievement. This achievement, however, formulated also a restricting boundary between the self and the richness of the sensual world. Indeed this window, which was at first conceived of as being open, eventually closed and became grilled with a grid (Romanyshyn, pp. 71-82) and it is just this closed and grilled optical perspective which, according to Romanyshyn, has become the cultural visual hegemony of the modern world. (Romanyshyn, p. 74) As a result, John Berger summarises

Alberti's window in disparaging terms as a "safe let into a wall, a safe into which the visible has been deposited". (Berger, 1977, p. 109)

Curiously, it is interesting to discover that Alberti designed grottoes modelled explicitly after ancient classical ones (Bonbon) which certainly cuts across any overly simplistic explanations of artistic ideals. However, Panofsky adequately demonstrated that Alberti and Brunelleschi, for the most part, tried to forget and obliterate the spherical allocentric visual field of the ancients, in favour of an angular-linear perspectivism by ignoring the bumbling holonetric glance. It will not be until a niche (reminiscent of the grotto) in the Baroque era, with its divided impulses towards the intimately hyperbolic melee of dynamic forms in cohesion with a nearly inert linear perspective, that a feeling for immersive ideals strongly reappears. But before investigating this niche, we shall research other early artistic strategies of display which entice a widening of the FOV and a pleasing dilation of the eye.

BX: Extended FOVs: Embellished Carpets, Tapestries, Mosaics and Murals

Horizontal self-transcendence is of the utmost importance. Without it, there would be no art, no science, no law, no philosophy, indeed no civilisation. And there would also be no war, no odium theologicum or ideologicum, no systematic intolerance, no persecution.
-Aldous Huxley, *The Epilog of The Devils of Loudun*

...man is an animal suspended in webs of significance he himself has spun. I take culture to be those webs, and the analysis of it to be therefore not an experimental science in search of law but an interpretative one...
-Clifford Geertz, *Two Countries, Four Decades, One Anthropologist*

Sometimes the image of the physical world is not so much a dance of gestures as a woven texture. Light, sound, touch, taste, and smell become a continuous warp, with the feeling that the whole dimension of sensation is a single continuum or field.
-Alan Watts, *The Joyous Cosmology*

All is but a woven web of guesses.
-Xenophanes, *Fragments*

Following the precedents of Lascaux, Newgrange and ornamental distributions, thus far we have observed some attributes of the rounded Assyrian sacred fertility pits shift into sacrosanct grove or cove nymphaea and subsequently into the immersive circles of celebratory Greek orchestra pits. From there we have followed some of the history of spherical architecture and the garden and its grotto. We will now discuss the sense in which immersive culture stems from the devise of the rectilinear Oriental carpet, which will be followed by a discussion of tapestries, murals, and mosaics.
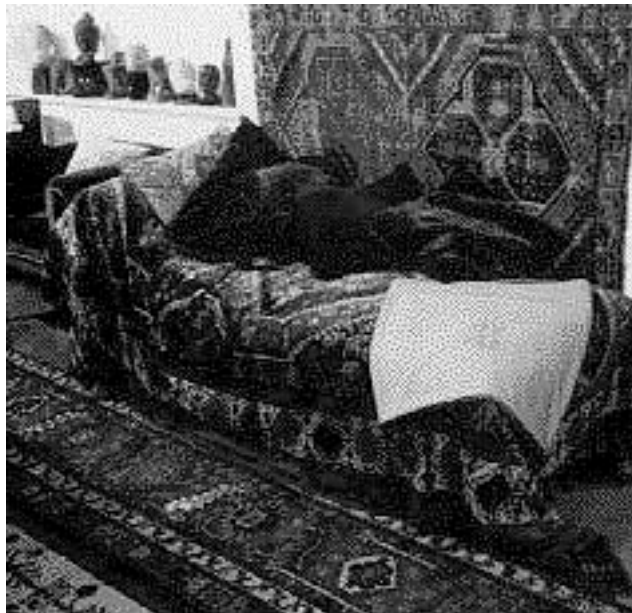
Sigmund Freud's therapy sofa

Sitting in the centre of a *syncretistic* carpet (Youngblood, p. 84) woven to correspond to the model of a paradise garden is certainly consistent with some ideal immersive concerns. It also is an intrinsic part of the

lifestyle of the Islamic world where ornamental rugs are woven: North Africa, the Middle East, Turkey, Persia, and India. Moreover, the Oriental carpet's significance in the West is indisputable when we consider that Sigmund Freud's famous analytic couch, perhaps the most charged piece of furniture in the Western world, is a variable gesamtkunstwerk niche of Oriental carpeting.

It is generally assumed that the carpet originates in Central Asia among the nomadic tribes to whom the Persians were related. (Harrow) The earliest example thus found is from the Pazyryck burial of a Scythian prince in the Altai mountains of Siberia, dated scientifically to around the 5th century BC, although a fragment from the Bash/Adar barrow has been carbon dated to 650 BC. (Ball, V.) Because of the nomadic historic background of the carpet's desert origin, we need constantly to appreciate the elements contributed by nomadic peoples who maintain a wandering rhizomatic vision of human relationships with the world around them. This interweaving of paths in space is exemplified in the typical Islamic carpet by the prevalent complex (labyrinthine-like) linear design element which is favoured: *interconnectedness*. In immersive terms we must be impressed with this tendency towards interconnectedness as applied to the resulting interlace and filigree which conceals both the end and the beginning of itself.

Within the arid environment of the Islamic world it is readily understood that a visual craving would develop for bursts of surrounding colour which would also convey reflection upon an otherworldly paradise. (Harrow) Correspondingly, carpets were used extensively to provide floor coverings in tents (as well as awnings) throughout Islam. But more than that, in the Islamic world an embellished carpet (conceivably used for daily prayer and as an assist to spiritual contemplation) reflects interpenetrating bodiless forces via its design intermixture, as well as creating material value. For many Islamic families the carpet is the primary repository of wealth and elaborate carpets often form at least part of a woman's dowry. (Erdmann)

Most Islamic carpets exemplify visual repetitions and symmetries in the creation of an airy mesh which is produced by hand knotting; a time consuming, patient activity which generally is assumed by (or dictated to) women. Correspondingly, the Islamic rug producing world itself consists of an intricate mesh of geographical regions populated by diverse linguistic, ethnic and religious groups. It is therefore not surprising to find tremendous variations in the designs, palettes and structures among the rugs woven. (Critchlow) Exploring the layers of meaning then is as complex as an investigation into the structure of human thought and language. To pretend therefore that the elements of design in oriental rugs can be simply evaluated in immersive terms would be misleading. However with the aid of the immersive imagery detected in Persian poetry it is possible to identify at least some elements which enable an immersive interpretation of a portion of Mid-Eastern knotted rugs.

As previously accounted, the notion of the garden in Islamic culture is extraordinarily meaningful as it represents blissful life after death. A review of all of the relevant utopian Persian mystical poetry is beyond the scope of this thesis, however it is important to realise that the Persian conception of a garden is different from that of the West, as it is closer to the West's enclosed grove or cloistered courtyard. The appropriate understanding of Islamic paradise should be thought of then as a form of walled enclosure in which one might expect to find flowing water, plants and trees; not unlike the Greek consecrated grove. (Kalter) This enthused utopian ideal was one pursued by pre-Islamic dynasties also, most notably that of the Sasanians who developed and extended the concept of a good life concluding in a utopian grove. (Harrow) We know too that the principle of *gnosis* (referred to as *tariqah* (the way)) governs Islamic art and that unlike in the West, in Islamic art there is no distinction made between metaphysics and dexterity. Craft is seen as the palpable outgrowth of extrinsic metaphysical laws which themselves derive from transcendental inevitabilities. (Bahà al-Din)

In the 12th century Muslims began to group themselves into tariqahs, fellowships organised around and named for the tariqah of given masters. One of the first large-scale orders, the Qadiriyah, formed around the teachings of Abd al-Qadir al-Jilani of Baghdad. Though rarely monastic in the European sense, the activities of a tariqah often centred around assembly halls (called *khanqah, zawiyah*, or *tekke*) that could serve as places of retreat or accommodate special spiritual exercises. The *dhikr*, for example, is a ceremony in which devotees meditated on the name of God to the accompaniment of breathing exercises, music, or movement, so as to attain a state of consciousness productive of a sense of union with God.

Thousands of tariqahs sprang up over the centuries, some associated with particular occupations, locales, or classes. It is possible that by the 18th century most adult Muslim males had some connection with one or more tariqahs. The structure of the tariqah ensued from the charismatic authority of the master, who, though not a prophet, replicated the direct intimacy that the prophets had shared with God. This quality he passed on to his disciples through a hierarchically ordered network that could extend over thousands of kilometres. The tariqahs thus became powerful centripetal forces among societies in which formal organisations were rare.

The teachings of the tariqah espouse that there is a post-existence paradise garden awaiting the faithful, a promise which suggests wider ontological repercussions. As a result, carpet weavers aspired to capture this ideal of post-existence by weaving a model of it in an aesthetic here and now. (Bahà al-Din) Indeed the pre-Islamic ideal of post-existence within a heavenly grove became fused with Qur'Anic metaphysical art ideals, providing a highly immersive proposition, as one may sit on a visually enlivening woven carpet while placing oneself within an enveloping metaphysical telos. By a set of symbolic manoeuvres, the borders of the carpet's designs create the permeable partitions of the enclosed paradise grove (i.e., conceived immersive world). Usually the patterns on the main field are ones which extend in all directions (implicitly beyond the frame) so

that the border functions by enabling a gaze at a limited area of the implied infinite design, thereby creating a sense of *enveloping horror vacui,* a sense which many hold to be a touchstone of all Islamic art. *Horror vacui* (vacuum fear) indeed is a useful term if turned inside-out when speaking of the glance's tendency to wish to see the entire spatial excess obtainable within immersive art's *multiplicity within unity* (as if afraid of missing something). This inverted horror vacui attribute of the Islamic carpet tradition is observable also, to a large extent, in the heritage of tapestries as well.
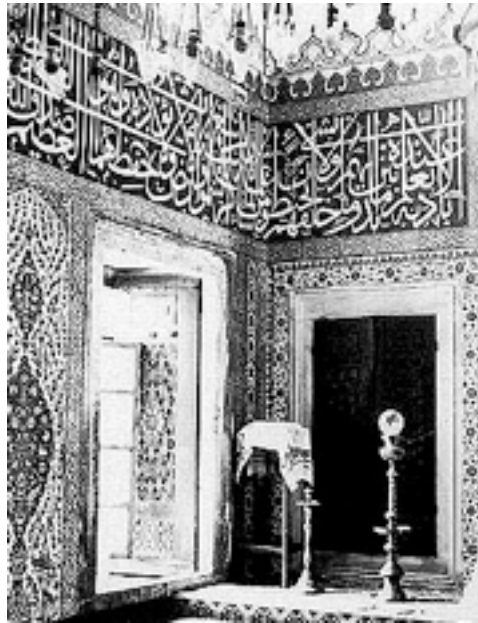
16th century interior of Selim II tomb, Istanbul

The earliest recorded tapestry fragment, with an inscription which dates it to between 1503 BC and 1449 BC, was found in Upper Egypt in the tomb of Tuthmosis IV. This tomb is only recently opened to public inspection and when I visited it what impressed me most was not its painted interior (though it did include a well-preserved section devoted to the Goddess Hathor) but its huge size and how deep it was located under the earth. The tapestry fragment found there is already of admirable calibre which implies that tapestry weaving had long been established in Egypt. (Kalter) We know that the Copts, the early Christians of Egypt (the word *Copt* is derived from the Greek word *Aegyptios* (meaning Egyptian)) were highly skilled weavers. During the Roman epoch small scale tapestry portraiture was relatively widespread. However, until about AD 1360 all tapestries were mainly small, most with simple designs of geometric or heraldic patterns.

Strictly speaking, a tapestry is a textile woven on a loom and created by the entwining of the warp and weft to make embellished cloth. There are two types of loom, the high and low warp loom, and several types of weaving methods. Tapestry and embroidery are often confused, but they are fundamentally different. An embroidery is patterned with a needle and thread rather than the interaction of the warp and weft, the design

being worked after the original cloth is woven rather than during weaving as with tapestry. (Ball, V.) Tapestries are normally woven with wool or linen warps, and the wefts are of wool (although high-quality tapestries have a large proportion of silk or even gilt thread).

Wall tapestries were particularly well established during the Middle Ages as the nobility moved from estate to estate taking their tapestries with them. (Kalter) By 1313 there are references to weavers in Arras, which implies that tapestry weaving was firmly established in France by this period. Arras weavers specialised in a style often delineating a garden grove-like lightness and elegance with Venus-type figures placed into a floral ground. Religious houses in Germany were producing tapestries by the 14th century woven on small looms. Consequently they are often only about .9 metres high (close to 1 yard), but very wide, as the warps are always horizontal when a tapestry is hung. These tapestries were used as back-cloths behind choir stalls or as friezes.

Chronologically the next important group of tapestries are those of the Gothic. One of the most famous early gothic tapestries is the *Apocalypse of Angers* which illustrates in a series of seven tapestries scenes of the end of the world according to St. John (circa ?-75 AD). The series (which reflect the influence of various illuminated manuscripts) was woven by the Parisian weaver Nicolas Bataille (1363-1400) in the years between 1379 and 1381. (Erlande-Brandenburg) Remarkably, at one point in the early-19th century, it was used to protect fruit trees from the frost, and part of it had been cut up for use as bed coverings. It was saved by the Bishop of Angebault who bought it back for the church in 1843 for 300 francs (roughly 50 of today's U.S. dollars).

Tapestry weaving in Europe on a large scale took a long while to emerge but the technique was well known and practised on a small scale in monasteries. It has been suggested that the Crusades and the influence from Moorish Spain stimulated demand of tapestry weaving. (Ball, V.) Other theories hold that it was changes in domestic architecture that were responsible, as it is not until there is a large wall space, such as that of a château hall, that the large scale capability of tapestry became fully realised. (Erlande-Brandenburg)

Because of the desire to use them to fill a room (for various reasons) tapestries were frequently made in large scale and often in a series. Charles-Antoine Coypel's (1694-1752) *Don Quixote* series, created in 1714, is perhaps the earliest example of an entire wall covered in tapestry. Later in the century, François Boucher's (1703-1770) lavish *Loves of the Gods* was created in 1775 at Gobelins to the dimensions of 3.64 by 6.27 metres (about 12 by 20.5 feet). Indeed room tapestries generally came to display a mannerist love of abundance and a richness of optic excess and hence they, quite rightly I think, can be placed along the immersive continuum which began with the ornamentation of the body and ornament's extenuation out onto

body coverings, though now expanded further onto the walls and furnishings of the body's surrounding milieu.

1775 fully tapestried room at Osterley

Furthermore, tapestries were not just used as wall hangings in addressing the total milieu, they also dressed the bed, which was a prestige item of furnishing since the Gothic era. This enveloping domestic item required textiles of all kinds in great quantities in that the bed needed textiles for its curtains, canopy, valances for the head, foot board, coverlet, decorative pillow cases, as well, of course, for its sheets and blankets. The trimming of a Royal State bed was usually very elaborate (and from our immersive perspective deeply symbolic) but many farmers and tradesmen also garnished their beds with tapestries and silk hangings and their tables with tapestries or embroideries or even ornamental carpets. In the Middle Ages tapestries also were sometimes used to decorate the streets for important events such as coronations or processions and even used, like in the Middle East, to decorate tents. In fact the European tapestry, like the Islamic carpet, was originally used in the Middle Ages as moveable furnishings so they had to be strong enough to withstand being transferred from place to place without damage. (Erlande-Brandenburg) With the gradual disappearance of the vagabond lifestyle, tapestries began to be seen as a permanent part of a room's atmosphere and hence became increasingly up-scaled to dominate a room, sometimes continuing around a corner if they were too big for any one wall. By the early-15th century, representational scenes tended to be finished off by a subtle vertical form such as a column or tree and this bordering tendency gradually developed into actual borders. (Kayse) By the 16th century tapestries were occasionally designed for specific rooms and sometimes given elaborate borders. A wonderful example is the famous late-15th century suite of tapestries entitled *La Dame à la Licorne* (Lady with Unicorn) (which recalls the nymph in her sacred grove), on permanent exhibition at the Musée des Thermes et de l'Hôtel de Cluny in Paris.

La Dame à la Licorne

With increased demand, larger workshops were established at Arras in the 13th century and at Antwerp in the 15th century. Workshops later were established at Aubusson in the early-16th century and at Gobelins by 1607, a studio which became well known for its sumptuous hangings with often gold strands woven within the fabric. Beautiful Gobelins tapestries can be seen today at Versailles in the Mars Salon and the Mercury Salon and at the Musée du Louvre. Also at the Louvre one can see the huge set of twelve tapestries which come from a Belgium renaissance studio entitled *The Maximilian Tapestries*, which were woven in Brussels in 1535. Poignantly, they appear adjacent to three low-relief sculptures (originally part of the *Fountain of the Innocents*) by the French renaissance sculptor Jean Goujon (1510-1566) which represent nymphs. In the same gallery one finds *The Three Nymphs* (also known as The Three Graces) which was carved by Germain Pilon (1528-1590) as a funerary monument for the extracted heart of the reportedly gay King Henri II (1519-1559).

The Gobelins studio had originated in mid-15th century as a workshop which specialised in the colour scarlet run by the Gobelin family of dyers. In 1662 King Louis XIV reorganised the studio into what became called The Royal Factory of Tapestry and Carpet Weavers to the Crown. At the studios head was placed the artist Charles Le Brun (1619-1690). Five years later the studio also incorporated The Royal Cabinet Makers and gold and silver craftsmen and this atmosphere gave birth to what we now think of as the Louis XIV style, a syncretistic style which emphasised a rich, all-over, ornamentational opulence. A prime example of the style are two Boulle ebony cupboards inlaid with mother of pearl, copper and pewter and ornamented with gilded bronze mounts, by the Royal cabinetmaker André-Charles Boulle (1642-1732), exhibited in the Louvre gallery which bears his name. The best Louis XIV architecture in Paris is the Dome Church (1677-1735) along with the baroque influenced Val-de-Grâce Church (1645-1667), with its splendid cupola decorated with a 1663 fresco by Pierre Mignard (1612-1695). Adjacent to the fresco is a medieval cloister garden left over from a former abbey. The Dome, though now the tomb of Napoléon I (1769-1821), is perhaps the best example of 17th century Louis XIV religious architectural style (what has come to been called the Grand Siècle style) just as Versailles exemplifies political architecture of the same epoch. It is noteworthy to see that

in the 1793 Revolution the Dome was transformed back into a symbolic Pagan site, from which all domes commence, when it was declared the Temple to Mars, but the name did not stick.

By the 17th century tapestries were beginning to be created (or re-adjusted) to fit most new rooms. Thus tapestries were cut to allow for fireplaces or windows, forming an all-over quality. Matching tapestry fabrics were used as covers for upholstered chairs and settees by the end of the 16th century. (Ball, V.) Indeed by the 17th century tapestries were regarded as permanent parts of a room's decoration and highly valued. The French studios Felletin and Beauvais thrived by offering tapestries in the grotesque style. By the late-17th century the borders become narrower and often composed of floral wreaths entwined with arabesques. This narrowing down of the border is continued into the 18th century when the tapestry border is reduced to an imitation of a picture frame.

To further unify the room, by the 18th century studios such as Aubusson and Beauvais specialised in producing tapestry chair seats and backs so as to expand the elaboration throughout the entire space. But by the late-18th century few tapestries were being produced, as they were not really in accordance with the then reigning neo-classical taste. The fashion for wallpaper also contributed to their decline in popularity.
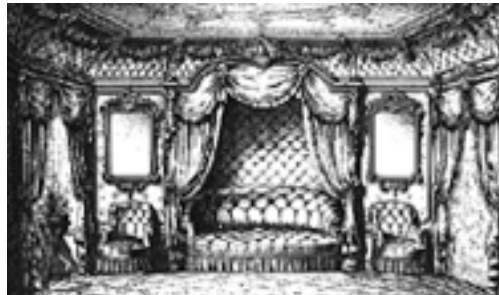
Parisian boudoir design from 1867

Wallpaper is the ornamental and utilitarian covering for walls made from long sheets of paper that have been stencilled, painted, or printed with abstract or narrative designs. Wallpaper developed soon after the introduction of paper making to Europe during the latter part of the 15th century. The earliest wallpapers in England and France were hand painted or stencilled. During the 17th century, decorative techniques also included block printing and flocking, a process whereby powdered wool or metallic powders were scattered over paper on which the design had been drawn with a slow-drying adhesive or varnish. The oldest existing example of flocked wallpaper comes from Worcester and was created in approximately 1680.

During the 18th century, wallpaper manufacturing developed far beyond the expectations of the early makers. From the very beginning, wallpaper had been regarded as a substitute for tapestry, painted cloth, leather, and wood panelling, and the first wallpapers were esteemed because they so cleverly and inexpensively simulated

the appearance of more costly hangings. Later designs, however, expressed the decorative possibilities inherent in the medium itself. In France and England new and varied styles became available and technical advances were making wallpaper more widely accessible. In 1785 Christophe Philippe Oberkampf (1738-1815) invented the first machine for printing wallpaper. Shortly thereafter, Louis Rémy Robert (1811-1882) designed a process for manufacturing endless rolls.

With this emphasis on endlessness, we can now turn our attention to another immersive friendly medium: mosaic. *Mosaic* is a technique which goes back to the 3rd millennium BC in the West. It consists of arranging and setting pieces of terra-cotta, glass, marble, stone or pebbles (and occasionally silver) into designs or pictures which cover floors, walls or vaults (or most immersively, all three in tandem). A superb, fairly recent, example of this tandem approach which I encountered was the interior of the mausoleum of the Sa Majesté Mohammed V at Rabat, Morocco.

interior of Sa Majesté Mohammed V

The experts are all in agreement that mosaic work must have had its origin in the East, but there is far less certainty about the date at which it was first practised. It is known that the Chaideans were skilled mosaicists already by 2500 BC, nevertheless the art was not much employed by the Persians, Egyptians, Assyrians or Babylonians.

The earliest known Western mosaics date from the 8th century BC and are made of pebbles, a technique refined by Greek craftsmen in the 5th century BC. Pebbles of uniform size, ranging in colour from white to black, were collected and used uncut to form floor and pavement mosaics. With this technique, Greek craftsmen were able to create elaborate and complex designs by outlining areas with tiny black pebbles. By

the 4th century, pebbles painted red and green were added to give greater variety of effect. Throughout antiquity, mosaic remained primarily a technique used for floors or pavements where durability and resistance to wear were paramount considerations. Stone, especially marble and limestone, was particularly suitable for this purpose when cut into small pieces.

The Romans were the first to use the stone mosaic technique extensively in the West ornamentally to claim space as an immersive environment and stone mosaic labyrinths have been found throughout the Roman Empire. The stone mosaics of the mausoleum of Galla Placidia at Ravenna date back to the year AD 430 and the mosaics of San Vitale were executed around AD 548. At Pompeii and Herculaneum (Roman cities covered by a volcanic eruption of Vesuvius in the year AD 79) we can find fine early examples of stone mosaics as well as painted murals. Too, a remarkable stone labyrinth was found at a Roman villa near Salzburg which contained four mosaic illustrations concerning Theseus and the slaying of the Minotaur. (Lethaby) There is also an opulent circular stone mosaic at Fribourg in Switzerland which depicts eight axes, four florid towers, eight heedful birds, and Theseus and the Minotaur at its axis. The circular stone mosaic labyrinth at Kato Paphos in Cyprus is vintage also, with minute particularisation to the paths and an elaborate central mosaic with five carefully portrayed figures.

mosaic copula at San Vitale

Mosaic was a widely utilised immersive medium in late antiquity and the Middle Ages, especially in Byzantium where it was utilised splendidly in the half-domed apses of churches. The development of a Byzantine style began in AD 330 when Byzantium (Constantinople) became the seat of the royal residence of the Emperor Constantine when Christianity was declared the instituted religion. Byzantine art may be said to have reached its highest standard in the 6th century when it spread throughout the whole Empire penetrating even the Balkan States and Italy. From the 9th to the 12th centuries it permeated the ornament of the romanesque style, including the Church of Sancta Sophia which became the model on which many mosques were based, so far as their main features are concerned. (Rossi) In many mosques a central mosaic immersive parabolic dome forms the chief feature, as in Sancta Sophia. The Great Mosque (1413) and the Green Mosque

(1420) are so modelled, as is the 16th century mosque Süleymaniye in Istanbul. For a dazzling visual feast which covers this enticing topic in detail see Yves Korbendau's book *L'Architecture Sacrée de l'Islam.* (Korbendau)

copula at Yechil-turbe, Brousse

As just mentioned concerning Pompeii and Herculaneum, the Romans used fresco mural painting (painting applied to and made integral with the surface of a wall or ceiling) to an extraordinary extent, but the use of the fresco technique first emerged in the Minoan period. In Pompeii and Ostia the walls and ceilings of almost all buildings, public and private, were mural fresco painted by artists using powdered pigments mixed with water and applied to fresh (*fresco*) plaster so as to furnish immersive, unified, aesthetic schemes such as were first painted on the stone interiors of Egyptian temples (such as at the splendidly painted interiors of Amada Temple (15th century BC) and Der Temple (12th century BC). Such murals are a form of painting that is truly three-dimensional as it partakes of a given space's immersive physical characteristics. Representative of this inclination in Pompeii is the great Dionysian mystical consecration frieze of the Mysteries (circa 50 BC) at the *Casa dei Misteri* (Villa of Mysteries). This painting is the largest to survive from antiquity as it covers most all of the room in which it was painted. It depicts, it is believed, the secret initiation rites of the cult of Dionysos. As Oliver Grau points out, it is exceptionally puissant in creating the suggestion of immersive bacchanalian space and Bacchic inebriation in that the fresco covers all the walls of the room and the audience hence finds itself virtually amidst twenty nine life-sized members of a Dionysian sect and in the understood company of Ariadne, Dionysos, and a dancing Bacchant covered only with a veil. (Grau) Given its wrapped-around formation, the borders between conceptual and actual space seem to soften as an illusionary immersive space surrounds the audience, captivating its attention. We thus sense to be in the virtual company of an euphonious nymph who offers her uncovered breast to a fawn as horned men unveil an erect phallus. Such a widespread use of colour, design, and thematic management can radically alter our sensation of spatial ontology.

The oldest fresco mural in romanesque France is to be found at Auxerre, but there are other fine early examples, for example in the crypt of the St. Germain abbey, the vault of St. Savin-sur-Gartempe, the chancel of St. Martins at Vic, the apse of Berzé-la-Ville, the dome of Cahors, and the macabre dance of death at La Chaise-Dieu Abbey. In immersive terms, the finest frescoist I have ever seen is Ambrogio Bondone Giotto (1266-1337) and his Arena Chapel in Cappella Scrovegni, Padua, Italy. In 1306 Giotto finished painting a series of thirty eight frescoes in the Arena Chapel (so-called because it occupies the site of a Roman arena) which was built by Enrico Scrovegni in expiation for the sins of his father. The other major fresco cycle associated with Giotto's name is in the Upper Church of St. Francesco at Assisi, Italy, a fresco cycle which wraps a huge room in one harmonious sweep. Also the huge fresco cycle of Fra Angelico (1400-1455) at the San Marco Chapel in Florence is superb in immersive terms, as is the *Legend of the Cross* fresco series (1459) by Piero Della Francesca (1416-1492) in the San Francesco Chapel in Arezzo, among others.

Ambrogio Bondone Giotto, *Arena Chapel in Cappella Scrovegni*

BXI: The Multiple Ambiguities and Shifting Excess of the Baroque Immersive Impulse

The eternal conflict between reason and the heart is decided in my very flesh, but in my flesh irrigated by nerves.
-Antonin Artaud, *Manifesto In Clear Language*

Is not perhaps all ecstasy in one world humiliating sobriety in that complementary to it?
-Walter Benjamin, *Reflections*

Baroque art and architecture is that of the 17th and much of the 18th century in France, Italy, Spain, Germany, Austria, Portugal, Mexico and other European colonies in the Americas. It appears in such disparate cities as Prague, Seville, Goa, Rome and Ouro Prêto where at each location it appears slightly different while remaining essentially alike. The Baroque is known for its fugitive dynamic and a diversity-in-unity style, where one moment form appears solid and firm and the next fleeting and cloud-like. In so being, it clearly was a transgression of the Renaissance Classicism which gave it its birth. (Powell) But it was not a straightforward negation of renaissance classical aesthetics so much as a hyper-excessive abuse of them when we consider how the Baroque took renaissance conventions and whipped them rapturously into a frenzy; recombining parts and compressing or distending them. Hence the Baroque is both a stasis and a flight, in other words a viractual situation *par excellence*.

This porous Baroque period ranges between Mannerism, with its emphasis on the manner of presentation (which included departures from normal appearance via distortion, eccentricity, and/or exaggeration), and the Rococo. A number of baroque characteristics carry through in the art and architecture of the first half of the 18th century, although this epoch is generally termed *Rococo*, a geistesgeschichte which imperturbably indulged itself in feathery and splendourous excess with little constraint. Its distinctively immersive hyperbolic quality follows from the styles' high valuation of previously neglected ("lower") architectural orders such as pilater strips, pediments and volutes. The Rococo is known also for its asymmetrical display of shell-like and underwatery forms which complimented an emergence of formerly rarely depicted Pagan iconography such as that which highlighted Venus and the other nymphs. (Kimball) Much more will be said of the Rococo's immersive powers shortly.

It is by circumstance of their historical position that the best baroque and rococo artists/designers were poignantly aware that there was no longer any virtue left in formulating simple statements. Instead they advanced the realisation that experience may harbour not only ambiguity, but more positively, an ambivalence or multivalence and that a variety of experiences are required to express the fullness of immersive life. Thus the exquisite multiplicity of meaning available in the art of the Baroque exceeds Renaissance precedents and heralds another formation of salient immersive ideals.

Andrea Pozzo, *Ascendancy of St. Ignazio*

On inspecting the Baroque for immersive tendencies we immediately notice that many baroque ceiling murals are profusely hyperbolic, as is the case with Andrea Pozzo's (1642-1709) 1694 *Ascendancy of St. Ignazio* fresco on the vault at the San Ignazio Church and the San Carlo alle Quattro Fontane Church fresco by Francesco Borromini (1599-1667). Borromini's fused visual sequences (which blended into an aesthetic totality) created an effect on people that has been described as follows: "...they do nothing but look above and all around them, for everything therein is so disposed that one thing leads to another". (Norberg-Shulz, p. 97) This is achieved as every element invites the viewer to seek out its compositional relationship to the other elements and thus the viewer's perceptions are lead up to the spatial realm of the dome and its image of totality and infinity. (Portoghesi, p. 168) Also in Antonio Allegri Corregio's (1489-1534) 1530 fresco *Assumption of the Virgin* in the duomo of Parma the effect is of an ascent towards totality and infinity which surmounts and absorbs the spectator into a swirling vortex. In the absence of a mediating frame the viewer easily mentally enters this dizzying vacuum and ascends conceptually into heavenly vastness.

Antonio Allegri Corregio, *Assumption of the Virgin*

Turning underground, when immersed within the ambience of the fecund and grisly baroque/neo-baroque Cimitero dei Cappuccini located beneath the chapel Santa Maria della Concezione in Rome (circa 1626 to 1870) (Schuyt, Elffers & Collins, p. 177), I found myself tipsy with a morose and peculiar vision of viractual death: overwhelmed, engulfed, and supersaturated by an extremely dark lapidary style. The *mise en scènes* of this art-ossuary are arranged from innumerable human bones (the skeletons of over 4,000 monks) displayed by their survivors, the Alinari Brothers, in an unashamedly ornamental attack on the simplicity of death. The abominable, dank, subterranean syntax is so rich and evocative as to border on logorrhea. The style so purple as to spill over into ultraviolet.

This immersively opulent cove resonates with a beguiling virtuoso uneasiness which reaches far beyond its material circumference. And yet, at a time when our critical abilities have been systematically bastardised by media saturation and bludgeoned by decades of commerciality, the Capuchin monks' convoluted baroque visual style is to most merely disturbingly freakish. More the pity, because the Capuchin crypt spoke to me with a viractual voice both compelling and concerted. Indeed the crypt is such a powerful immersive space that it thrashed out of me my scepticism about the limits of eerie fantasy as therein I felt about me a disembodied, skinless, and offensive viractual stillness where from within countless skeletons seemed to stir and quiver and seethe about abhorrently. The elaborate unity and horrid continuity effect was not one of

melodramatic gloom, however, but one of comic/tragic reconciliation formed under the aegis of a totalised immersive excess.

The Cimitero dei Cappuccini's flower-arrangement-like nihilism is another example of the immersive dissolution of representation through negative hyper-promiscuity as discussed in relationship to the Apse of Lascaux's occupied sfumato. Here this promiscuity is further enhanced by emphasising our human disintegration anxiety as the crypt collapses human identity into a construction made up of literally dead distinctions between selves and signs. This fabrication speaks to the fact that we are all but schematic information (genetic code) immersed within the millenarian field.

detail from *Cimitero dei Cappuccini*

Equally the crypt made me sense that the precarious glittering life of today's representations are made up simply of all the previous images they have succeeded in disintegrating and recomposing. The eye can scan and emotionally identify meaning in the perceptual field of the crypt only because its structure is the sfumato, concave side of our own personal ego-image. The crypt is, in a sense then, like the Apse, another representation of all representations. And as such it is an attempt to represent the unlimited immersive field of representation. Therefore, it urged on me the idea of an immersive space in which images have no longer any identity or any distinctive place. Rather, here in the crypt's semi-chaos and ferment lay great hidden forces. Forces of vital emotional release where things and bodies are represented only from the madness and ecstasy which animate them. Here all are equally joined in the great flow of life and death, as in the depths of this compactness, blood, excrement, and doom join in sfumato obscurity. Bound now inescapably and tightly together, human forms and the blank space that usually isolates them and surrounds their outline interpenetrate each other in an immersive folly far more horrific than transcendental. Anything, however, less terrifying, less crazy, less intoxicated, less contaminating to our perspectivist gaze would not be able to de/re-compose it as it must be if we are to achieve immersive holonogic visuality.

I followed this dire saturation up by visiting the usual early Christian catacombs in Rome and I found them powerful but entirely too claustrophobic and barren to say more to this study. However, after perilously flying back into Paris in fear for my life through what in France is called a *tempête* (wind storm) I went immediately to visit the Catacombs of Paris, which I found rich in associative immersive material which addressed existential anxieties in Baroque fashion.

The Parisian Catacombs were begun in 1785 following the decision to excavate all of the city cemeteries, stemming back to Gallo-Roman times, and move the remains to one central location, an abandoned Montrouge quarry from which the stones that built Paris were dug. Between five and six million skeletons were thereupon transferred to this location and stacked systematically according to body part (seemingly endlessly) against the walls. The walk through the resulting macabre grandeur, with its repetitive super-coded/anti-coded rigor, is stunningly beautiful. A rhythm of great discord is established necessarily entailing a process of intimidating sublime ideas which foresee us in expiration along with our own minuscule insignificance. This is immersion incapable of maintaining racial or sexual differences and as such is the animated crumbling of the normal monuments to human differences we construct daily. The Catacombs' tottering bone-lined promenade works against the completing, reassuring, mystifying representations of ideology and as such it ponderously invites the ultimate integration of form through an immersively indiscriminate account of human existence, complete with resultant long, painful, beautiful washes of commingled feelings and realisations of our ultimate maggot destination and expectant entry into poignantly fertile ground.

On returning to the light of day so as to inspect characteristics of baroque metaphysical space (clearly the Baroque is an ebullient Catholic art practice rather than a restraining Protestant one), I observed that the Baroque is saturated with the power of deception, with make-believe and trompe l'oeil effects. Indeed it is teeming with the gilded complexities of ethereal flowers, throbbing stars, false arches, dripping fruit, twisting leaves, winding columns, floating virgins, spinning clouds, and resplendent angels. In the baroque geistesgeschichte, artistic expression was predisposed to try to break out of bodily place and architectural space by superseding forms of constraint by over-saturating the norm. (Bazin, G., 1968)

A good example of this tendency is the late-baroque Catholic church in the tiny Mexican village of Santa Maria Tonantzintla in that it is an Indian version of baroque flourish. Here an all-over excessive decorative web dances around one in unrestrained profusion and forms seem to explode with pleasure as everywhere foliage glistens, leaves shine, angels hover, and carved fruit exude thick drops of dark honey. Such syncretistic excess is typical of the Late-Hispanic-Baroque, which is also called the *Churrigueresque*, after the Spanish architect José de Churriguera (1665-1725). This period has been called an exaggeration of the

Baroque to such an extent that it concluded it. (O'Neil, 1990, p. 27) Other fine Mexican examples of this tendency are the alter retablo in the former Jesuit seminary in Tepotzotlàn and the Rosary Chapel in the Church of Santo Domingo in Puebla. Here a decorative web extends beyond the retablo through the use of what is called *yeseria*, a type of interior plaster work which was used to cover vast areas in ornamental moulded relief. This technique evolved into what is called *argamasa* and was utilised widely in the Hispanic *Querétaro* style, which was basically Rococo by then. Both yeseria and argamasa provided a good base for the application of vivid colour, a taste Mexican architects satisfied fully through their use of glazed ceramic tiles which were used to cover everything from building façades to entire domes and cupolas. (O'Neil, 1990, pp. 358-359)
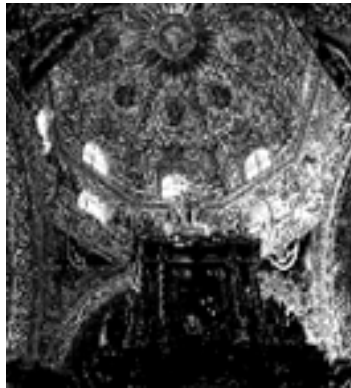
Rosary Chapel

As we have already seen, in the absence of previous framing restrictions the Baroque is fraught with metaphysical immersive challenges which may produce ecstasy in some or bafflement and mystification in others. Although it tolerated and accepted, even celebrated, the individual unique aspect of life, it transfigured all of its disperse elements into a single unifying will. Hence the world of the Baroque is a diverse one of contrasts while remaining essentially one unified (Roman Catholic) world. Most importantly, 17th century baroque art flaunted a prismatic rejection of Protestant visual simplicity, thereby undermining the, by then, conventional clarity of perspectivism in that perspectivalism, as previously explained, sequesters the subject from the environment by constructing the subject as supreme and the space of vision as detached. (Panofsky, 1991) However non-Latin, non-Catholic artistic rebuttals to this hegemonic scopic framing convention also were developed in northern Europe, approaches which implied the ignoring of previous perspectavist hierarchies, particularly in Dutch 17th century *nature morte* (still life) painting. By savouring the discrete particularities of visual experience in an obviously fragmentarily clipped way, Dutch 17th century nature morte painting presents to the viewer a seemingly capricious selection of richly articulated surfaces of the world which creates a presumed transversality.

However more central to our concerns is the baroque niche's format which links us back up to the grotto and all that it represents in terms of sacred/sexual contemplation. Baroque niche-space continues the immersive impulse and the immersive disposition towards filling and overflowing peripheral ambient vision with latent excess which implicitly returns perspectivalism to its legitimate province as a narrow and contingent intellectual convention.

What interests in the High Baroque is just this scopic all-over tension, as it emanates a forced, but fine spun grace in a vigorous continuum. The High Baroque's multiple, disjunctive strands of meaning are presented to the spectator simultaneously and it is for the viewers' swift, sophisticated mind to create a single tissue of meaning from it, even as the body is engaged in movement and in opposition to the disinterested static gaze of the dominant but petrified renaissance beholder. As we have seen, renaissance space tended to be torpid and planar, its harmoniousness achieved through a cumulative addition of clearly defined cognate elements, while baroque totality is achieved (at the expense of clearly defined elements) through the subordination of individual elements into an activated whole. In the baroque niche, it is the inter-interpreting spectator, not solely the artist, who may be regarded as the agent who affects meaning-laden synthesis on the rhythmically continuous but diverse component parts inextricably interwoven there. Also among the prevailing characteristics of the baroque niche relevant to the immersive intention are its feelings for a stirring dynamism and a wide gesticulation. Emblematic of that baroque ideal is the sensation of theatre (involving the motion of the spectator) which is evoked.

This is the Baroque way to reshape bucolic experience by increasing seductive opulence while at the same time seeking fine and intimate sensations of diversity in the moving sensuousness of its unified means. With it, an aspect of the Baroque achieved a partial overthrow of the dominant renaissance scopic order and the immersive is elevated to a position of momentary superiority. It is precisely this pernicious dereification of visual stasis which prepares the way for, and celebrates, the implications of the phantasmagorical aspects of immersion, as in the Baroque period there existed a characteristic demand for phantasmagorical illusions which required that an interior space, in churches principally, consummated a remarkably effulgent sense of gesamtkunstwerk totality by blending the elements of architecture, sculpture, painting, ornament and lighting together. (Bourke) The aim of this gesamtkunstwerk fusing was to orchestrate an otherworldly consciousness, which was to enhance the beholder's faith through the creation of an effect of unitary intensity in opposition to a continuation of consciousness' normal segmenting function. Consequently the phantasmagorically affected baroque atmosphere of indeterminate apparition was considerably concerned with a seductive style which functions best as whole gestalt composites which convey a sense of awesome grandeur, spatial complexity, and an interest in excess.

Though primarily Latin in sensibility (in service of the Roman Church's parsimonious and authoritative inducements), there are fine examples of the baroque taste for unrestrained phantasmagorically inclined ecclesiastical gesamtkunstwerks in Germanic countries as well, including the Abbey Church at Melk, Austria by Jakob Prandtauer (1660-1726) and the Benedictine Abbey Church at Zwiefalten, Germany by Johann Michael Fischer (1691-1766). Secular architecture too aspired to the ideal of attaining gesamtkunstwerk union between all of its parts and the building's surroundings as in the case of Gartenpalast in der Rossau (1711) which today serves us as the Museum of Modern Art in Vienna. The patron of the building, the prince of Liechtenstein, planned out both the building and the gardens with unified gesamtkunstwerk intent. However the juiciest spaces are the sacred ones, as in the aesthetic overture of the Baroque, religious doctrine became the *modus operandi* of inducement. Hence viractual affect was permitted to function through constructed illusions and through the enlargement of artificial inclination.

Previously, renaissance church architecture had been principally sympathetic to an orderly architectonic system based upon the aesthetics of gracefulness. Beauty consisted in a prudent adherence to mathematical proportions in all sections of the building. In comparison, the baroque church as a medium sought to establish a heightened perceptual instrumentality between the visualising subject and that of an entangling *magnum opus*. It is this union of apportionment with visually stimulating interchanges that make up the sturdy but fine corpulence of the Baroque's exorbitant proposition. In contrast to the lucid, linear, fixed, sealed framework of the renaissance perspective and world-view, in the Cinqueccento Baroque we observe a complication of spatial levels so ambiguously interrelated and so multiplied as to leave no one single immutable plane of reference the spectator can grasp.

Philosophically this Counter-Reformational submission to vertiginous experiences of rapture are indicative of the Baroque propensity for self-consciously eschewing the model of intellectual clarity in favour of a language of multiple ambiguities and shifting excess. We must recall that the *Reformation* was the reform of the Roman Church in the early-16th century which came from those who protested against its excesses. The various Protestant churches set up as a result of this reform ideal profoundly influenced the nature and scope of art where they flourished and this impacted heavily upon the employment of artists. In reaction against the opulent (and hence expensive) excessive aura of the Latin (Mediterranean tinged) Church, Protestants favoured strict simplicity. Hence church commissions declined. One can see how this would (or could) break-up the artistic employment structure which was capable of producing immersive installations. Still, as immersive art in the North shrivelled, the Roman Church retaliated with the *Counter-Reformation* agenda, a vigorous counter-offensive running from about 1560 through 1648 which offered to the public a new, even more, energetically excessive program of immersive abundance. With it, church construction and embellishment boomed, offering artists in Catholic countries a wealth of work. (Larsen) This counter-offensive initiated a revival of confidence in immersive experience which the, now called, Catholic Church

lavishly funded. Thus artists in Catholic countries worked, albeit attendant upon the narrow ideological objectives which allowed the immersive art to exist. (Hilbrich) Happily these objectives generally display a wider enchantment with nebulous metaphysical propositions which it ostensibly attempts to delineate by making the actual physical medium almost nowhere admit to being only what it is, preferring to simulate other media such as tapestry and/or bas-relief sculpture. Thus here we are presented with an illusionistic experience which shifts itself in a softly focused, multiple and perforated manner.

Accordingly, the unrestrictedness of the Baroque visual/intellectual situation goes beyond ideology towards a multivalence by way of a smoothed disjunction which supplies a unity of vision and fills the air with an attitude where space altogether ceases to be conceived as a void and becomes nearly palpable in its fused and responsive ether. (Nishida, 1958) Thus baroque spatial composition results in creating not a clear, unproblematic, ideological art, but rather a dazzling and disorienting deftness by blending a surplus of images and forms into majestic harmony. (De Bolla) This baroque dexterity inevitably weds suavity to grandeur through an implied sense of manifest splendour where elaborate conflicting contrapposta appears poised in equilibrium. Hence it provides a fluency and fullness to space which when conceived of skilfully becomes lyric and vibrant. As such it creates a sensuous impression (though languorous) through an implied transition from analytic to synthetic comprehension of pictorial form which fundamentally marks the mentality of the Cinqueccento Baroque atmosphere: a détente mood to bind and unify forces. (Maravall) In this synthetic sense then, the Baroque's rhizomatic visual injunction prepares art for the re-emergence of the immersive formation, in that it weans art away from the fiction of a "true" perspectivist visionality and reveals instead the possibilities which open up for inventing new scopic arrangements (and rediscovering lost ones).

Such a reduction in perspectivist constructs in favour of synthetic janusian immersive ideals comes together in baroque manifestation most vividly and succinctly in the *bel composto* (beautiful assemblage) niches of Gian Lorenzo Bernini (1598-1680) which were constructed in the various baroque chapels he created in Rome in the late-1600s. Giovanni Careri's book *Bernini Flights of Love, the Art of Devotion* beautifully articulates what I have been feeling internally when struggling to define precisely what it is I mean by the instinct for synthetic immersion which VEs suggested to me. Careri analyses the synthesising character of three baroque chapels which Bernini assembled, often in terms of the montage film technique pioneered by Sergei Eisenstein (1898-1948) in the early part of the 20th century. My main concern however is with his analysis of the Fonseca Chapel within San Lorenzo, Lucina in Rome and the immersive ideals which Bernini articulated through the, at that time new, bel composto mixed-media technique. If fact my interest is precisely located in the upper third portion of this composition, the segment concerning the relationship between the angelic bodies and their position in and relationship to space, weight, and to light. The way in which the angels first depicted in the top third in painting are extended beyond the limits of the painting into the garland of putti - which floats in the vault of the dome, linking the painted sky with the sculpted one, up into the central oculus,

which reveals the actual sky - presents to us an interesting progression in the expansion of the frame and invites issues of immersive viractuality to come forth.

detail from *Fonseca Chapel*

In order to understand how viractual ecstasy is represented in the rippling undulation of the bel composto we must look to see how painting, sculpture and architecture are "linked together in a fluid ensemble designed to create the experience of an overall expanding frame of reference" based on inter-relationships assembled between "miscellaneous hierarchical arborescent perceptions" (Ostwald, p. 457) in correspondence with their position within the sum synthetic-holonogic-total, as well as the contingent location of the spectator. These correlations, which guide us "through the composto by the montage of the arts" (Careri, p. 104), were explicitly announced by Bernini himself on his pronouncing that things in the Fonseca Chapel "do not appear only as they are, but also in relation to what is near them; a relationship that changes their appearance". (Portoghesi, p. 15)

Gian Lorenzo Bernini, *Fonseca Chapel*

To understand best the issues at work here, we need to look again at the metaphysical underpinnings which are driving the artistic expression, specifically the metaphysical ideology behind conceptions and representations of angels. Far from being the quibblings of cloistered theologians which bore no relationship to life, these concerns involved the very bedrock of the Church's theological, cosmological, and philosophical structure and teachings, as the figure of the angel was a primary representation of the human's position concerning relationships between space and matter in expansive/immersive terms. As such, a consideration of the angel's efficacy in an idealised viractual condition sets down an influential model for human potentiality.

The term *angel* is derived from the Greek word *angelos* which means *courier*. In that the messages delivered are airborne and move, angels fly and are winged. When we say that an angel is in a place, we mean that (s)he has applied *virtus* (an inherent power and potential) to that place. *Virtus* means both the potentiality and the capability to *generate special effects*. (Careri) In the Koran every angel is the key to a different endless ocean of knowledge which has no beginning and no end. (Eliade, 1991) Yet the exact composition and material quality of angels' bodies and how they relate to the space of the world and the celestial space of heaven, had

remained an urgent concern and of great debate in the Christian Medieval Ages between Augustinian Franciscans, followers of Saint Augustine (AD 354-430) and the Aristotelian Dominicans, followers of Thomas Aquinas (the Italian theologian who largely adopted the neo-Platonic ranking of angels believed to have been written by Dionysius the Areopagite). Augustinian Franciscan Saint Bonaventure (1221-1274) argued against the Aristotelian Dominicans that no *pure* form existed in creation and that the angels were composed of *hylomorphic matter,* matter bound up with the principles of otherness and mutability. Thus since matter contains the principles of mutability, angels posses a quasi-material body (what to me seems to be an evocation of fat-light). This fat-light angelic body cannot be circumscribed by place however, because place is a quality where quantity is endowed with position, unlike the quantum nature of light. Following the Bonaventurian model, the angels portrayed in Bernini's Fonseca Chapel imply in fat-light fashion that their bodies are constructed from a hyper-sensitive semi-materiality, fabricated of hylomorphic semi-transparent matter.

Primary to the Bonaventurian angelology of the 17th century, were the above distinctions, distinctions which were meant to also counter the Protestant critique of the Holy Eucharist. Hence, angels became the paradigmatic representation of immaterial hylomorphic substance. The main point of the Bonaventurian/Augustinian angelology - and what is at the hub of this reflection - is the idealisation of the semi-transparent hylomorphic flesh of the angel and its location and existence in space as being material yet virtually interfacable with immaterial spatiality, in other words its possession of viractuality.

The permeable quality of an angel's hylomorphic viractual body is represented in Bernini's baroque Fonseca Chapel's bel composto by the child-like winsome figures' semi-transparent relationship to their painted background, which conceptually spills over into the painting's sculpted frame and into the architecturally domed space from which the angelic figures emerge and return towards a light which constantly re-defines them with every fluctuation in its intensity. From the painted portion of the composto (by Giacinto Gimignani (1611-1681)) the garland of hylomorphic angels is transposed into relief sculptures which overflow the frame and expand the painting as if they were released from it into the space of the architecture on route to, and from, the circular domed light source which dominates the composition and which both physically clarifies and luminescently dissolves the depicted hylomorphic forms.

Fonseca Chapel's dome

This conveyance of semi-transparent hylomorphic entering and exiting by preternatural means, is the role which the angels play in the Annunciation narrative, which depicts and explains the forecoming viractual pregnancy of the virgin Mary below. The inference of these hylomorphic childish forms emerging from and returning to a central radiant hole stresses the narrative of female sexuality and reproduction (just as in the Pagan grotto) and hence again brings forth immersive issues of sexual perforation, pregnancy and birthing.

Clearly the oval format of the painting *Annunciation* (a copy by Giacinto Gimignani made in 1664 from an arched-shaped 1612 painting *Annunciation* by Guido Reni (1575-1642)) strengthens my conjecture that this form, this radiant circle and painted oval, were meant by Bernini suggestively to represent in abstaina the sexual female orifice and its reproductive capacity (i.e. the nymphian grotto theme). Moreover, on entering the church on a bright Italian day and approaching the dim Fonseca Chapel, the dilation of the pupil of the eye in reaction to the abundance, then semi-absence, and then increased presence of light within the sombre enclave (in parallel with the circular overhead oculus (reminiscent of the Pantheon) from which the heads and faces of angels peek) harmonises spectacularly with the dilation process of the female sexual aperture which proceeds and precludes sex and birth. In the Fonseca Chapel's bel composto, childish figures emerge out of the oculus and paintings and float in a gravity free environment in which their tiny nude bodies break free from, or are consumed by, light. The individual hylomorphic bodies which construct the spiral of cherubs which leads to and from the oculus in the dome grow progressively diminutive in relationship to their location near the oculus, creating the impression that their bodies are penetrating the stucco material which creates the dome, as if the architecture had no more physical density than a hylomorphic fat-cloud. The hylomorphic materialisation of the cherubs reaches maximum transport the closer it is situated near the light emitting perforation and it is precisely here in the Fonseca Chapel's bel composto where viractuality beckons the flesh to go outside of itself breath-like and for spirit to abandon the sheath of rational flesh in ecstasy. Here the membrane of ecstatic and swooning flesh is submitted to luminous pressures from within and infusions from without as it resists not the sacred/orgasmic passion of expanding and then re-assembling the self in a continual, mobile, dilation-immersion into *ex-stasis* (which literally means *gone outside itself as standing still*) typical of the symbolism of the cave/grotto. (Sjoo & Mor) As Careri asserts, "in contemplation, the

composto tends to *go outside itself,* in its own ecstasy becoming the vehicle of an experience that goes beyond all images." (Careri, p. 104)

This *ecstasy of going outside of self* (with its breath-like mercurial countenance) defines one important immersive ideal. Aesthetic immersive spaces (as we have seen particularly in the Apse, the grotto, and now the niche) give license to this particular dynamic dialectic of going outside of self in a way the perspectavist tradition seems incapable of doing, as the immersant is better arranged in symbolic space to voyage the unveiling circuits which are employed in the encouragement of ecstasy than when facing the pictorial; for when positioned within an immersive/expansive field the immersant's ambient vision is already being drawn peripherally outside itself and outside its commonly restricted (framed) edges.

Hence the Fonseca Chapel's encouragement of floating transference is the tension of a representation outstripping itself and as such it produces a Bataillian rapturous effect as it continually over-leaps the scope of image and concept and identity and space where one capacity turns against another in supernatural contradictory fashion, reminiscent of the ecstatic writings of Saint Theresa of Avila (1515-1582) and her descriptions of an engaging mystical union with Christ. (Theresa, 1977) While Saint Theresa describes this mystical union as a wave-like experience which cannot be related outside of the terms of incomplete and opposing images, she nevertheless stresses the experience as being one of a dynamic, intense and convulsive nature. (Stace, p. 11) These attributes, as codified in the Carmelite spiritual tradition, became another semi-transparent model on which Bernini based his teeming composition's rippling and pulsating operational mechanisms, including his Cornaro Chapel bel composto sculptural niche in San Maria della Vittoria which embraces his famous *Ecstasy of St. Theresa* (1652): what, frankly, appears to be a woman, tucked into her grotto, in the throes of orgasm.

Consequently, within Bernini's Cornaro Chapel niche, the boundaries which separate the ecstatic realm from the unecstatic realm are transgressed convulsively by St. Theresa's semi-transparent relationship to wave-like space and omnijective-like corporeality. In the Cornaro Chapel niche the writhing St. Theresa represents human (quasi-sexual) ecstatic potential as opposed to our relatively inviolable demeanour. Here too, by being able to pierce solid matter in analogy to the way veins web marble, the angelic cortege is privileged to escape the rules of containment which matter imposes upon the non-hylomorphic human body. In trespassing the mortal boundary, Bernini's angels are again unplatitudinously associated with a broad electromagnetic spectrum of fat-light and hence stand in opposition to containment. This makes the hylomorphic angel the site of hyper-real hyper-planarity and the perfect model to analyse in terms of viractuality and extensions of the subject into an implicit space through telepresence (reminiscent of what in magic is called entry into the *imaginable-world).* (Crowley) This imaginable-world is more subtle than the earthly world and yet denser than the angelic world (thus open to semi-transparent fat-light interactions) and hence a viractual zone of

connections and ecstatic flights of release (Spare), even as the body is clamped to the heavy, round, earth realm which is holding everything down with its transparent gravity.

BXII: The Rococo Counter-Reformation: Between Opulent Habitat and Non-Place

In describing Autopoietic unity as having a particular structure, it will become clear to us that the interactions (as long as they are recurrent) between unity and environment will consist of reciprocal perturbations.
-Humberto Maturana and Francisco Varela, *Autopoiesis and Cognition: the Realisation of the Living*

The value of an old work of art should be assessed on the basis of the amount of radical theory that can be drawn from it, on the basis of the nucleus of creative spontaneity which the new creators will be able to release from it...
-Raoul Vaneigem, *The Revolution of Everyday Life*

We shall now switch epochal emphasis from the time of the rich fullness and dynamic extravagance of the Counter-Reformationist Baroque period to that of the Rococo. Even more than with the Baroque, the Rococo spills its vast organised commotion over the viewer, assaulting the immersant with commands for his or her aesthetic involvement in its artificiality and elaborate unreality. Unfortunately photography flattens what in the Rococo is a complex but light application of ornamental splendour by overemphasising details which are only part of a whole fluid spatial strategy which serves to create a sense of amazement; a sense which these spaces still exude today.

Assuredly amazement is the initial impression. Nevertheless turgid or ecstatic seem to be the other two ways of interpreting the density of extensively adorned rococo space, according to taste. What is factually agreed upon is that the term *Rococo* came into usage in the closing years of the 18th century, although it was not acknowledged officially by the Académie Française until as late as 1842 when the Académie Française's supplement to its dictionary defined it as ornament characteristic of the reign of Louis XV (1710-1774) and the beginning of that of Louis XVI. (Kimball) The term was originally a derogatory one, most likely derived from the term *Rocaille*, which, as I described in the portion pertaining to the grotto, was a stylistic extenuation of craggy design which was used to fabricate interior grottoes and which tended to spread throughout the entire space. Briefly to recap: the florid sprawl which appears in the classical Greek nymph's sacred grove developed into the Italian grotto, which developed into the Renaissance interior grotto, which then passed into the fully all-over immersive attributes of the rocaille style. What interests me especially about the flamboyant vine-like sprawl of the rocaille/rococo interior, is how it suggests the viney rhizomatic shrubbery of the grotto entangled with our own bodies' thalamo-cortical system (the reticular activating system and the thalamus which links with the cortex, the basal ganglia, the hypothalamus, the hippocampus) (Jones, S.), as linear complexity is the motivating principle leading to the immersive effect in the rococo room. In majestic rococo rooms, exuberant linear ostentation pushes visual logic mercilessly to its limits via opulence in an effectual fusion of intensity with grace. That is their raison d'être and their oppositional stance in relationship to the coherent monocular geometricalisation of the renaissance point-perspective precedent. In fact, the sumptuousness of rococo sensorial space is, one could say, the first mature historical paean of ecstatic

adornment dedicated to immersive ideals in the West, as in its architectural interior decoration the Rococo exhibits a fondness for expanding, all-over intimacy. With the ubiquitous asymmetrical curves of its surface structure, it wraps itself around and transforms an interior into a confection of delicately coloured vines and ribbons, reminiscent of espousal pastry, and, only slightly removed, of the sacred grove of the nymph.

In 1683 the Premier Architecte du Roi (chief architect to the King of France) was Jules Hardouin Mansart (1646-1708), the architect who created the Hall of Mirrors in Versailles. It was in his studio and under his name that the rococo style began to emerge, most keenly through specific motifs and innovations of his designers Pierre Lassurance I (1655-1724) and Pierre Le Pautre (1660-1744). By the beginning of the 18th century, the intermixture of the Baroque with elements of Classicism (which had characterised the royal art of Louis XIV) gave way to the lighter, more gleeful art of the Rococo, a spatial art which demonstrated a heightened immersive opulence. (Kimball) The spatial conception of rococo architecture under Mansart began to show fundamental changes from the assured building of the Baroque. (Powell) Where baroque walls, piers and columns had been massive and forceful and where the space was tenaciously focused while being multifarious, rococo spatial ideals, on the contrary, envisioned space as delicately unified while being diffused with an abundance of light. Stylistically, while the Rococo protracted the complexities of baroque surface arrangement, it treated it as homogeneous ornamentation, justified only insofar as it charmed the eye. This stylistic shift away from the legacy of the rich Italian baroque interiors of Pietro da Cortona (as first introduced to Paris by Giovanni Francesco Romanelli in his work of 1644 for Cardinal Jules Mazarin) began to introduce a lighter style (subsequently called Rococo) into the remodelling schemes of some of the rooms at Versailles. In the last year of Louis XIV's reign, this rococo style was adapted in many interiors which involved Le Pautre's leading participation, including Parisian *hôtels particuliers* (private mansions) such as the Hôtel de Pontchartrain interiors built in 1703 and the chapel at Versailles, finished in 1710.

the Queen's rococo style chamber at Versailles

With Louis XIV's death in 1715 the characteristic phase of Rococo called *Régence* emerged. The all-over rippling watery feel introduced by Pierre Lassurance I and Pierre Le Pautre under Jules Hardouin Mansart was coupled with a new flashy plasticity consisting of curvaceous forms, mirrors, and oval hemicycles mixed with fluttering ribbons and/or acanthus leaves scrolling outward around a chamber. This trait is seen, for

example, at the Hôtel d'Assy of 1719 which was constructed under the new Premier Architecte du Roi, Gilles-Marie Oppenord (1672-1742). Another bold régence style rococo interior, know for its playful lightness, is the Hôtel de La Vrilliére (now the Banque (Bank) of France) constructed by François-Antoine Vassé (1681-1736) who became the chief designer on Le Pautre's death in 1716. Further developments in the style were made by Condé architect Jean Aubert (1719-1785) who remodelled the Grand Château at Chantilly. In the Chambre de Monsieur le Prince and the Salon de Musique, Aubert extended gold filigree across the expanse of white panelling along with a spidery scrollwork which spumed out onto the ceiling above the cornice at the corners and mid-points of the walls, creating a decisively immersive effect.

Following the régence style of Rococo is what is called the *Rocaille* (the most extravagant expression of the Rococo) even as I have said this term predates the emergence of the Rococo and suggested to it its name. (Kimball) As stated, Rocaille had originally referred to the shell-work employed in garden grottoes, but as of 1736 the term began to be used differently to designate a High Rococo, total, over-all design which included complimentary furniture and porcelain. La Pautre's basic concepts had been little embellished by Jean Aubert until Juste-Aurèle Meissonnier (1695-1750) and Nicolas Pineau (1684-1754) goosed the design concept into an even finer feathery network of gilt filigree that became ever more total while remaining light in spirit. Meissonnier, who was trained as a goldsmith, found his greatest fascination and inspiration in the asymmetrical. Although he produced only a small amount of work (his mark in fact has been found only on one piece: a gold and lapis lazuli snuff-box (1728)) his influence was widespread due to the favour of Louis XV and the posthumous publication of his designs in 1751 as the *Oeuvre de Juste-Aurèle Meissonnier.* In actuality, he had been responsible for only a handful of interiors: one for Léon de Brethous in Bayonne (1733), the apartment of Baronne de Bézenval in Paris (circa 1736) and a cabinet for Count Franciszek Bielinski in Dresden (1734).

Nicolas Pineau, on the other hand, was responsible for the more high-profile interiors of the Hôtel de Rouillé (1732), Hôtel de Villars (1733), Hôtel de Roquelaure (1733), and Hôtel Mazarin (1736) in Paris. Following the publication of rocaille theoretical treatises, ornamental pattern sheets and suites of engravings by the Augsburgian publishers Martin Engelbrecht (1684-1756) and Johann Georg Hertel (1700-1776), the rocaille ideal rapidly diffused throughout Europe and developed into what amounted to an international style. But by 1740 the Rocaille Rococo had reached its apogée in France and was universally accepted and hence underwent no further development. The most important works undertaken in this late phase are interiors by Germain Boffrand (1667-1754), who executed them late in his life. Notable was his creation of the Salon Ovale for the Princess at the Hôtel de Soubise (1739) where he blended a rhythmic succession of arched mirrors with extending tentacles of filigree with a series of painted panels by Charles-Joseph Natoire (1700-1777) placed in the spandrels and undulating coving, all spiralling around a central rosette.

Although essentially an immersive art, the Rococo produced some splendid painters, such as Jean-Honoré Fragonard (1723-1769) (a good example (with grotto referencing) being his *The Luck of the Swing* (1766)), François Boucher (*The Triumph of Venus* (1740)), and Jean-Antoine Watteau (1684-1721) (*Nymph et Satyr* (1715)) in France and Giovanbattista Tiepolo (1696-1770) in Italy. Boucher's favoured motif was the sexual endeavours of Venus, and King Louis XV's mistress, Madame de Pompadour (Jeanne Pompadour) (1721-1764), commissioned a set of four *Loves of Venus* in 1754 from him. However, a better example of immersively reflective painting of the time is Giovanbattista Tiepolo's 1757 fresco in Villa Valmarana (1750) outside of Vicenza titled *Rinaldo Abandoning Armida*. Here a love mirror and shield mirror are positioned at the two ends of the painting in order to mark out its ground of virtuality where Rinaldo's body will clash between his will to leave and his desire to stay. On being lured from his beloved Armida by brutal duty, one of Rinaldo's legs makes a vague step, but his head is still turned to Armida. The eyes of Armida try one last time to keep her lover in the love mirror, but in the image of herself, Armida is already seeing Rinaldo's exit. Resisting to the end the display of Armida's beauty, Rinaldo turns away from the love mirror to prepare himself to search for his own new warrior image in the virility of the two bearded knights who will lead him to the boat and into the sea towards war.

Beginning around 1725, the Rococo held sway in Germany with even more strongly inscribed peculiarities than existed in France. This Bavarian Rococo is fantastic and more varied in form than its French inspiration, while being less courtly. The first Germanic architects of this style were Johann Balthazar Neumann (1678-1753) (particularly good examples are his amazing chapel at the Prince's Residenz at Würzburg (1741) and his church in Vierzehnhiligen) and François de Cuvilliés (1678-1768) (his odium in the Residenz is outstanding as is his pavilion at Amalienburg) in Bavaria and Georg Wenzel von Knobelsdorif (1607-1753) and Carl von Gontard (1738-1802) in Berlin. In Bavaria and Austria the Rococo survived until the end of the century, while in France it had given way to the new austerity of Neo-Classicism by the 1770s.

Residenz at Würzburg, rococo interior

Johann Balthazar Neumann, *Residenz chapel at Würzburg*

A significant theme in Germanic rococo counter-reformational excess is certainly an extenuation drawn from the baroque expanse and its immense trembling flair for the plethoric but now taken to an even finer sugary spun *artiificialia*. For example, in the Church of the Assumption in the unassuming village of Rohr in Bavaria, trompe l'oeil theatrical curtains divide to disclose an absorbed Virgin Mary floating aloft, wanting any discernible means of support, reminiscent of the thinly veiled grotto theme of the Fonseca and Cornaro chapel niches. The Bavarian Rococo offers many such voluptuous grotto scenarios embedded within an architecture where structure melts into a bewildering myriad of curves and illusionistic spaces which give us pause; not just in the elaboration of viractual action, but in the congruent blending, flowing and folding of spatial pleats which forms an intrinsic part of a realm of experience recognisable as immersive.

Another marvellous example of Bavarian Rococo is the St. Johann Nepomuk Church in Munich (1746) which is better known as Asamkirche (Asam Church) after its architect Egid Quirin Asam (1692-1750). Together with his brother, the painter and architect Cosmas Damian Asam (1686-1739), they created a masterpiece of sumptuous sacred Rococo at 32 Sendlinger Straße. On entering the vestibule of the church, I encountered a consummate example of Bavarian excess. In this hybrid space, painting, sculpture and architecture work together in fabricating something between a prodigal odium, a playhouse, and a quixotic grotto. I was overwhelmed by a devastating folly of munificence and the giddy embellishment of silver and gold extravagance. The Asam brothers also worked on the interior of the lush Einsiedeln Abbey south-east of Zurich. Another fine example of Bavarian rococo interiors can be seen at the Schloss Nymphenburg, near Munich, which was designed by Johann Baptist Zimmermann (1680-1758).

Johann Baptist Zimmermann, *Residenz* interior

Bavarian Rococo church in Ottobeuren

Bavarian Rococo dome at Ottobeuren

Further pertinent insights into immersive ideals under the Bavarian Rococo are best characterised by the Wieskirche (1746-1754) designed by Dominikus Zimmermann (1685-1766) with its elaborate (possibly ostentatious) spectacular interplay of painted and sculpted forms. This church can stand representative of a dozen such 18th century whipped-cream ornamental eruptions in obscure villages, deep within the Bavarian, Swabian, and Franconian countryside: villages such as Ottobeuren, Weingarten, Osterhofen, Wallfahrsirche, Neresheim, Bobingen and Vierzehnheiligen. (Harries) In Austria a fine example of gesamtkunstwerk rococo space is the Wilhering Abbey Church, west of Linz.

Egid Quirin Asam and Cosmas Damian Asam, *St. Johann Nepomuk Church*

Wallfahrsirche, Swabia

Wallfahrsirche, Swabia

Wallfahrsirche, Swabia

BXIII: The Neo-Rococo Immersive Urge of the Dream King

New environments reset our sensory thresholds.
-Marshall McLuhan, *Through the Vanishing Point: Space in Poetry and Painting*

I want to remain forever an enigma; to myself, and to others.
-King Ludwig II, *The Dream King: Ludwig II of Bavaria*

Typical of 19th century Neo-Rococo is the belief that all aspects of a comprehensive architectural scheme - from its landscape setting and the building itself, to the interior decorations, right down to the utensils - should be orchestrated as a seamless and homogeneous whole under the direction of one overriding design. This is the most enduring legacy of rocaille style as its gesamtkunstwerk-like objective became preserved and further elaborated in the Neo-Rococo and Neo-Gothic. As we will see, it is an ideal which entwines its way through Fin-de-Siècle (1880-1899) architectural theory into the 20th century's principal driving art objective. This complete integration within a constructed space of the broadest concepts on down to the smallest details (each reinforcing the other) is what is referred to as the gesamtkunstwerkkonzept (concept of the total-artwork), a term, as explained in AVI, adapted from Wagnerian operatic theory. The philosophical understanding of the canon of the gesamtkunstwerk was the proclivity towards an integration of all related elements into a single aesthetic statement, resulting in a self-contained immersive world of *total design*.

King Ludwig II of Bavaria was born crown Prince on the morning of August 25th, 1845, eldest son of King Maximillian II (1811-1864). It is significant that he was born, and spent some of his early years, in the previously mentioned Nymphenburg Schloss replete with its rococo rooms, grottoes and frescoed scenes from Ovid's *Metamorphoses*. In 1857, at age 12, Prince Ludwig heard of *Lohengrin,* the operatic production by Richard Wagner which was in production in Munich. That Christmas, Prince Ludwig received a copy of Wagner's 1851 text "Opera and Drama" from one of his tutors and soon after became captivated by all of the composer's published theories, including "Das Kunstwerk der Zukunft" (The Art of the Future) in which, as previously stated, Wagner theorised the gesamtkunstwerk. (Westernhagen, p. 332) This gesamtkunstwerk ideal, in one way or another, affected the aesthetics of every one of Wagner's works from *The Valkyrie* on; including *Siegfried, Twilight of the Gods, Tristan and Isolde, The Mastersingers,* and *Parsifal.* It is this gesamtkunstwerk desire for what Wagner saw as "total drama" (Stein, p. 6) which was passed on to Prince Ludwig.

In 1861 Prince Ludwig saw his first production of Wagner's opera *Lohengrin* which made a profound impression on him (as it did on Wassily Kandinsky) (Kandinsky, p. 5) instigating a long and intense admiration and eventual supportive role for the composer and his gesamtkunstwerkkonzept ideals. (Blunt, W., pp. 21-45) When Prince Ludwig was at age nineteen, his father, King Maximillian II, died unexpectedly,

marking the beginning of the reign of King Ludwig the II of Bavaria, the *Dream King*, palace builder and generous patron to Richard Wagner. And indeed, what is more fluidly immersive than dreaming, in that a dreamer can rapidly shift from participation in one scenario to another instantaneously. (Hillman, 1979) As Frank Biocca points out, in dreams "it is apparent that the mind is capable of producing very compelling spatial environments". (Biocca, 1998) In dreams people and things appear around us out of nowhere, and they shift appearance and proportions with little attention to the concrete laws of conservation. (Segal) As Carl Jung (1875-1961) and others have suggested, this feature of extemporaneous creation in dreams may be how we encounter our unconscious desires. (Jung, 1916)

Wagner, as we have already seen, holds a lofty place in immersive prominence due to his penned theory of the total-artwork (gesamtkunstwerk). To this end he (along with the architect Otto Brückwald (1841-1904)) oversaw fabrication of a festival theatre (Festspielhaus) in the city of Bayreuth (home of the grotto rich Lustschloss) which opened in 1876 with *Der Ring des Nibelung*. Bayreuth was characteristic of amphitheatres designed by the architect Gottfried Semper (1803-1879) who at that time was professor of architectural theory in Zurich and a close friend of Richard Wagner. Semper believed that separate architectural elements needed to be fused and integrated. Semper's philosophy of building influenced Frank Lloyd Wright (1867-1959) via Louis Sullivan (1856-1924), among others. (Placzek)

For Bayreuth, Brückwald and Wagner rejected the eclecticism of 19th century theatres which Wagner described as the architecture of effect without cause. (Breton, G.) Rather, Brückwald and Wagner (influenced by Semper) set out to rediscover the forfeited unanimity which they believed to have existed in the classical Greek theatre. Hence at Bayreuth the Italian box system was abandoned in favour of a fanning, semi-circular, quasi-amphitheatre and the gulf between the stage floor and the tiers of seats was narrowed by plunging the orchestra into a pit (to a large degree) which was tucked underneath the stage. This design marked a turning point in the evolution of opera houses (as did the circa 1830 introduction of gas lighting into the opera auditorium which plunged it into darkness during performances). (Breton, G.) As a result of the ideals outlined by the gesamtkunstwerk, for the first time in three centuries the trend of removing the audience from the artwork (which darkness exacerbates) was slightly reversed.

French architect Claude-Nicolas Ledoux in 1774 had foreshadowed this purpose with a theatre he built in Besançon (now destroyed), in which he introduced a new type of seating scheme which lessened the segregation between the audience members (the conventional Italian boxed-seating arrangement had become a veritable cove for amorous rendezvous) in favour of better (and more equal) seeing and hearing conditions. Ledoux replaced the isolating Italian style box-seating with balconies which raked back in tiers rather than being superimposed. Like Brückwald/Wagner, this formation also referred back to the Greek *cavea* and represented an inversion of the then traditional hierarchical seating; a spatial redistribution which predicated

the social democratic ideals behind the French Revolution. Ledoux placed the poorest spectators, who were formally put in the stalls under the Italian system, into the upper balconies and through doing so, provided a foretaste of the amphitheatre revival which Wagner and Brückwald achieved a century later.

In order to write *Der Ring des Nibelungen*, Wagner (now under the patronage of King Ludwig II and living at 21 Briennerstrasse, Munich) surrounded himself and his piano in a powdery yellow satin room with matching yellow valences of the same material, which he referred to as the *Grail*. (Blunt, W., p. 33) In this large room, everything was satin, silk tulle and lace. The white satin curtains were decorated with lovely faux roses and the frames of the mirrors and pictures were puffed out with tied-back pink satin bows (with even a rosette of satin in the centre of the ceiling), clearly an effort for a unified feeling.

Colors of the room would change with moods. Wagner for a time covered the windows with a heavy violet velvet while working from a violet armchair wearing a violet velvet hat. (Blunt, W., p. 35) Wagner's cocooning disposition seems to echo King Ludwig's penchant for preferring to sit alone in the midst of an artificial world of make-believe where he could project himself out of his present and into fantasised historical, usually Medieval, heroic roles. Wagner himself spoke of this ideal element of escape and referred to his working ideal as bringing "a non-existent world into being". (Schneck, p. 226)

This aim of creating an inorganic world and luxuriating in its rarefied artificiality was well articulated in 1884 with the publication of Joris-Karl Huysmans's (1848-1907) décadent novel *A Rebours* (Against Nature), a story of a recluse art worshiper who yearns for new sensations and perverse pleasures within a transcendental artificial ideal. (Huysmans) Décadent French theory, (Pierrot) which is almost equivalent to Fin-de-Siècle Symbolist theory, aspired to set art free from the materialistic preoccupations of industrial society. (Balakian) The foremost visual décadent artist, in my estimation, is the phenomenal satanic-inspired Félicien Rops (1833-1898). (Draguet, p. 2)

Symbolist theory is that formed primarily by the French poets Jean Moréas (1856-1910) and Stéphane Mallarmé (1842-1898) as influenced by Charles Baudelaire's collection *Les Fleurs du Mal*'s (The Flowers of Evil) concern with the theme of escape from reality. But while Baudelaire's escapism had been of an essentially emotional and sensual kind, Mallarmé's was of a much more intellectual bent, and his determination to analyse the nature of the ideal world and its relationship with reality is reflected in the two dramatic poems he began to write in 1864 and 1865, respectively, *Hérodiade* (Herodias) and *L'Après-midi d'un faune* (The Afternoon of a Faun). By 1868 Mallarmé had come to the conclusion that, although nothing lies beyond reality, within this nothingness lay the essences of perfect forms. The artist's task is to perceive and solidify these essences. (Mallarmé, 1945)

In 1886 Moréas produced a manifesto which outlined the theory called "Le Symbolisme", thus giving the outlook its explicit name. The movement/mood also included the poets Paul Verlaine (1844-1867) and Arthur Rimbaud (1821-1867), the composer Claude Debussy (1862-1916), and the painters Paul Gauguin (1848-1903), Odilon Redon (1840-1916), Jean Delville (1867-1953), Pierre Puvis de Chavannes (1824-1898), Fernand Khnopff (1858-1921), and Gustave Moreau (1826-1898).

King Ludwig's expressed stylistic aim was just such a Symbolist/Décadent one (Reed) in that his supporting Wagner's erection of Bayreuth was intended to bring the public into a more "thoughtful and lofty state" and to "help it gradually to free itself from a taste for cheap and frivolous entertainment." (Blunt, W., p. 37) It is safe to say, I believe, that he desired the décadent ideal for himself in ways of taste and state of mind as indicated in a letter to Wagner of May 10th, 1865 where he declared "we must break through the barriers of custom, shatter the laws of the base, egotistical world. The ideal must and shall come to life!" (Blunt, W., p. 50)

Linderhof, one of King Ludwig's décadent fantasy palaces, was built in neo-rococo style by Georg von Dollmann (1830-1895) to resemble the Petit Trianon of Versailles; Marie-Antoinette's (1755-1793) famous royal playground which was designed to resemble rural Austria (an impressive immersive work in itself) which included an adjacent Temple of Love. Linderhof is the only one of Ludwig's palaces that was actually finished. Of Linderhof, King Ludwig said in a letter: "Oh! it is essential to create such paradises, such poetical sanctuaries where one can forget for a while the dreadful age in which we live." (Blunt, W., p. 143) Located close to another of the King's castles, Neuschwanstein (designed by Eduard Riedel (1813-1885)), the King often retired to Linderhof to indulge in his decorated isolation. Linderhof owes a large part of its charged enchantment to the sublime natural beauty of its mountain setting and to its admirable prim French gardens. In the middle of its grounds an embellished fountain emits a 30 metre high (about 100 foot) water-jet bathing a golden statue of Flore. The interior of Linderhof is a melee of neo-rococo ostentation and mirrors (Bavarian Neo-Rococo is based on Bavarian Late-Rococo, an already plenteous style) and the glitter of gold is prevalent throughout. The King's Throne Room, modelled on an abstract Byzantine basilica, requires brief comment as King Ludwig oversaw every detail of its conception and execution. Its walls are arcaded on two levels and the ceiling suggests the immersive umbrella of a star studded cerulean stratosphere, with indigo, porphyry and gold as its predominant colors. Yet the most dazzling of the rooms are the Mirror Room and the King's bedroom (which was based on designs by Eugen Drollinger (1858-1930)). The King's crown too was fantastically carved and decorated with palms, Goddesses and cupids, but unpropitiously he inauspiciously perished before it was finished and never wore it.

King Ludwig's bedroom

According to Jean-Christophe Royoux in his essay "The Expanded, Extended Héritage: Transformation et Ramifications d'un Concept Esthétique dans l'Art Annees Soixante" large exhibitions, such as the Paris Exhibition of 1878, mark the beginning of global consciousness as they offered to the visitor an expanded account of the world by presenting artefacts from around the world for contemplation. The example Royoux gives is the 19th century shock ingested by contemplating an intricately embellished shoe belonging to a Chinese woman. (Royoux, p. 6) Thus in terms of consciousness it is important to note that a Moroccan house was purchased for Ludwig in Paris at the Exhibition of 1878 and brought to Linderhof where Ludwig sat to read and that in 1876 Ludwig had acquired a Moorish style kiosk from Schloss Berg in Bohemia for Linderhof. In the centre of the kiosk he sat a peacock throne designed by Franz von Seitz (1817-1883). An ornate immersive example of this European trend to copy the Islamic can still be entered today at the Maison de Pierre Loti in Rochefort-sur-Mer, France: an 1878 *Salon Turk* which was created by the romantic author Pierre Loti (1850-1923) as a richly patterned, all-over, intermixture of voyages both real and virtual. One is reminded here of the poet Samuel Taylor Coleridge's (1772-1834) famous poem "Kubla Khan", written on the basis of an opium dream, in which the legendary ruler builds a pleasure dome in Xanadu over a hidden sacred river where women mourn and play. After reading Schelling and other idealist philosophers, Coleridge began criticising what he saw as the Enlightenment's over-mechanical empiricist view of the mind as a passive absorber of impressions and began emphasising the psychological and artistic aspects of the organic mind. (Stewart, p. 77)

In addition to the exotic chambers thus mentioned, a small hunting box which King Maximillian had built in the Alps below the 1,800 metre (6,000 foot) Schachen (a peak of the Wetterstein range south of Garmisch-Partenkirchen) was redone by Ludwig in an Indian manner (a style then just coming to European fashion) in the early-1870's. Though one may interpret this fact as a superficial gesture, perhaps concepts of Brahmanism, where the self and the environment are connected (Havell), may have reinforced Ludwig's taste for the

gesamtkunstwerk. The King did write to Wagner in 1885 saying that, "India and Buddhism have something inexpressibly appealing to me, evoking rapture". (Petzet, p. 247)

However, it is another extraneous space close by his lavish polyglot palace at Linderhof which holds the most immersively significant (and cheeky) of King Ludwig's décadent dream realisations: the aforementioned flamboyant Venus Grotto (a reference which brings us back to sacred nymphaea). The 9.9 metre high (33 foot) Venus Grotto was designed by Fidelis Schabet (1813-1889) and fabricated in 1877 of garnished grout. (Schuyt, Elffers & Collins, p. 59) It was equipped with artificial arc-lighting, an ersatz rainbow, a wave machine and central heating, all set in harmonious action to recreate the phenomenon described in Wagner's first act of *Tannhäuser*. (Miller, N., pp. 115-117) The Venus Grotto was first intended to be built at Neuschwanstein, but do to lack of a suitable site, it was moved to Linderhof by a December 15th, 1875 Royal decree and the work was carried out in 1876 and 1877. Dr. Michael Petzet, writing in Wilfrid Blunt's book *The Dream King: Ludwig II of Bavaria,* describes the grotto's space as one which allows the visitor an encircled mirage where "stage and auditorium are blended into one", creating a *total theatre* as it "did not separate the onlooker from the stage". (Blunt, W., p. 234)

The Venus Grotto is furnished lavishly with fake stalactites, giving one the impression that one has entered a Lascaux-like sacred space. According to Naomi Miller this artificial grotto, compared to all others, "most nearly simulates the experience of exploring large cavernous spaces" (Miller, N., p. 116) even as garlands of roses are strung throughout its 9.9 metre (33 foot) high cupola expanse (which extends hundreds of metres/feet inward). The grotto also contained a cascade and a fully functional artificial moon and could be illuminated by electric lights coloured to suit the mood of the King. The explicit models for the Venus Grotto were the Blue Grotto at Capri (Richard Hornig, the King's equerry, was sent twice to Capri to check the precise shade of blue) and King Maximillian's tiny grotto at Hohenschwangau, in which Ludwig had played as a wee Prince. In the Venus Grotto, five distinctive lighting effects could be made to play for ten minutes in turn by automated means, concluded with the appearance of a spectral rainbow just over the *Tannhäuser* set painting. It was very modern in that it was the first electrically illuminated installation in Bavaria. Of it King Ludwig said, "I don't want to know how it works. I just want to see the effects." (Blunt, W., p. 151)

detail from the *Venus Grotto*

King Ludwig had installed in his den (a study filled with paintings illustrating the erotic aspects of the *Tannhäuser* fable) a clandestine inlet which discharged him into his cherished Grotto of Venus. The Grotto of Venus is entered by a sharply angled antechamber which leads to the principal chamber. The first entity that one notices is a diminutive lagoon (replete with painted water nymphs, dryads and flying harpies) fed by a pattering cascade. As mentioned, the lights could be controlled to change colors, for instance to the cerulean of Capri or crimson to evoke the Grotto of Venus in the Hörselberg grotto where Tannhäuser dallied with the Goddess of Love. Exit from the grotto is made by way of a prolonged serpentine, stalactite-filled corridor which leads to a dolmen-like shaft that swings unclosed.

By gliding in the enchanting flamboyant cockle-boat over the face of the lagoon, King Ludwig could site himself in the midst of the grotto's ambience and surround himself entirely on every side, even if he was only experiencing a presentation that incorporated the variance of coloured lighting effects. On the lagoon, which could be ruffled by an artificial wave machine, the King kept two swans, symbols of eternal bliss and immortality, along with his enchanting cockle-boat in which he would be rowed by a lucky servant.

Wilfrid Blunt, in his book *The Dream King: Ludwig II of Bavaria*, reports that there was a staging of the first act of *Tannhäuser* in the grotto but that the sound of the waterfall rendered subliminal the singers voices in a thick din mixture of sound and by an acoustical space described as "freakish". (Blunt, W., p. 151) This concert report however, Blunt mentions, may be fictitious.

We are sure that the King, true to this aspiration to be rapturously transported, had performed for him many operas in the opulent Orientalist manner, such as Jules Massenet's (1842-1912) *The King of Lahore,* of which the King commanded two private performances. Indeed there were staged frequent operas in the Oriental style for the King including Felicien David's (1810-1876) musical adaptation of Thomas Moore's (1779-1852) epic orientalist poem *Lalla Rookh*. For the 1876 performance of *Lalla Rookh* there was painted a huge depiction of the Kashmir Valley which the King wished to transfer to the Venus Grotto to become interchangeable with the Tannhäuser painted setting.

Herrenchiemsee, also built by Georg von Dollmann, is another jewel in Ludwig's crown of castles. It is beautifully set on a small island in the Chiemsee, Bavaria's largest lake. The Chiemsee holds three islands: the Herreninsel (with an ancient castle that once served as a college of Augustinian cannons); the little Fraueninsel Island (with Benedictine abbey dating from AD 782); and the tiny Krautinsel Island (which according to legend provided a spot of rendezvous for amorous monks and nuns). In 1873 King Ludwig purchased Herreninsel and decided to build there his bantam interpretation of Versailles, France, which he

visited twice, including the enrapturing *Galerie des Glaces*. Hence Herrenchiemsee is replete with mimicked French rococo styled suites designed by Eugen Drollinger. Drollinger created a pale blue salon and one in pink within which an infinity of mirrored reflections spin the ornate wall carvings (intertwined with garlands of efflorescence and birds) into an endless visual lattice. Though Herrenchiemsee remained unfinished, it nevertheless was extravagantly dressed with the distinguished 91 metre long (100 yards) Hall of Mirrors, longer than the one in Versailles (which is 73.8 metres long by 9.9 metres wide (246 by 33 feet)) which Ludwig lit with 2200 candles organised in crescents and cruseiforms. It is reported (Blunt, W., p. 154) that the King would have the entire palace lit with over 4000 candles so as to enjoy the immersive dazzle such a prodigality of flickering candlelight (reflected in the 100 mirrors) provides.

Also the King, who often preferred to sleep during the day and remain awake at night, put to use remarkable artificial lighting arrangements for immersive purposes. In 1865 King Ludwig ordered a blue globe to bathe his bedroom in a uniform sapphire radiance along with an installation of an artificial moon and rainbow so as he could better advance his immersions into reverie while in bed. Already the Herreninsel bedroom was unbelievably lush with each curtain weighing one hundred pounds. It is reported that thirty to forty women spent seven years creating the bed covering for the sovereign's berth (Blunt, W., p. 154) yet the Dream King spent but a week in it, as he drowned under mysterious circumstances on June 13th, 1886, five days after being pronounced deranged.

King Ludwig II, in contrast to his art collecting grandfather King Ludwig I (1786-1868), had purchased only one painting of any importance in his entire life, Anselm von Feuerbach's (1829-1880) *Medea*. The King preferred murals, for their obvious immersive animus, but also because they more easily blended into the total-artwork which the King was creating with his behest. Indeed Ludwig issued orders concerning the smallest details and aesthetic decisions involved in the materialisation of his façadist vision; an integumental vision based on a spiritual/theatrical conception of the function of adornment as providing unifying and uplifting transport. *Façadism* is the term for this Ludwigian style of conceiving and executing space; a reproach directed at architects whose interest in architecture is bounded by the fabrication of façades. It is to be remembered here that Christian Jank (1813-1888), the scenic designer at the King's Court Theatre (who specialised in rococo interiors) provided King Ludwig with highly romantic theatrical sketches of fairy tale buildings during the planning and erection of Neuschwanstein. Furthermore Franz von Seitz (1817-1883), who was the technical director and costumer at the Munich Court Theatre, played a decisive part in the fabrication of the interior of King Ludwig's Munich Residenz (home to Friedrich Sustris's mannerist Grottenhof) and assisted with the interior decoration at Linderhof (besides providing the King with costumes he could wear around the building).

At Neuschwanstein the King's bedroom was based on the highest ornate characteristics of the Late-Gothic, a stylistic period which served to function as a theoretical impetus to Eugène Emmanuel Viollet-le-Duc (1814-1879), the French neo-gothic architect and architectural theorist. The King's Neuschwanstein bed, for example, was carved from walnut and was surmounted by a forest of tiny gothic spires which created the impression of transforming the bed into a canopied tomb, a feat which kept seventeen skilled artisans at work for four and one half years.

Viollet-le-Duc deserves special attention in relationship to the concept of the immersive gesamtkunstwerk because his ideas influenced many Art Nouveau architects who themselves helped to deliver to Modernism the immersive gesamtkunstwerk ideal. As professor of the history of art and aesthetics, Viollet-le-Duc advocated theories of "complete" (gesamt) building which he expressed in his books of theory. Viollet-le-Duc's interest in the historical Gothic period led him to engage in the restorations of some of the most magisterial medieval French buildings such as Notre Dame de Paris, the wonderful Vezelay Abbey, the entire city of Carcassone, Sainte Chapelle de Paris and the Chartres Cathedral. (Pevsner, 1969) In 1844, Viollet-le-Duc started the restoration of Notre Dame (which lasted his entire career) and through which he attained a remarkable understanding of gothic gesamtkunstwerk ideals.

Paradoxically, in spite of Viollet-le-Duc's neo-gothic commitment to the mythic past, the late-19th century was giving birth to the *Machine Age,* a period characterised by new industrial processes, scientific developments and inventions that brought promise of fuller and richer lives for those living in "advanced" societies, but also an unprecedented level of social and psychic fragmentation. By the end of the 19th century, the substantial, consistent, Newtonian world began to deconstruct. Ideas surrounding the French architect Etienne-Louis Boullée's (1728-1799) conceived monument to Sir Isaac Newton (1642-1727) (which privileged immersive contentment in hyper-tellurian proportions) became outdated.

In his important theoretical designs for public monuments, Boullée sought to inspire lofty sentiments in the viewer by architectural forms suggesting the sublime immensity of the natural world. Strongly influenced by antiquity, the distinguishing aspect of Boullée's mature work is his abstraction of the geometric forms suggested by ancient works into a new concept of monumental building that would possess the calm, ideal beauty of classical architecture. He expressed this theory in a series of immersive projects for public monuments, culminating in the 1784 design for an immense sphere that would serve as a cenotaph honouring the British physicist Isaac Newton. The interior of the cenotaph was to be a hollow globe daubed with stars representing the universe.

Etienne-Louis Boullée, drawing for *Newton's Cenotaph*
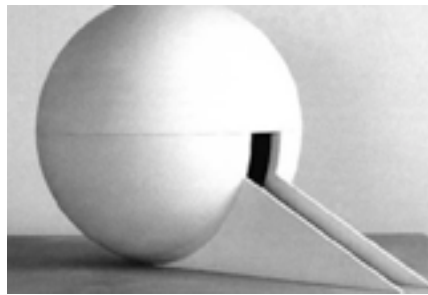
Etienne-Louis Boullée, *Palladian model*

In surpassed (but complimentary) fashion, the Machine Age's antidote to late-19th century psychic fragmentation will be to propose an all-encompassing universal visual language for depicting space with which to transcend particular circumstances.

BXIV: The Imprudent Immersive Momentum of the Fin-de-Siècle

The efficiently mechanised world could truly serve a purpose if only every one of us gained the possible amount of free time to enable us to meet the only obligation to nature which mankind has, namely to create art.
-Kasimir Malevich, *The Non-Objective World*

Where there is information, there are information states embedded in an information space.
-David Chalmers, *Facing up to the Problems of Consciousness*

The formerly mentioned English theorist John Ruskin discovered considerable inspiration in Viollet-le-Duc's theories which he lent to the English Neo-Gothic movement called the Arts and Crafts Movement, a movement prompted by dismay at the deteriorating character of Machine Age design as demonstrated at the London Crystal Palace's *Great Universal Exhibition* of 1851 (the first of the great universal expositions; an exhibit which covered nine acres and to which about six million people went). More specifically, the Arts and Crafts movement developed out of John Ruskin's, Charles Robert Ashbee's (1863-1942) and William Morris's (1834-1896) gesamtkunstwerk theories (Morris is also its most distinguished practitioner), and slowly evolved during the period between 1850 and 1910 into an international campaign for design reform which affected the shaping of modernist ideals relevant to our concerns. (Kaplan) The Arts and Crafts movement argued that design affects society in such a direct way that the characteristics of living and working spaces mould the character of the individuals which make up society and hence its gesamtkunstwerk design ideals were targeted to affect all aspects of immersive space, from interior furnishings to gardens to urban design. A special feature of the movement in England, such as in Ashbee's British Guild of Handicraft, was the establishment of guilds to raise the general standard of design by enlisting the co-operation of artists and craftsmen. (Kaplan) Subsequently this gesamtkunstwerk expression of totality and unity was taken up by some American designers, for example Gustav Stickley (1857-1942).

William Morris is important then for the contribution he made to the revitalisation of gesamtkunstwerk unification through Morris & Co., which he founded in 1861. Morris's intention was not just to produce wallpaper, tapestries, stained glass, furniture, and carpets, but, by so doing, to demonstrate how standards of production could be improved by making things by hand instead of by machine, thus (supposedly) improving the human condition. Morris contrasted the social fraternity of the Middle Ages with the frightful social situation of his Victorian England which led him to promote a comprehensive reformation of Industrial Society. As a result he advocated an overhaul of the incoherent Victorian pastiche aesthetic in alliance with political upheaval.

Red House, William Morris's family home constructed in 1859 by Philip Webb (1831-1915) at Upton, Kent, serves as a good example of Arts and Crafts design and its accordant spatial concepts. Structure,

ornamentation and detailing are provincial in atmosphere and generally simple and uncluttered, though visually enriched with wallpaper of flat but intricate design, generally based on natural stemming motifs reminiscent of the sacred grove. Every detail makes reference to the flowing growth observed in nature which allowed Morris (who began his career under neo-gothic architect George Edmund Street (1824-1881), where he met Webb) the freedom to cover an entire wall or room in a continuous spreading, flowing pattern which immersed those in the room in a vivid and engaging ornamental pattern. (Lemere) Morris, who decorated the house, treated some rooms by addressing the entire wall surface as a single unity, but he also advocated the unifying effect of totally bare white-washed walls, a very radical notion at the time of Victorian clutter and conspicuous consumption. (Osband) This type of unified space was also achieved by ornamental design, of course, for which Morris is justifiably well known, as when Morris would print and then hang fabric, draping it around a room. But while draping hand-printed fabric around the perimeter of an entire room is gravely expensive, Morris devised other means to gain the same overall effect at a fraction of the cost. By mixing printed paper and printed fabric, this overall design feeling could be achieved also. Morris did not advocate pleated wall hangings or tented ceilings in any case, but rather the gathering of the fabric only slightly so that the full richness of the pattern would be displayed. (Wilhide)

Morris designed a total of forty one wallpapers and five ceiling papers, all of which can be placed into the categories of net or branch. Although he had attempted to print all of his patterns by hand himself, the technical problems which he encountered were too great and a high quality hand-printing company, Jeffrey and Co., was selected by Morris to hand-print his designs for him. (Wilhide) Ironically the Arts and Crafts movement stressed craftsmanship at the expense of mass market pricing, with the result being exquisitely fabricated pieces that could only be afforded by the very affluent. Thus Morris's socialist idea of art for the people was lost and only relatively few craftsman could be employed. This trend evolved into what came to be known as the *Aesthetic Style,* eventually sharing some characteristics with the Belgian/French Art Nouveau movement. An artist identified with the Aesthetic Style who completed an immersive scheme is James McNeill Whistler (1834-1903) with his 1877 *Harmony in Blue and Gold: The Peacock Room* which was painted for Whistler's patron F. R. Leyland as an encircling dinning room.

In the late-1870s Morris's design principles were picked up and adapted (and in his view abused) by the proponents of the Aesthetic Style, who modified his ideals into a transcendental attraction towards splendour. However, subsequently more important spin-off groups evolved: the *Vienna Sezessionist* movement, the *Dansk Kunstfudsforening* (a Danish Society for the Industrial Arts), and the *Wiener Werkstätte* (Vienna Workshops). With the financial assistance of Frits Wärndorfer, a Viennese industrialist, Josef Hoffmann (1870-1956) and Koloman Moser (1868-1918) in 1903 founded the Wiener Werkstätte for the production of well-designed and crafted products for the interior. The studio, while being a great artistic achievement, failed to earn money, and thus closed in 1932. In 1907 the *Deutsche Werkbund* (German Craft Alliance) was

founded to promote quality in design with an emphasis on industrial design and experimental architecture. One thinks here of the Pallenberg-Saal (1900) in Köln which was built as a fin-de-siècle gesamtkunstwerk accolade to Richard Wagner, Friedrich Nietzsche and the Swiss painter Arnold Böcklin (1827-1901) by Melchior Lechter (1865-1937) and which was principally ravaged during the bombing raids of World War II. However, although it's ideals were originally derived from the English Arts and Crafts movement, the German Craft Alliance became interested in harnessing the capability of the machine to ameliorate the character of mass-produced objects. Although these groups differed in some respects, they all advocated standards of unified design and artistic co-operation, thereby anticipating the union of art and industry that will become the focus of much of the immersive aesthetic in the 20th century.

As we saw with the Neo-Rococo, the main point of totalising conceptions of space through décadent design is the concept of space as a unified entity, where the architect/designer is concerned with harmonising every detail into a unified artistic expression, from door knobs to furniture to interior wall decor. (Lemere) This concept of moulding space into a unified whole through holistic design marks the beginning of the trend away from eclecticism and towards Art Nouveau gesamtkunstwerk ideals.

Art Nouveau is the French name of an art movement which took its impulse from the nymphianesque blend of natural forms and women. This interest in sensual bio-structure was expressed in sinuous gesamtkunstwerk fashion, touching everything from cutlery to lamps to furniture to walls to entire building façades to metro-stations. Architects and designers who contributed to the development of this style included Victor Horta, Henry Van de Velde, Antoni Gaudí, Hector Guimard, Otto Wagner and Charles Rennie Mackintosh, all of whom are discussed below.

Basically Art Nouveau is a Northern European and North American style of art/architecture which spanned from the 1890s to about the Neo-Neo-Classicism of the First World War era. It was called *Stile Liberty, Jugendstil, Modernism, Nieuwe Kunst* or *Sezessionstil* respectively in Italy, Germany, Spain, the Netherlands and Austria; but in all cases artists and architects wanted to expunge the differentiation between the major and minor arts in the creation of a *total art* in gesamtkunstwerk fashion by centring them around life. Therefore architecture, which has an immediate immersive sway on human existence, was the prominent art to which every artistic propensity is thoroughly integrated. This formal conception of accordance and its rhythmically all-over stratagem emerged, like the Arts and Crafts movement, in resistance to clutter and the fact that the style was a gesamtkunstwerk sort (while at the same time being a reactive anti-action) in many ways conditioned its formal vernacular. (Osband) What is important to immersive theory is that through this anti-clutter reaction the most immersively consequential features of the approach were cultivated; namely the *synthetic conception of spatial form and the unity of expression*.

For our concerns it is especially interesting to note the importance of Art Nouveau's approach to conceptualising gesamtkunstwerk interior space. As mentioned, the basis of the Art Nouveau interior is a concern with nymphian effluvium-feminine forms, and with swirling, tendril-derived patterns which are applied throughout the space in a frivolous spirit. The forms from nature most popular with Art Nouveau designers were characterised by flowing curves of the sacred grove: grasses, lilies, vines, and the sensual curves of women. However on occasion, other, more unusual natural forms, were also used, such as peacock feathers, butterflies, and insects, but at all times High Art Nouveau's foremost feature is an emphasis upon ornamental value distributed throughout the entire space.

An Art Nouveau interior is asymmetrical at root, as evident in the tiniest single line or in its approach to the total space, but its typical asymmetricality is always in service of a *total design.* So what is important to our concerns, is that Art Nouveau is a total art concerned with every detail, as every object of or in an Art Nouveau space is ideally related to a *total homogeneous whole*.

The obscurantist mystification often sensed in circuitous Art Nouveau was part of a widespread cultural reaction against the new social divisions brought about by the power of the Industrial Revolution and towards the intractable powers of the nymph/fairies at flippant play in nature. Its sinuous space provides the immersant with the possibility for an ebbing of consciousness toward the incomprehensible, a vantage point from which to breakout of the Renaissance perspective position towards a more supple non-Euclidean immersive awareness. This heightening of perceptual sensitivity allows for and encourages a heightened omnijective consciousness of one's surroundings in general, as the churned-line is found on the floor and then picked up in the shapes of the furniture and on into the doors and door frames until it reaches the structural arches which support the ceiling and into the lighting fixtures. As a result the entire space is swaying, bending, floating, arching, smoking, curling, throbbing, dripping, melting, aching, writhing.

Baron Victor Horta (1861-1947), a Belgian artist/architect and teacher at the Brussels Vrije Universiteit and at the academies of Antwerp and Brussels, is one of the key founders of the Art Nouveau movement, who, at age 25, fabricated his first domicile in Ghent just after finishing his studies at the Brussels Academy of Fine Art. Viollet-le-Duc's book *Conversations on Architecture* was Horta's bedside reference book and thus helped prepare the ground for the gesamtkunstwerk approach to space developed by Horta in his version of immersive total art. Belgium's extensive industrial development during that period, which was based on mining, iron and steel industries, led to the appearance of a new and well-off bourgeoisie which was readily disposed to exhibiting its recently acquired wealth and social status by commissioning original architectural creations. Industrial space had called for the development of large scale iron and glass constructions for factory use and this new technology became available for possible applications in creating human habitations.

Grasping upon this new technology, Monsieur Horta broke the mould of traditional architecture (in search of the all-inclusive gesamtkunstwerk) by giving his spaces a centralised light well.

The first Art Nouveau building was built in Brussels in 1893 by Horta, the Hôtel Tassel. The Hôtel Tassel, at 6, Rue Janson, was built for Horta's friend Emile Tassel as an immersive manifesto, and in so doing established Brussels as the capital of Art Nouveau. Baron Horta also built in Brussels the Hôtel Solvay (1895), l'Innovation warehouses in Brussels (1901) (subsequently destroyed by fire), the Grand Bazar at Frankfurt-am-Main (1903) and in Antwerp (1906), the Maison du Peuple (1899) (demolished), a Hospital in Brussels (1924) and the Museum of Fine Art in Tournai (1903).

Baron Horta's idea to construct lyrically enchanting spaces with whimsical arabesques (noodles, whiplashes and eels) is particularly evident in his 1900 *Maison Personnelle* (personal home) which is located at 23-25, rue Américaine, in Brussels. It is one of the most exquisite Art Nouveau buildings in the world and open to the public. Its fully immersive fin-de-siècle milieu is achieved through an unfamiliar warped suppleness of space created through thin, windblown, and whiplashed lines which disposed me to the feelings of sprite underwater hair and, of course, writhing seaweed.

Baron Horta's creative fervour was enthusiastically received for almost 20 years (from 1893 to 1910) by an ample component of the Brussels' fin-de-siècle bourgeoisie, however the Catholic high society rejected Art Nouveau, considering it dangerously decadent because of its emphatic use of curved lines. (Amaya) Consequently, in Brussels no church was ever built in the Art Nouveau style; which made it *ipso facto* a part of the secular movement of the period. Between 1915 and 1919 Horta stayed in England and the United States respectively, and there his whiplash ideal towards space became tempered and he turned to straight lines.

Gesamtkunstwerk inspired designer/architect/theorist Henry Van de Velde (1863-1957) also was a key figure in the movement, as he called for the unification of art into the space of the whole room (wallpapers, furniture and paintings). Van de Velde and his Brussels company, the Société Van de Velde, created all the interior furnishings of his buildings, including rugs and metalwork and in one case even a matching dress for its owner in keeping with his theories of totality which he articulated in *Déblaiement d'art* (1894) and *Aperçus en vue d'une synthèse d'art* (1895). Van de Velde advocated in his tracts the unification of all of the arts as an instrument of social reform and a rejection of historical forms. Living in Germany, he became associated with the rise of the Jugendstil and became an early member of the Deutsche Werkbund (which invited him to build a theatre for its planned exhibition in Köln in 1914). He is considerably known for his Havana Cigar Shop, a shop he created in Berlin in 1899 in collaboration with the Belgian painter/designer/theoretician Georges Lemmen (1865-1916). Lemmen was especially recognised for his carpets, wallpaper, and tiles. Indeed Henry

Van de Velde's reappraisal of the status of the applied arts became a fundamental issue in the Sezessionist movement.

We turn now to the imposing suavity of Antoni Gaudí in Catalonia. At the age of 16 Antoni Gaudí (1852-1926) left his hometown Reus to join the school of architecture in Barcelona where he quickly adapted Islamic, Oriental and gothic influences. Although he did not travel about Europe, Gaudí was aquatinted with fin-de-siècle Belgium/French avant-garde movements because of the intimate relationship between Barcelona and France and with the pre-modernistic movements of Arts and Crafts, Gothic Revival, and Impressionism which were discussed in the intellectual proto-modernist circle which he frequented, but it was Horta's Art Nouveau movement that influenced Gaudí the most, stimulating him to experiment with new materials and new fluid shapes. Gaudí was particularly close with Count Guëll, who travelled often in Europe and it was Guëll who introduced Gaudí to the theories of the architect/theorist who exerted the most persuasive influence over the Art Nouveau architects in regards to the gesamtkunstwerkkonzept ideal, Viollet-le-Duc and his book *Entretients sur l'Architecture* (which influenced both Horta and Gaudí). Noteworthy is the fact that King Ludwig paid a visit in 1867 to Pierrefonds, a restored medieval citadel that underwent restoration by Viollet-le-Duc.

Gaudí's version of Art Nouveau, like Horta's, is characterised by an overwhelming proclivity for the organic nature of women, beasts, and plants which he translated into immersive utility. The materials utilised by Gaudí towards these ends ranged from stone, ceramic, tile, wrought-iron, glass and brick. He also used broken tiles for financial and technical reasons, as square tiles could not match the wavy shapes he preferred, plus it was cheaper to use free broken refuse from ceramic factories.

Antoni Gaudí is a chief exponent of the gesamtkunstwerk immersive ideal of Art Nouveau precisely with his 1906 building Casa Batlló located at 43, Passeig de Gràcia, Barcelona, noticeable for its organic tactility of bones and shells within, and its external cocked surf façade and chimerical roof. With Casa Batlló, Gaudí accomplished an astute transformation of an existing building, transforming it into an enchanting immersive gesamtkunstwerk as Gaudí thoroughly undertook the design of every single element of the building, from the extravagantly protuberant façade to all aspects of the interior, including the gracefully gnarled furniture. On the exterior Gaudí was able to combine a flamboyantly surging façade (in an ingeniously cool-colour orchestration) while maintaining a dialogue with the neighbouring Casa Ametller (1900), built by Josep Puig i Cadafalch (1869-1956) four years earlier. Powerful pillars which resemble the substantiality of mammoth elephant legs accost the visitor at street level, protruding into the sidewalk, nigh tripping up an unaware pedestrian. These legs are bordered by a craggy vertebrae-like tier and the wavy façade extends upward between these two biologically evoking forms, culminating at the roof in a gargoylesque humping crescendo. The façade itself, coated in a layer of Montjuïc stone, shimmers seductively under the sun in multifarious

chameleon-like colors; fraught with a scattering of small roundish plates resembling fish or reptilian scales. Affixed to this seething mass of swelling construction are a number of small, elegantly curved balconies with oval shaped portholes.

The entire structure feels unsharpened, flowing and smooth in opposition to the street itself on which the arrangement sits, with the exception of a few square windows up top. Even the walls are gently rounded in strained undulation and contraction, as if they too have entered into the oceanic female throws of a fluttering uteral orgasm. The walls appear to be made of a soft, smooth, supple, leathery material and this illusion of softness is carried through by the roundness of the inside forms of the building where one has the feeling of being pleasantly encased in an expanse of hardened dripped honey. Turning, lunging stair railings are met, engulfed and supplemented by softly heaving honey-coloured walls and wooden biomorphicly shaped carved doors and irregularly shaped windows. There are no right angled corners or straight lines, which offers the immersant an impression of being wrapped up in one continuous fluid wave motion, complimentary with the exterior. The number of ceramic tile elements used, which compliment the feeling of inhabiting a construction produced by organic cells, increases towards the roof, where the crest of the roofing runs in a protuberant line that traces a zigzag spinal swell. The roof is covered in pallid bluish-pink ceramic tiles on the side facing the street, almost as if it were blushing due to the pithy sensuality of its avant-garde stance.

Antoni Gaudí, interior at *Casa Batlló*

Relevant to our concerns also are the designs of Charles Rennie Mackintosh (1868-1928), particularly his series of ornamentally extravagant tea rooms which he executed in Glasgow, Scotland between 1896 and 1917 with his companion Margaret Mackintosh-Macdonald (1865-1933). By stripping away the extraordinary panache from neo-rococo space and replacing it first with the buoyancy of the sinuously entangled lines of Art Nouveau (as generally supplied by Margaret Macdonald, who designed most of the distinctive symbolist decorative inserts) and then eventually, with sparse clean proto-modernist geometricalisation, Mackintosh moved from one configuration of the immersive gesamtkunstwerk to another. This second, bare, modern gesamtkunstwerk he learned from Josef Hoffmann (student of Otto Wagner (1841-1918) of Vienna's Wiener

Werkstätte) whom he found to be enormously sympathetic to his design ideas when he went to Vienna in 1900 to visit the 8th Sezessionist Exhibition.

Otto Wagner was the Austrian architect who influenced the history of architecture towards a reductivist gesamtkunstwerk ideal along with his contemporary and eventual antagonist, Adolf Loos (1870-1933). Around 1900, ornamentation became the object of heated discussion and was much maligned by Loos in his conference and text, both called "Ornament is a Crime". (Loos)

The French focus for Art Nouveau was Paris and the city of Nancy. In Nancy one can still encounter a wonderfully complete Art Nouveau environment intact at the Musée de l'Ecole de Nancy's Salle à Manger (1904) by Eugène Vallin (1856-1936). Art Nouveau came to Paris principally by the celebrated architect Hector Guimard (1867-1942) who, as most people know, designed the Paris metro entrances, among other structures. In 1894 Guimard was building the Castel Beranger in a neo-gothic style when he visited Horta in Brussels. Inclined by what he had seen of the Hôtel Tassel, Guimard modified his plans for Castel Beranger, designing every detail; the wall paper, door handles, floor tiles, and front door in gesamtkunstwerk manner. Another architect who theorised, designed and built gesamtkunstwerk-based Art Nouveau in Paris was Frantz Jourdain (1847-1935), an influential teacher, theorist and builder of the 1910 La Samaritaine building (still existent but much belied).

Hector Guimard, *Maison Coillot*

In general, Art Nouveau stimulated the realisation that it might be possible to create a type of modern universal form-language independent of past period styles, and this heritage markedly stimulated the modern gesamtkunstwerk aesthetic approach, as its ideals of unity and consistency replaced cluttered multivariousity and picturesque aesthetics. In terms of the aesthetic pleasure achieved through unified ideals, the visitor to Paris, the place from which I write this dissertation, cannot but notice the cultivated pleasure which such an aesthetic approach provides, in that Paris, for the most part, shares the charming aesthetic range imposed upon her by the broad unified city-planning of Baron Haussmann, accomplished between 1852 and 1870. And furthermore, what is impressive in Paris is that there are numerous anonymous Art Nouveauesque nymphs prevalent throughout the streets present as façade decor. Women's faces, nestled in sculpted vines and shrubs, thoroughly punctuate the city's streets, hovering over doorways; seemingly beseeching entry.

As initiated (by the students) in the studio of Gabriel-Charles Gleyre (1808-1874), Impressionist painting restored concentration onto the two-dimensional surface of the canvas while simultaneously suggesting an interregnum of luminous space. As such it also played a consequential role in modelling fin-de-siècle French immersive aesthetics. One thinks here of the ephemeral paintings of Claude Monet (1840-1926), particularly his extensive series of paintings, *Haystacks* (painted between 1890 and 1892) and *Rouen Cathedral* (painted between 1892 and 1894) and then *Nymphéas,* the series of 23 large paintings (19 of which were 2 by 4.30 metres (6.56 by 14 feet) which he created late in life based on his Giverny garden's *Basin de Nymphéas.* From 1915 to 1926 Monet exhibited all of these paintings in wall-to-wall installation mode, filling the three rooms of the l'Orangerie des Tuileries in Paris. But also indicative of this aesthetic are the paintings of Auguste Renoir (1841-1919), Alfred Sisley (1839-1899) and Jean-Frédéric Bazille (1841-1871).
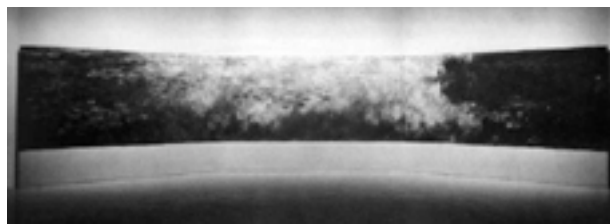
Claude Monet, *Nymphéas* (1920 installation at MOMA NYC)

Post-Impressionism extended this momentum towards depicting expanses of luminous space. For example, with Georges Seurat's (1859-1891) mammoth 1886 Pointillist canvas *Un Dimanche après-midi à la Grand Jatte*, everything on the canvas is inexorably locked together in one flowing deliberation as the composition (taken as a whole) postulates an uninterrupted enveloping colour-energy devised from the colour theory of the chemist Eugène Chevreul (1786-1889). We can see this continue in the Divisionist paintings of Seurat's friend Paul Signac (1863-1935), for example in his painting *la Voile Jaune* of 1904 which shows a ship disintegrating into its environment. Paul Cézanne likewise extends this tradition in such a way, that his influence on the 20th century is hard to overstate.

Art Nouveau also influenced the Viennese fin-de-siècle architect Otto Wagner and gave him the inspiration to abandon his neo-renaissance construction ideals for more Art Nouveau ones of *total design synthesis*. Otto Wagner had studied under the two architects who together in 1864 designed Vienna's opera house, August Sicard von Siccardsburg (1813-1868) and Eduard Van der Nüll (1812-1868), who surely were cognisant of the Richard Wagnerian gesamtkunstwerk ideal. Subsequently Otto Wagner identified with the Sezession Movement and its aesthetic gesamtkunstwerk idiom, an idiom exemplified by the wrap-around mural by Gustav Klimt (1862-1918) known as the *Beethoven Frieze* in the Sezession building, a building which Otto Wagner designed adhering to the principles of unity (as earlier articulated by Gottfried Semper). In May 1897, facing censure by a governing panel, a coalition of progressive artists and designers (included Joseph Maria Olbrich (1867-1908), Koloman Moser, Josef Hoffmann, and Rudolph Bacher (1862-1945)) seceded from the long established Künstlerhaus to form the Vienna Sezession through the inducement of Klimt. In the inaugural issue of the Sezession magazine named *Ver Sacrum* (January 1898) Klimt explained the ideals of the movement: "We do not know any difference between major arts and minor arts...". Their unifying aims were to awaken Austrian art from its provincialism by promoting living artists and by encouraging cultural exchanges with contemporary European artists. Their first exhibition opened a year later with accompanying poster and catalogue designed by Klimt. The role granted to utilitarian art at the second Sezessionist exhibition was consequential in further breaking through the picture-frame approach to art and moving art towards an immersive gesamtkunstwerk (total-artwork). They thereby confirmed a changing attitude in the European avant-garde towards immersive expectations. An early precedent for this ideal had been established in 1891 when the Salon du Champ de Mars in Paris exhibited applied arts on an equal footing with paintings and sculpture, disciplines previously regarded as separate levels of artistic endeavour. In 1898, Joseph Maria Olbrich designed and built the famed Sezessionist building, the ornamentally domed structure where exhibitions of the Sezessionists took place. The building has milky bare walls contrasting with its sculpted golden copula.

Joseph Maria Olbrich, *Villa Friedmann*

In pursuing these ideals of liberty, by 1902 a process of simplification and formal purification had begun, a tendency which had found an early expression at the 14th exhibition of the Viennese Sezession. On this occasion, Josef Hoffmann created two abstract relief stuccoes (followed by the severely plain white cubic forms of the flat roofed Purkersdorf Sanitarium (1904)) which demonstrated equivalent principles of unification to the previous all-over ornamental gesamtkunstwerk, a syncretistic tendency which would gain predominance. Under the theoretical influence of John Ruskin, William Morris, and Charles Robert Ashbee, Hoffmann strove for a total harmony between environment, architecture, decoration, furniture, and all the utilitarian objects of daily use. The Adolphe Stoclet House and garden in Brussels (which Hoffmann designed in 1905 and finished in 1911) is Hoffmann's premium example of this *total aesthetic*, as it was furnished throughout by his Wiener Werkstätte with explicitly matching designed furniture, glass, china, and tableware. Though Neo-Classicism remained the ordering matrix, the building is sumptuously united, as everything from the layout to the most minute details, such as door handles and flower vases, were harmonised under one accomplished strategy. The main dinning room is crowned with a shimmering mosaic by Gustav Klimt.

Sezessionist exhibitions were extremely well received by critics and public alike, but no on-going collaborations existed between Sezessionist designers and Viennese manufacturers. Realising it was imperative they find craftsmen who shared their high standards and objectives if quality designs were to be consistently executed, Hoffmann and Koloman Moser co-founded the Wiener Werkstätte (Vienna Workshop) in 1903 thanks to the fortuitous and generous backing of financier Fritz Wärndorfer. It was also a period of close artistic collaboration between Hoffmann and Moser and occasionally their designs became indistinguishable, especially their metal lattice-like gitterwerk. The severely rectilinear designs forged by Hoffmann and Moser dominated production until about 1907 when Moser resigned. Thereafter, objects began to lose their purely structural character and surface decoration once again came to the fore. In a Machine Age dominated by both second-rate production and a numbing imitation of the past, the Werkstätte (in actuality a consortium of individual workshops employing some 100 workers by 1905) saw its initial mission as one of reduction and divestment: to eliminate familiar historical and naturalistic motifs while simultaneously reviving meticulous craftsmanship. Its philosophical underpinning was the principle of the gesamtkunstwerk, the integration of all related design elements into a single aesthetic statement. Towards these ends it introduced paintings, sculpture, mosaics, wallpapers, postcards and haute couture fashion into its production options. The Purkersdorf Sanitarium (1904) was an early, important commission.

The founding of the Wiener Keramik by Michael Powolny (1871-1954) and Berthold Löffler (1874-1960) in 1906 likewise coincides with the Werkstätte's consequent resurgence of ornament. However the applied arts produced during the early years of the Werkstätte are also remarkable for their geometric refinement and elegant simplicity. This turn to simplification reveals the influence of the Scottish school of design,

particularly the work of Charles Rennie Mackintosh, who had a strong formal impact on Hoffmann's early work (both he and Ashbee exhibited works in the 1900 Sezessionist exhibition and Hoffmann visited Mackintosh in Glasgow two years later).

Out of all this creative energy emerged Art Deco which originated in France in 1908, reached its zenith in 1925 at the *Exposition Internationales des Arts Décoratifs et Industriels Modernes*, and persisted until about 1940. Though generally related to the decades of the 1920s and 1930s, Art Deco has been regarded as an extension of and a response to Art Nouveau and took from the spectrum of its artistic forces. In the mid-1920s Art Deco dominated the stylistic gesamtkunstwerk ideals of architecture, domestic interior design and consumer goods, however a change was soon heralded by Le Corbusier's (1887-1965) (born Charles Edouard Jeanneret-Gris) *Pavillon de I'Esprit Nouveau* which he presented at the 1925 *Exposition Internationales des Arts Décoratifs et Industriels Modernes* held in Paris (specifically the lean artist's studio interior he exhibited in conjunction with the artist/theoretician Amédée Ozenfant (1886-1966) (Ozenfant, 1952) and through his theoretical writings *Vers une Architecture* of 1923 which maintained gesamtkunstwerk ideals by defining architecture as *total concept*. Le Corbusier's great 1955 boat/balloon-like Notre-Dame-du-Haut Chapel at Ronchamp exemplifies his approach, and for me was one of the most successful immersive modern spaces I have ever been in.

The first public showing of a 16 mm film was by the Lumière brothers, Auguste (1862-1954) and Louis (1864-1948), in Paris on December 28th, 1895. The 1904 St. Louis Exposition saw the first permanent cinema attraction which took the form of an artificial railroad car whose operation combined auditory, tactile, visual, and ambulatory sensations to provide a convincing illusion of railroad travel. It was called *Hale's Tours and Scenes of the World.* (Fielding) Around 1903 Art Nouveau began to be absorbed by neo-neo-classical rationalistic trends, after which it still enjoyed a stylistically (but insignificant) existence in a commercialised version until 1910, surviving in some places up to the First World War. The Sezession became defunct in 1906 after Klimt left the group. On December 17, 1903 Wilbur Wright (1867-1912) and his brother Orville Wright (1871-1948) kept aloft for twelve seconds (travelling 36 metres (120 feet), never more than 3 metres (10 feet) above the ground) a box-kite contraption which became the first aeroplane at Kitty Hawk, North Carolina, USA. Orville Wright saw, before his death in 1948, his invention evolve into a bombing machine, destroying city centres, a fact that disturbed him greatly. We shall now see how these developments transform profoundly the sense of immersive space in the 20th century.

1945 photo by H. Hoffman of Berlin being bombed

BXV: Early Modernism and the Questioning of the Horror Vacui Interior

The word Dada symbolises the primitive relationship to ambient reality; with Dadaism a new reality achieves its majority.
-Tristan Tzara, Franz Jung, George Grosz, Marcel Janco, Richard Hulsenbeck, Gerhard Preiss, Raoul Hausmann, *Dada Manifesto*

The guiding myth inspiring the invention of cinema, is the accomplishment of that which dominated in a more or less vague fashion all the techniques of mechanical reproduction of reality in the 19th century, from photography to the phonograph, namely an integral realism, a recreation of the haptic world in its own image, an image unburdened by the freedom of interpretation...
-André Bazin, *The Myth of Total Cinema*

Foucault located the disciplinary societies in the 18th and 19th centuries which reach their height at the outset of the 20th as those which initiate the organisation of vast spaces of enclosure. The individual never ceases passing from one closed environment to another, each having its own laws...
-Gilles Deleuze, *Postscript on the Societies of Control*

Suprematism did not bring into being a new world of feeling but rather an altogether new and direct form of representation of the world of feeling.
-Kasimir Malevich, *The Non-Objective World*

As Rudolf de Lippe pointed out in his book *La Géometrisation de l'Homme en Europe à L'Epoque Moderne*, increasingly in the Modern era the geometricisation of human vision became the general methodical condition in the West, characterised by an analytical sight which decomposes the holonogic visual sphere into geometricised fragmented parts. This is a modern technological vision whose effectiveness lies in its tendency to isolate and decontextualise the holonogic scope. (de Lippe) Indeed modern technology had an enormous social impact in the 20th century in this, and other, respects. The automobile and electric power, for instance, radically changed both the scale and the quality of 20th century life, promoting a process of rapid urbanisation and a substantial change in lifestyle through mass production of household goods and appliances. The rapid development of the aeroplane, the cinema, and the radio made the world seem suddenly smaller and more accessible. Since 1900, the speed of travel has increased by a factor of 10 to the 2nd power, known energy resources by 10 to the 3rd, explosive power of weaponry by 10 to the 6th, and speed of communication by 10 to the 7th power. Such new ways of understanding involve a change in perspective, and that change is marked in the 20th century by an extended propensity for immersion. (Larousse & Augé)

Modernism in architecture (and then art), as will be demonstrated, adapted Late-Art Nouveau ideals of gesamtkunstwerk unity by placing emphasis on the *unity and similarity of reductivist forms*. This reductive urge is called orthodox *Modernism*, an ideal concerned with essences and abstractions. Charles Jencks takes the view that the modern movement in architecture is based on a world-view informed by the Industrial Age with great emphasis on the mass production of virtually identical goods and with reducing the design of something to its simplest functional elements. (Jencks, 1996) Simultaneously, profoundly new concepts in art

began to appear in 1905 with Henri Matisse (1869-1954) and the Fauves at the Salon d'Automne in Paris. Particularly the Cubism of Pablo Picasso (1881-1973) and George Braque (1882-1963) emerged as a radical departure from the perspectavist representational tradition of the past, as Cubism (Apollinaire, 1944) aimed to restructure representation through a redefinition of realism. (Roskill) *Analytic Cubism* (1908-1912) dropped the conventions of renaissance framing in favour of a multi-outlook exploration of many different angles and viewpoints, articulated through overlapping and interlocking planes, as we can see with Picasso's 1911 painting *Homme à la Mandoline* (Man with Mandolin). In opposition to point-perspective, Analytic Cubism shows (like the holon model) that the viewer synthesises fragmentary accumulated evidence into an assembled totality when the viewer's volume of perceptions are detected through ambient vision in motion. Analytic Cubism re-analyses and synthesises vision's multiple viewpoints concurrently by tenaciously folding them (simultaneously) in one sweeping but minced formation. As such, analytic cubist consciousness suggests an embedded hermeneutic immersion of selfhood into the non-detached distance of the omnijective world. *Synthetic Cubism* emphasises this non-illusionistic program in a broader way through the incorporation of elements in the environment, such as fragments of wall-paper, journals and/or photographs. (Roskill) A good example is the 1912 legendary *Nature Morte avec Chaise Canée* (Still-life with Chair Caning) by Pablo Picasso.

The sharp angularity and geometry and distortion of figures and objects by the cubists provided much of the foundation for modernist artistic expression throughout Europe and the world. In the winter of 1915, for example, Kazimir Malevich (1878-1935) published *From Cubism to Suprematism in Art, to New Painterly Realism, to Absolute Creation* in which he expressed his belief that representational art was obsolete. (Malevich, 1971) In the course of the next year this theoretical text served as the introduction to his manifesto *From Cubism and Futurism to Suprematism*. Thereafter, concluding his first extensive theoretical tract in 1919 *On the New Systems in Art*, Malevich began putting into effect his *Suprematist* theories in 1920 at the Academie of Vitebsk (which was founded by Marc Chagall (1887-1985)) due to the intervention of Lazar El Lissitzky. His project was assigned the name *Afirmmer of the New Art* or *UNVOIS*. (Gray) With UNVOIS Malevich set out to create a new form of art education in which all of the art forms are developed homogeneticly based on his theories of *Suprematism* in gesamtkunstwerk fashion, including principles of collectivism. By doing so Malevich was in harmony with the architect Walter Gropius who was striving in Dessau to connect utopian modern gesamtkunstwerk ideals with those of Romanticism which he advocated in the Bauhaus program of 1919; an institution which Malevich visited in 1927 where he met with Gropius and László Moholy-Nagy (who had become influenced by Malevich's book *The New System of Art*). More on Gropius and Moholy-Nagy and the Bauhaus will follow.

Regrettably, a general disinclination with Malevich's method led to its demise in 1921. However in 1922 Malevich completed his theoretical masterpiece text, *Suprematism: the World of Non-Objectivity* and

Suprematist forms became the point of inspiration for many artists and art projects including El Lissitzky's immersive *Project for the Affirmation of the New* (*PROUN*) rooms, described by him as interchange areas between painting and architecture. (Gray)
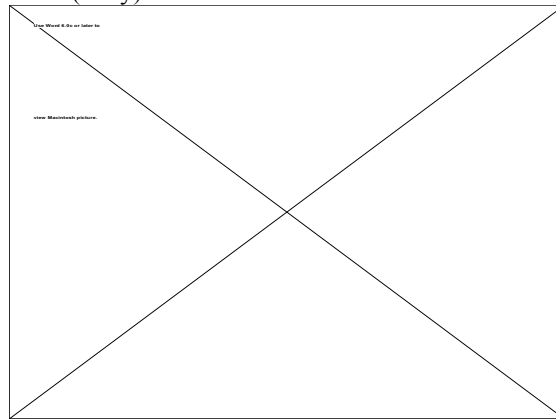
El Lissitzky, *PROUN Space*

El Lissitzky designed the *Constructivist Room* at the gallery van Dienen in Berlin and this project resulted in his 1923 *PROUN Space,* an immersive work made in painted wood reliefs which were scattered over the walls and in the corners. Here El Lissitzky's painting emerged from its frame to fill the entire space. Happily, after being destroyed, *PROUN Space* has been reconstructed at the Van Abbemuseum, Eindhoven, in The Netherlands. Moreover, El Lissitzky designed a theatre based upon Suprematist principles (which was never built) for Vsevolod Emilievitch Meyerhold (1874-1940) which foresaw many of the approaches to "total theatre" that were attempted in the 1930s. (Henri, p. 20)

Varvara Stepanova (1894-1958) and Vladimir Tatlin's (1885-1953) movement called *Constructivism* theorised a move away from representation and speculation towards intellectual production based in the actual material conditions of life. (Stepanova & Rodchenko) Hence Constructivism declared art irrelevant in a society committed to creativity and the aesthetics of everyday life. (Noever, pp. 174-176) To place this notion into operation, in 1917 Tatlin, along with Stepanova's spouse Aleksandr Rodchenko (1891-1956) and Georgy Yakoulov (1884-1928), designed the *Café Pittoresque* in Moscow. Its constructivist design extended into real space, dominating the café's interior. Rodchenko also constructed a uniform interior for his *USSR Workers' Club* which he built at the *Exposition Internationales des Arts Décoratifs et Industriels Modernes* which was held in Paris in 1925.

Important international contacts were made for El Lissitzky at the Constructivist-Dadaist Congress, an international meeting held in Germany in 1923 which was sponsored by the painter/architect Theo van Doesberg (1883-1931). El Lissitzky had meetings there with both van Doesberg and László Moholy-Nagy. As a result of this Congress El Lissitzky went to work with the German Dadaist artist/designer/typographer/poet

Kurt Schwitters (1887-1948) on his Hannover *Merzbau* (1923-1937). In the early-1920s Schwitters began working on a collage/column which he called a *Schwitters-Säule* which soon grew out and up over the ceiling of his apartment in Hannover. (Schmalenbach, pp. 129-139) Soon it grew down across the walls, and niches were made in it to contain mementoes from his friends which were later covered over until the work finally grew up through the ceiling down through the floor and onto a small projected roof. In its entirety it was called *Merzbau* (Merz-house). (Henri, pp. 18-20) This Merzbau was abandoned to the Nazis when Schwitters moved to Norway to escape them. There he began another Merzbau (the Hus am Bakken at Lysaker) which was burnt down by children in 1951. The Hanover Merzbau too had been destroyed in the aerial Allied bombings of 1943, but in 1947 Schwitters began work on his final piece of what he called "total art" (Henri, p. 19): his *Merzbarn.* This work was to be made almost entirely of plaster with 'found objects' embedded in it. Another relevant Schwitters's project from the immersive perspective was his theorisation of the *Merzbühne,* a "total-Merz-theatre". (Henri, p. 20) Though this project was never to be realised, it paralleled a number of other *total theatre* projects that were developing in Europe during the 1930s, for example that by Gropius.

Kurt Schwitters, *Merzbau*

In light of Schwitters's achievements we might now consider Clarence Schmidt's 1930s decor/assemblage creation of a continuous chain of grottoes and corridors and caves created on O'Hayo Mountain near Woodstock, New York, which Allan Kaprow wrote about in his 1966 book *Assemblages, Environments, Happenings.* (Kaprow, 1966, pp. 170-171) Schmidt's collage grotto/labyrinth has been hailed by Adrian Henri as "possibly the 20th century's finest piece of *total art*" (Henri, p. 12), a concept of environmental art Henri develops in his book *Total Art* which, as we have seen, stems from the Wagnerian terminology gesamtkunstwerk: a coextensive configuration which sets out to inexorably dominate, overwhelm, and flood the viewpant with sensory impressions.

Another European avant-garde movement with immersive suggestion was Futurism. (Lovejoy, 1997a, p. 40) The Cubist ontological embeddedness of the view into a spread of moving optical fields was taken up and amplified in Italian Futurism, as it further attempted to coalesce and condense scattered/totalised ocular impressions. Umberto Boccioni's (1882-1916) 1911 painting *States of Mind II: Those Who Go* is an admirable example. Responding to the Machine Age, the Futurists, under the philosophical leadership of Filippo Tommaso Marinetti (1876-1944) glorified speed and the machine while expressing a rejection of the past, best exemplified in immersive terms by a famous fist-fight in 1910 between the Futurist painters and poets and the Venetian townspeople who reacted in anger when 800,000 manifestos, entitled *Against Past-Loving Venice*, were scattered upon them. (Henri, pp. 13-16)

Cubo/Futurism achieved a syntheses of the flickering optics of Post-Impressionism with the spread of urban media visual production, thereupon announcing the postulate that reality is discovered through the slant of drifting involvement as opposed to static detached understanding. This dematerialised optical awareness suggested further supra-visual reconfigurations which are picked up by the radical avant-garde of mid-20th century, as we will see.

But rather than Cubo/Futurism based, art conceived of as "total experience" (Henri, p. 24) stems, according to Adrian Henri in his book *Total Art* (where he identifies a tradition of "total art"), from Dada, a reaction against the First World War of 1914-1918. (Henri, p. 26) It is true that the Dadaists did not restrict themselves to being painters, writers, dancers, or musicians as most of them were involved in several art forms and in breaking down the boundaries which kept the arts distinct from one another. In particular Henri suggests that "total experience" stems from Max Ernst's first Köln exhibition in 1920, in which Ernst was joined by other artists who, like him, were later to become Surrealists. The exhibition was entered through a men's urinal which was opened by an adolescent girl in a First Communion dress reciting obscene verses. (Henri, p. 24) Freud's intrigue with the unconscious was enthusiastically taken up by the Surrealists who saw his studies of dreams as central to their own desire to disrupt the norms of conscious perception. (Foster, 1993) As Ellenberger's book *The Discovery of the Unconscious: The History and Evolution of Dynamic Psychiatry* forcefully demonstrates, Freud did not "discover" the unconscious, (if we can say that anyone did, it would be Jean-Martin Charcot (1825-1893) and Pierre Janet (1859-1947), the author of *De l'Angoisse à l'Extase* (Of Anguish and Ecstasy)) but Freud, working with his associate Josef Breuer (1842-1925), might be said to have posited the general principles and contents of the unconscious mind which gained predominance in the 20th century. (Ellenberger) Henri states that it was the grand Surrealist exhibitions of 1936 in London and 1938 in Paris which are the most direct precursors of total art. In the Paris show, under the direction of Marcel Duchamp, the ceiling of the main room was hung with 1,200 coal sacks filled with paper while a gramophone played German military marches, complimented by an ornamental pool and the smell of roasting coffee-

beans. For a later exhibition in 1942 at the New York Reid Mansion, entitled *First Papers of Surrealism,* Duchamp created an environment out of kilometres of entangled string. (Henri, pp. 22-24) Too we must acknowledge and indeed honour an immersive *chef-d'oeuvre* (masterpiece) and source of immense inspiration to the Surrealist Movement itself, the *Palais Idéal* of Ferdinand Cheval (1836-1924) which to my eye appeared to be one gigantic sprawling grotto when I visited it, as if the stupendous mannerist grotto-façade at villa Borromeo had been left to grow untrimmed and run amock. It was constructed by Cheval alone in the Hauterives (Drôme) between the years 1879 and 1912, the result of 93,000 man hours of hard labour.
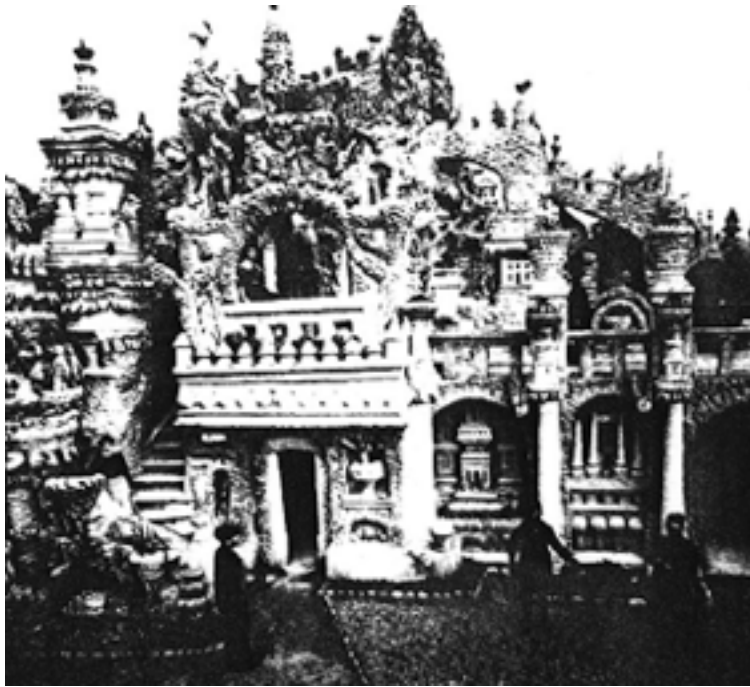
Ferdinand Cheval, *Palais Idéal*

BXVI: Modernism's Meditation on Violence: Unity by Subtraction

Ars una, species mille (there is only one art but a thousand forms).
-Walter Gropius, *Architecture in the People's Free State*

Modern space is Euclidean, horizontal, infinitely extensible and therefore, in principle, boundless.
-Victor Burgin, *Geometry and Abjection*

...design accepts the characteristics of machine production not as limitations but as means for the creation of new types of rightness, and it sees the machines themselves as tools of enormously augmented effectiveness in the humanising of our world...
-Walter Dorwin Teague, *Design This Day: The Technique of Order in the Machine Age*

By 1917 the painter/architect Theo van Doesburg had changed his ideas radically from his Dada roots and became a co-founder of the *De Stijl* (The Style) (also known as *Neo-Plasticism*). Founding members of the group included the painter Piet Mondrian (1872-1944) and the designer/architect Gerrit Rietveld (l888-1964). Mondrian had visited Paris in 1911 and was thereafter influenced forcefully by the theories of Cubism. Taking Cubist abstractionism further, De Stijl rejected figuration as the goal of art and replaced it with the pared-down vocabulary of elemental shapes and primary colors, thereby allowing art to express its own language free of the concerns of representation. In October 1917 van Doesberg started a magazine, which took its name from the group; *De Stijl*. Mondrian's article "The New Plastic in Painting", published therein, best expressed the De Stijl ideal of a universal art divorced from the need to serve representational ends. (Lemoine, 1987, p. 29). De Stijl principles see space as boundless through a horizontal/vertical unitary grid. Indeed Mondrian's horizontals, verticals and primary colors were meant to serve as a metaphor for universal unity and totality. Important to immersive theory is that De Stijl also considered interiors and their furnishings (most notably Rietveld's 1917 *Red and Blue Chair*) to be within their ideal of total art.
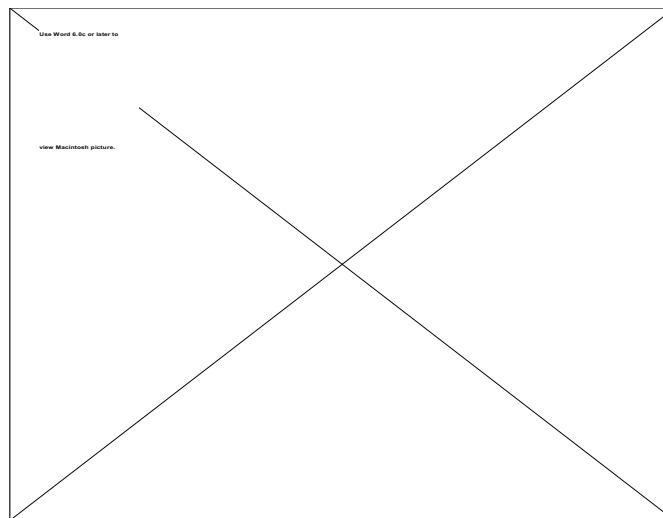
Café de l'Aubette

In 1920 van Doesburg made the first of two visits to the Bauhaus. As a result van Doesberg sought to broaden the influence of the Neo-Plasticism movement into architecture. Together with the artists Sophie Taeuber-Arp (1889-1943) and Hans Arp (1887-1966) van Doesberg collaborated in 1928 on the *Café de l'Aubette* entertainment complex in Strasbourg, France; an immersive artwork which surrounded the visitor in an eruption of geometric forms in space.
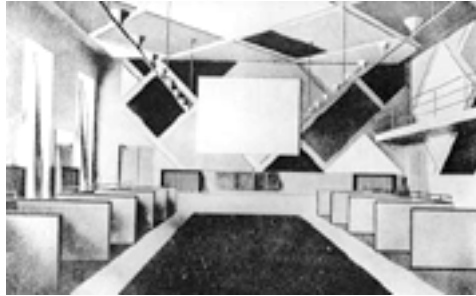
Café de l'Aubette

Gerrit Rietveld also built a small Neo-Plasticism home called the Schroeder House in Utrecht in 1925. The student of Gotfried Semper, Hendrick Petrus Berlage's (1856-1934) work too fits in well with the gesamtkunstwerk Neo-Plasticism movement in art/architecture. Viollet-le-Duc had made him see that historic styles should not be copied when designing a building and as a result he started to look for a new way of creating unity in a building using geometrical plans and shapes. In a building by Berlage the construction used is always shown and often functions as a decorative though integral part of the design. For instance the sculptures on Berlage's buildings are always a part of the wall or the corner that they are set in. In this way he reached a unity in the interior and exterior of his buildings.

Eminently important in charting the gesamt aspect of the immersive total art ideal through Modernism is the architect Walter Gropius, a practitioner of a form of reductive architectural sublime whose hagiographic-like holistically unifying ideology/style became characteristic of the 20th century. More than anyone, it was Gropius, who by matching the artist up with the world of production, subsequently gave birth to the modern industrial culture which we think of as Modernism. (Drucker) The Bauhaus's gesamtkunstwerk ideal laid the foundation for a modern universal project which aimed to affect all of the human visual world: everything from the smallest of manual instruments and utensils, to the span of city planning. Gropius started from the neo-gothic assumption that genuine modern art had to harmonise with modern architecture and with the products of modern technique in total-design fashion. Indeed art was to convey the experience of the unity of the modern gesamtkunstwerk ideals. (Gropius, 1965) Not surprisingly, Gropius considered himself a follower of Ruskin and adhered to the ideals of Ruskin's sublime in connection with an idealised gesamtkunstwerk

interpretation of the unity detected in the Gothic. Indeed the synthesising theme runs throughout his entire life's work, as he strove for integrating synthesis between formally separate sectors of work and life. (Hüter)

Gropius, it must be remembered, was founder and director of the celebrated Bauhaus Art and Design School, an institution whose gesamtkunstwerk ideals played a powerful role in shaping the ideology of modern art by propounding the unification of art and industry. (Wensinger & Gropius) Gropius envisioned the Bauhaus as an educational institution which would be concerned with industrial design in service of an architectural totality where architecture would endow unifying ideals to the arts and crafts. With the Bauhaus, Gropius put into pragmatic operation the co-operative gesamtkunstwerk ideals which, as we saw with Richard Wagner, cantilever out of German idealist neo-Platonic philosophy and 19th century cultural utopian Romanticism in general. It is consequential here to recall that Romanticism's ideals proved an inducement to historical research, which in turn aroused a new interest in art history which stimulated the Neo-Gothic Revival from which the gesamtkunstwerk ideal emerged (again) in Europe.

The Bauhaus faculty in 1926 included some of the most innovative artists/thinkers of the day, including Walter Gropius, Marcel Breuer (1902-1981), Wassily Kandinsky, Paul Klee (1849-1940), Oskar Schlemmer (1888-1943), Josef Albers (1888-1976), Lyonel Feininger (1871-1956), and Moholy-Nagy. By merging the agenda and goals of the art school with those of the school of applied arts they set out to combine the artist and the craftsperson through the analytical method of function in service of gesamtkunstwerk ideals. According to Karl-Heinz Hüter's essay "Total-Work-of-Art, Total-Work, Total-Architecture", Gropius advocated the introduction of just such a polytechnic art education starting in the nursery schools. (Hüter)

Towards these ends Gropius and Moholy-Nagy together edited a series of 14 books that circumscribed the philosophical framework for the Bauhaus agenda; an agenda in which the arts and industry would verily merge. (Passuth) Clearly Gropius/Moholy-Nagy were striving to connect modern creative ideals with those of the utopian Romantic/Neo-Gothic (as presented in Ruskin's theoretical writings) when they advocated in the Bauhaus program of 1919 a reunification of the whole of artistic creation into a new architectural-based art. (Wensinger & Gropius) Their theory was that new materials, made possible by new technology, should be used in the design and creation of both art and utilitarian objects which in turn would attune to larger architectural designs. (Nerdinger, 1985) In his 1919 programmatic essay "Architecture in the People's Free State" Gropius explicitly reveals this integrative function which he determines for the arts under gesamtkunstwerk principles and predicts that the arts will break their isolation from each other. (Gropius, 1919)

Like Richard Wagner though, Gropius theorised that this unified harmony was only possible under the direction of a creative head, which for him was the architect. However, paradoxically, the historical

legitimisation of this concept was founded in medieval community anonymity and the unified communal gothic cathedral. In fact Gropius used the expression *cathedral of future freedom* interchangeably with his more prosaic locution *unitary work of art* when promoting his ideal. (Bayer, Gropius & Gropius) Regardless of this paradox, progressive/socialist/utopian gesamtkunstwerk ideals led to bigger scaled building projects for Gropius, including the building of entire communities and the moulding of the quality of communal life therewithin, such as in his *People's Houses* project. Along with these extensive projects Gropius conceived of a new ideal, *total-architektur* (total-architecture) in the 1930s and discussed it at length in the last chapter of his book *Architektur, Wege zu einer optischen Kultur* (Gropius, 1957) and in *Scope of Total Architecture.* (Gropius, 1956) Through this ideal of total-architecture Gropius and the Bauhaus linked up to the utopian tradition of neo-Platonic ideas tending towards unity, but this time undertaken through an anti-excess non-ornamental functionality and an abstract geometric consistency of form which the post-modern theorist Charles Jencks characterises metaphysically as Calvinist Puritanism. (Jencks, 1996, p. 23)

But within the Bauhaus an even more general conception of this ideal of totality emerged: the concept of *aesthetic synthesis*, as Oskar Schlemmer defined it, which would symbolise the social synthesis in an entire new society. (Schlemmer)
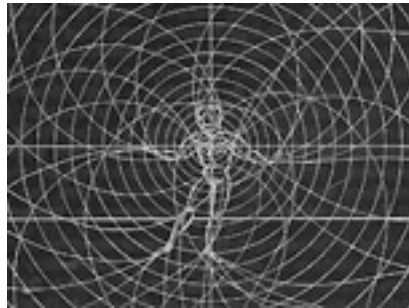
Oskar Schlemmer, man/movement/space design

In 1921 Schlemmer took charge of the sculpture workshop at the Bauhaus and began designing scenery and costumes for his *Triadische Ballett* (which would have its premiere in 1922 at the Landestheater in Stuttgart). In 1923 Schlemmer took charge of the Bauhaus theatre workshop and he continued to direct the theatre workshop when the Bauhaus moved to Dessau in 1925. In the manifesto for the 1923 Bauhaus exhibition, Schlemmer theorised an idealism which would unite art, science and technology together as to guide an artistic construction of the world. (Wensinger & Gropius) Consequently, around 1923, the Bauhaus went beyond the artisanal approach (which had characterised its early stage and was by then historically anachronistic) and functional technique and industrial processes became the dominant components of the utopian ideal of synthesis. In this connection, Gropius coined the slogan *Art and Technique: a New Unity*, thus joining the Bauhaus up with the early ideals of the Werkbund which had so heavily influenced him. (Bayer, Gropius & Gropius)
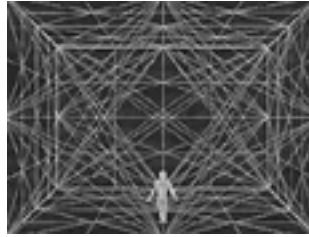
Oskar Schlemmer, scenic design

In this connection, the experiment of synthesis Gropius himself had undertaken back in 1914 when building a model factory and offices is pertinent. The synthetic concept of total-architecture meant that for him the architect must become a socialist town planner, an ideal which Gropius found desirable after encountering capitalistic building practices in the 1930s; restraining practices which made it impossible for him to realise his ideas for complex town plans. (Hüter) For example, Gropius designed a "co-operative city" for Berlin in the late-1920s which was never realised. He recognised too, in this ideal, that the architect is well advised to consider the natural environment and to protect the beauty of nature. Thus he advised architects to avoid the usual practice of destroying the natural landscape with land-scrapers, a common practice conducted in the name of urban development and stimulated by economic interests.

Indeed Gropius's ideal of total-architecture rejected the ideology of capitalistic profit in which the land was conceived of as a commodity in favour of what he saw as a synthesis of the future. (Gropius, 1956) This synthesis entailed a plan for the destiny of the whole earth which blended both science and art; science to analyse human relations, and art to convey human activity into a *cultural synthesis*. Any visible form, natural or cultural, was conceived by Gropius in this total-architecture concept as part of an overall composition, consistent to the architect's grand design and in accord with the overall visual effect. (Nerdinger) Even utilitarian buildings, streets, or bridges are an important factor for the overall visual effect of total-architecture. (Gropius, 1956) This *overall visual effect* was achieved by virtue of a latent neo-Platonic sensibility which shunned any form of decorative disguise and privileged the sleek, cool assurance with which good-looking and expensive materials are used to enrich the surfaces. (Sembach)

Gropius attempted to develop this overall visual-ideological tendency in the Bauhaus but as the contacts with reality became closer and the confrontation with the world of technique increased, the concept of synthesis lost its visionary aspects. The dreamy poetical images of a harmonious world free from alienation were replaced by accurate methods of analysis. At that point, Moholy-Nagy proposed the introduction of the concept of *total-work*. He believed that the correct ideal was not of a total-artwork, but the self-producing synthesis of all and every moment of life toward the all uniting total-work (life). This concept of *total-work*

was to be taken as the conceptual basis of Functionalism. (Passuth) In 1924, when still at the Bauhaus, Marcel Breuer formulated such a new concept of synthesis in his essay "Form and Function". (Breuer)

However, it was in theatre where progressive/utopian gesamtkunstwerk ideals could still be put to instantaneous use through the blending of the arts. Towards these ends, in 1926, Gropius founded the Bauhaus Theatre in which many of the partly realised total art ideas of the Futurists and Schwitters came to fruition in the work of Oskar Schlemmer, László Moholy-Nagy, and a number of the Bauhaus students whose ideas of *total-theatre* consisted of an altered use of space. (Henri, p. 20) Here Oskar Schlemmer put forth the notion of aesthetic synthesis in relationship to the theatre projects of the Bauhaus, a synthesis which was intended to symbolise social synthesis. (Wensinger & Gropius) *Lackkabinett,* conceived in 1941 and finally executed in 1987 at Kunstverein für die Rheinlande und Westfalen in Düsseldorf, exemplifies Schlemmer's work as it matured out of those ideas of synthesis in an immersive manner. Moreover, in terms of the immersive gesamtkunstwerk, Gropius's 180° pivoting *Total Theatre* design is consequential. It entailed a comprehensive 180° stage design which included encompassing movable architecture, theatre stage, and cinema screen which united performers and audience in a rich pluralistic synthesis. The spherical form of the theatre situated the spectators around the edge of the rotund form which, according to Gropius, set up a new perceptual rapport with the performance and enhanced the sense of immersion within the presentation of the spectacle. The term *total* was adapted by Gropius for his *Total Theatre* (in spite of its limited version of the idea) so as to indicate that the viewer could see everything in its entirety. In his terms this total use of physics, optics, and acoustics produces a concentric FOV which extends out in all directions. Gropius ideologically envisioned this new perceptual field as educating the masses and teaching them a new way to think through the re-edification of the masses' psyche. (Nerdinger, 1985, pp. 95-99)
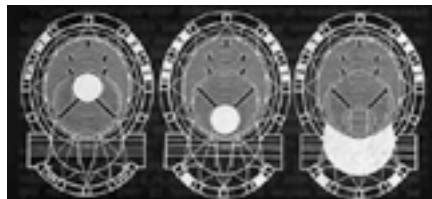
Walter Gropius, designs for *Total Theatre*
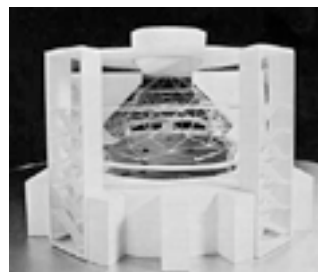
Walter Gropius, model for *Total Theatre*

Though, from one point a view, this *total* gesamt mentality can be seen as a megalomania characteristic, it also, at least in Gropius's case, seems to be a heart-felt appeal against the destruction of the biosphere which Gropius already saw occurring around him and an intuitive grasp of the immersive holographic consciousness as previously outlined. The synthetic concept of *total architecture* certainly became, for Gropius's theory, a pivotal point from which the consideration of immersion in the natural environment takes on importance. This concept of *total design* reaches an even higher global level with the *World Games* project of Richard Buckminster Fuller (1895-1983) in the late-1960s and early-1970s. (Fuller, 1969)

Buckminster Fuller, proposed dome for New York City

In terms of *total design* it is interesting to note that Moholy-Nagy, on May 14th, 1930, presented his famous kinetic sculpture *Light-Space Modulator* (Lovejoy, 1997a, pp. 45-47) at the *Salon des Artistes Décorateurs* (held in the Grand Palais in Paris) as part of an exhibition concerned with interior decoration, thus indicating how his ideal of the total-work was conceived as permeating an entire interior atmosphere. (Haus) This overriding tendency towards a unity of outlook makes it possible for two areas of design which would seem to have nothing in common, architecture and fashion, to be considered in conjunction. By 1930, after years of experimentation, Modernism, and the internationalism of modern art, was beginning to be entrenched world wide. By about 1930 the influence of Expressionism was already ebbing and being replaced with the *Neue Sachlichkeit* (New Objectivity), the art movement based on the sharp metallic-sheen of cool machine precision. (Hitchcock) This period in general possessed an absence of imprecision or vagueness in lieu of the pursuit of (supposedly) lucid values. The purism of 1925 had been a necessary preliminary for this development, but now, however, a process of refinement took place which made elements that had previously been disputable appear logical and almost impossible to hypothesise differently. This can be seen most readily in architecture, where the severe white cube becomes dominant. (O'Doherty, B., 1976)

Clothes around 1930 were, like the architecture, both functional and sensuous, combining a sporty, casual look with a sense of machine tooled refinement. All unnecessary details were avoided, yet opportunities for unobtrusive luxury remained. The great fashion photographers of that time (for example Edward Steichen (1879-1973) and Cecil Beaton (1904-1980)) too expressed this will to machine-perfect elegance which

represents the ideal type of this period. Elegant cosmopolitanism is key and it is probably no coincidence that the best posters of the period advertise fast trains and ocean liners, as the ideal was to travel while maintaining one's elegance. (Sembach) In interiors the ideal was to attain a charming sense of understatement and a degree of spatial comfort with a sort of hypothetical machine elegance (where variations were neither desirable, necessary nor possible) epitomised by Breuer's tubular steel chair (indeed its smooth lightness and tooled precision represented the ideal expression of machined sublimity).

Gropius's link with this tradition of the reductive machine-tooled sublime is obvious as his ideal values (which came to employ unambiguous geometry and the hard precision of materials) exercised a fascination over many designers of the era. From the mid-1930s on however, this association was ravaged by the advent of unrestrained functional, non-ornamental, streamlining and one senses a predominant sense of élitism in gesamtkunstwerk inspired design (with its lofty pretentious perfectionism which was nearly merciless in its acerbity and (presumably veiled) intimidation). The flawless manner in which the total-design ideal nourished both the Nazi aesthetic (Speer) and the aesthetic of American corporate business is noteworthy. The fact that this gesamt style of aesthetic perfection, devoid of all blemishes, was adapted makes it difficult to read the style in a magnanimous manner.

However, this strict gesamtkunstwerk principle is firmly located within the heart of the 20th century mainstream, as reductivist Modernism came to dominate architecture, fashion, appliances and much art. Most accepted the reductive (soon to be called *minimalist*) aesthetic in harmonious concert. By the 1940s the general desire to form a total-design gesamtkunstwerk basically amounted to striving to accommodate to the everyday strict character of work. An exemplary precedent figure in this respect was Peter Behrens (1868-1940), a German architect/designer/painter who played an important role in Late-Art Nouveau. Behrens's work was based on the concept of design as the indicator of social and economic life that bore the hallmarks of society as a whole. For example, for the Berlin AEG Electrical Combine Company Behrens designed not only the architecture, posters, advertising, and other forms of corporate presentation, but also the products themselves; the lamps, fans, and switch boxes. As we have seen in numerous examples, this clean, pragmatic aesthetic was foreshadowed by much of the art ideology of the Late-Art Nouveau, for example that of Charles Rennie Mackintosh and his choice of well placed clean monochromatic areas. This aesthetic choice began moving art and architecture in the direction of the reductivist gesamtkunstwerk ideal which crystallised in the theories and production of the Bauhaus's second director, Ludwig Mies van der Rohe (1886-1969); a praxis characterised by cleaned-up neo-Platonic unity which reached its height in the *International Style*.

The International Style was the name given by Philip Johnson and Henry-Russell Hitchcock to their influential book about the modern style in architecture, wherein Johnson and Hitchcock recognised that Modernism was not confined by national boundaries because architects from all over the world now met

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together to try to solve the problems of contemporary architecture. This unification-by-subtraction aesthetic guided a great deal of 20th century artists, architects, and designers, particularly Americans, up until the advent of Post-Modernism. In America the early precedent proponents of the all-inclusive gesamtkunstwerk approach to space were Frank Lloyd Wright, and Charles Sumner Greene / Henry Mather Greene (respectively (1868-1957) (1870-1954)) (the Greene Brothers). Frank Lloyd Wright's stated ideal was to destroy the room as a box in favour of a gesamtkunstwerk space as evidenced by the fact he wrote in his text "A Testament" that Ruskin and Morris were much in evidence in Chicago intellectual circles around 1900. Wright admired both Ruskin and Morris but made it clear that he was not antagonistic towards the machine. (Wright, F. L.)

At the turn of the century Wright became the chief practitioner of what became known as the Prairie School style and was widely recognised for his radical approach to building modern homes. Utilising mass-produced materials and equipment, mostly developed for commercial buildings, he discarded elaborate compartmentalisation and detailing for plain, roomy, family living areas. Comfort, convenience, and spaciousness were economically achieved. The typical Wright residence from this period displayed a wide, low roof over continuous window bands that turned corners, defying the conventional box-like structure of most houses. The result was that the house's main rooms flowed together in an uninterrupted space. Wright built about 50 Prairie houses from 1900 to 1910.

The Greene Brothers's 1908 masterpiece of the Arts and Crafts Movement in America, the Gamble House at 4 Westmoreland Place, Pasadena, California, is also important in this respect. In the Gamble House, furniture, cabinetry, panelling, wood carvings, rugs, lighting, leaded stained-glass, accessories and landscaping are all custom-designed by the architects, in the hand-crafted spirit of the Arts and Crafts Movement. No detail was overlooked as every peg, oak wedge, down spout, air vent, hardware and switch plate is a contributing part of the single design statement.

It is significant that European cultures, as we have seen, originated primarily with a centred societal place based on the prognosticational utility of the temple or the sacred grove. American immersive consciousness, however, begins when those semi-enclosures are forgotten as the fundamental American myth is that of the open frontier. The American ideal person is that of the heroic frontiersman and the cowboy, where independence, and the spatial awareness that is perceived as going along with it, is defined as being achieved out on the open plains and under an immeasurable sky. This is the myth remaining left over from the American experience with the frontier. The dangling contradiction of contemporary America is that there is in fact no literal frontier left to provide the emphasis on expansion and movement, nor is there a sense of centred temple or sacred grove to bind society together in an inspansive divinational direction. When in 1893

President Frederick Jackson Turner (1861-1932) announced to the American people that America had run out of "free land" he literally ended the spatial ideology that gave America its "open" identity. (Larousse & Augé)

In reality now, awareness of American crime consciousness is what more and more constructs immersive aspects of consciousness there with its broadly attentive perceptual FOV. More and more an incubus of personal terror is constructed in relationship to perceived power over the body. As a New Yorker from Chicago, I can assure the reader that the visual tunnel-frame which normally tracks the movement of forms or images in our optical field is expanded via fear of criminal attack. The night-walker in any American big city (or in a jungle I take it) extends visual and audio consciousness over a large field of perception. In the visual attention necessary for criminal avoidance, decentred perception is discovered to float on the outside of the frame, as the field which we inhabit is one also of moods and feelings socially constructed by what might be called a politics of fear. However the American philosopher Ralph Waldo Emerson (1803-1882), in *The Young American*, wrote that the land is the appointed remedy for whatever is false and fantastic in American culture and hence the reason for America's transcendentalist optimism. (Emerson) Hence I will briefly mention the magnanimous open but cultured spaces of the south-west United States, for example Wupatki, an Indian cliff dwelling (AD 1100) deserted by their Indian builders long ago.

BXVII: Inward States of Sublimity in the Spatialist Era: Missiles, LSD, and a Post-World War II Avant-Garde

...the aspirations toward a vaster and more organic one and the premonitions of unknown forces and their application in new fields are the same...
-Pierre Teilhard de Chardin, *The Phenomenon of Man*

In art the evolution is social and not just visual.
-Lucio Fontana, *from his last interview*

The artist is no longer bound to the canvas and can transfer compositions from canvas to space.
-Kasimir Malevich, *The Non-Objective World*

Neither missiles nor rockets nor sputniks will render man the "conquistador" of space.
-Yves Klein, *The Chelsea Hotel Manifesto*

A predominant question which I have researched in this section is just why does traditionally framed pictorial art become progressively challenged - and to a certain extent, eclipsed - by an ambient-immersive impetus following the Second World War? Indeed I have concluded that there had been a substantial eruption of this impetus following the war, as the reader shall see ahead. Evidently there was something endemic within the barbarous conditions of 20th century modern warfare which facilitated this development at its onset, rather than any more laudable human aspirations towards the expanding of aesthetic perceptual consciousness. We can find examples of the construction of immersive cultural space previous to the war on occasion, as we have seen, but after it I began identifying a large increase in apparent immersive cultural intentions. I have deduced that something in the spatial consciousness of society was altered following the war and have further deduced that the bombing of civilian centres in the course of the war (i.e., Köln, London, Tokyo) culminating with the American atomic bombings of the civilian Japanese cities Hiroshima on August 6th, 1945 (circa 140,000 victims) and Nagasaki on August 9th, 1945 (circa 70,000 victims) changed the world's sense of space radically.

The Allies' strategic air offensive against Germany began to attain its maximum effectiveness in the opening months of 1944. Both the U.S. air forces concerned, namely the 8th in England and the 15th in Italy, were increased in numbers and improved in technical proficiency. By the end of 1943 the 8th Bomber Command alone could mount attacks of 700 planes, and early in 1944 regular 1,000 bomber plane missions became possible. Even more important was the arrival in Europe of effective long-range fighters, chief of which was the P-51 Mustang.

However Paul Virilio in his esteemed *Bunker Archaeology* indirectly suggested the initial date of this spatial consciousness transition as being 1943 with the Nazi preparation for the first operational launching of the V-2

ballistic missile. (Virilio, 1994a) Ballistic missiles are rocket-propelled weapons that travel by momentum in a high, arcing trajectory after they have been launched into flight by a brief burst of power. Although experiments were undertaken before World War II on crude prototypes of the cruise and ballistic missiles, modern weapons are generally considered to have their true origins in the V-1 and V-2 missiles launched by Germany in 1944 and 1945. Both of those *Vergeltungswaffen* (Vengeance Weapons) defined the problems of propulsion and guidance that have continued ever since to shape cruise and ballistic missile development. Indeed strategic missiles represent a logical step in the attempt to attack enemy forces at a distance. As such, they can be seen as extensions of either artillery (in the case of ballistic missiles) or manned aircraft (in the case of cruise missiles).

In 1944 at the Peenemünde base on the island of Usedom in the Baltic, Wernher von Braun and his team created the V-2. The V-2 was 14.1 metres long (47 feet) and its payload was about 900 kg of high explosives. The horizontal range was about 350 kilometres (220 miles), and the peak altitude usually reached was about 100 kilometres (62 miles). It was first fired against Paris on Sept. 6, 1944. Two days later the first of more than 1,300 V-2s was fired against Great Britain (the last on March 27, 1945). Belgium was bombarded almost as heavily with them. Reaching a height of more than 160 kilometres (100 miles), the V-2 marked the beginning of the space age. After the war, both the United States and the Soviet Union captured large numbers of V-2s and used them in research that led to the development of their missile programs. (Encyclopaedia Britannica)

Nevertheless, Pablo Picasso's 1937 monumental 3.51 by 7.52 metre (11.5 by 24.6 feet) painting *Guernica* presented into art consciousness an earlier (the first) civilian air-bombardment of innocent people at home in their city of Guernica Y Luno during the Spanish Civil War (1936-1939). Here 1,654 Basque people were killed, at the bequest of Francisco Franco Bahamonde (1892-1975), and 889 were wounded, including the elderly, women, and children by Adolf Hitler's (1889-1945) Junker 52 and Heinkel 51 warplanes in the service of Spanish fascism. Previously there existed a separation between military and habitational space, but with the bombing of Guernica Y Luno the swathed immersive space of the tellurian domain was suddenly deemed defunct as previous earth/covering frontiers became increasingly porous to airborne invasions. This sense of airborne vulnerability soon extended itself further and further outwards with the launching of spy and then military-communications satellites (Sputnik in 1957), the first manned space flight of the Soviet military-pilot Yuri Gagarine (1934-1968) on April 12th, 1961 (the first man in space), and then the first manned trip to the moon of the American Apollo Mission in 1969 which featured Neil Armstrong's televised trek on the moon. Rocket technology enabled military forces to put nuclear weapons on intercontinental missiles, due largely to the former work of Russian rocket pioneer Konstantin Tsiolkovsky (1857-1935) (whose visionary ideals came from Nikolai Fedorovich Fedorov (1828-1903)), the American Robert H. Goddard (1882-1945) and the German Hermann Oberth (1894-1989). With rocket technology the space of military interaction

clearly expanded (Schell) and mirror-like entered the inner dimensions of the human psyche. Virilio verifies this shift in consciousness in his book *War and Cinema: The Logistics of Perception* where he traces the colonisation of the unhurried gaze by military technologies and the introduction of military intelligence into the indoctrination of the non-combatant's perceptions. (Virilio, 1989) This "rational" scopic extension of vision (Ivins, 1975) is accomplished precisely at the loss of another sort of vision, the ambient/holonogic, as it involves a heightened ordering and sighting of linear perspectives and a consequent geometrisation of both external space and the inner human. (de Lippe) This new sense of threatening external space perhaps is most strongly, and most fearfully, exemplified by what has become know as *C3I* (pronounced as *see cubed eye*) the electronic military intelligence spatial fusion of control, command, communication and intelligence which developed as the electronic/digital system of strategic command over the U.S. militaries' nuclear arsenal. A fine short overview of this trend towards militarising and sighting outer (and hence inner) space is provided by Herbert York in his essay "Nuclear Deterrence and the Military Uses of Space" where he outlines the Strategic Defense Initiative (SDI) program of the 1980s and its ensuing militarisation of outer space. Indeed York makes the point that "from the beginning" the use of the space program has been "primarily of a military, not civilian or scientific nature". (York, p. 20) As part of the SDI program President Ronald Reagan put forth in a speech in 1983 his "vision" of what became pejoratively called *Star Wars;* perhaps the archetype of this oppressive spatial consciousness.

Nuclear weapons derive their enormous explosive force from either the fission or fusion of atomic nuclei. Their significance may best be appreciated by the coining of the words *kiloton* (1,000 tons) and *megaton* (one million tons) to describe their blast effect in equivalent weights of TNT. For example, the first nuclear fission bomb, the one dropped on Hiroshima, Japan, in 1945, released energy equalling 15,000 tons (15 kilotons) of chemical explosive from less than 130 pounds (60 kilograms) of uranium. Fusion bombs, on the other hand, have given yields up to almost 60 megatons.

The first nuclear weapons were bombs delivered by aircraft. Warheads for strategic ballistic missiles, however, have become by far the most important nuclear weapons. (Schell) The U.S. stockpile of nuclear weapons, which included the hydrogen bomb that was first test exploded in 1952, reached its peak in 1967 with more than 32,000 warheads of 30 different types. The Soviet stockpile reached its peak of about 33,000 warheads in 1988. Throughout the ballistic missile arms race, the United States tended to streamline its weapons, seeking greater accuracy and lower explosive power, or yield. Most U.S. systems carried warheads of less than one megaton, with the largest being the nine-megaton Titan II, in service from 1963 through 1987. Meanwhile, the Soviet Union, perhaps to make up for its difficulties in solving guidance problems, concentrated on larger missiles and higher yields. The Soviet warheads often exceeded five megatons, with the largest being a 20 to 25-megaton warhead deployed on the SS-7 Saddler from 1961 to 1980 and a 25-megaton warhead on the SS-9 Scarp, deployed from 1967 to 1982. (Encyclopaedia Britannica) Hence at mid-

20th century, space became the range of both humanity's greatest fears (nuclear extinction of life on the planet) and its boldest aspirations (co-operative peaceful space exploration). (Kupeic)

What I am proposing here, in agreement with Virilio, is that the sense of human enfolded space was radically transformed in 1943 when the German rocket-launched bombs began to fall on London without warning, shattering the common sense of civilised, non-combatant, protected space and that this remade human feelings towards external space thoroughly. As a consequence, I maintain, a consciousness of civilian aerial bombing, of atomic weapons, of military rocketry and of the eventual militarisation of outer-space has greatly engendered the abandonment of the horizontal line in art, which for thousands of years had been the basis of aesthetics and proportion. Of course accompanying this new sense of space was a general post-war urge to position one's artistic activities and ideas outside of previous contexts; in Western art and philosophy's case outside of Surrealism and Existentialism.

In terms of a transformation of our sense of internal space, I find it amazing that Dr. Albert Hofmann (a biochemist at the Sandoz pharmaceutical firm in Basel, Switzerland) accidentally discovered LSD (d-lysergic acid diethylamide tartrate) the same year, in 1943, that rocket-launched bombs began to drop from the sky. LSD was first synthesised in 1938 by Dr. Hofmann but he did not know what he had synthesised until 1943 when he accidentally absorbed a small amount of LSD (which is colourless, odourless, and tasteless) and thus discovered its visionary properties. (Cohen) With this ingestion, Dr. Hoffman, after surveying the room he was in, realised that he now formed a continuum with everything in sight. The room seemed to shimmer in the sunlight, and he became aware of the atomic substructure that underlay the visible world of the senses. (Hofmann, A.)

The problems of LSD's experiential description are notorious, and the typology of its effects vary, but the central experience is one where a new level of immersive omnijective consciousness emerges. (Osmond & Aaronson) As this cultural phenomenon did much to change the art of the 1960s to the 1980s, I shall attempt to describe LSD's salient properties as they apply to immersive experience. Foremost in this regards is that when experiencing the chemical, the awareness of individual identity somewhat evaporates and subject/object relationships tend to dissolve. (Cohen) The world seems as if it is simply a fluid, shifting extension of mind and it shimmers as if it were charged with a high-voltage electricity. Additionally the subject often feels melted into the environment and somehow contiguous with it and there is an acute awareness of the atomic substructure of reality which makes it seem that one could pass through a wall or another person (as with VR). (Masters & Houston) Most importantly, the subject is somehow united with a sense of *unified ground of being*, and that urge, as we have seen, has driven the gesamtkunstwerk ideal since the beginning of time.

As Bohm and others (Capra, 1980) have shown us, everything in the universe is made up of, and seen as, part of the seamless *unified ground* of the holographic total-fabric and LSD seems to make this visible. (Hofmann, A.) Furthermore, this *unified ground paradigm* began forcefully entering Western consciousness just following World War II's brutal demonstration of nuclear destructive power on Japan and, as we will soon see here, began to be reflected forcefully in vanguard art of the post-war period. Therefore it is no coincidence that places of worship figured prominently among post-war modernist architecture and became statements of yearning for a placid immersive cohesion with wholeness, as we see with Le Corbusier's Notre-Dame-du-Haut Chapel at Ronchamp and the Claude Parent and Paul Virilio project for the church of Sainte-Bernadette du Banlay in Nevers, France, designed in 1964 and built in 1966. This project was based on the architecture of confinement and territorial closure which the Nazis had built on the French Atlantic coast, as depicted and explained by Paul Virilio's classification of the bunkers in his *Bunker Archaeology.* (Virilio, 1994a) These imposingly beautiful concrete monoliths seem almost as if they are floating autonomously on the silt and sand and this sense of shifting edges was recreated in the church of Sainte-Bernadette du Banlay as the project took the form of a colossal cleaved bunker which is cracked in two-halves.

Claude Parent and Paul Virilio, *Sainte-Bernadette du Banlay*

This design was intended as a critical statement of contemporary society's association with the military. Moreover, in 1963 Parent and Virilio set up the group *Architecture Principe* with the sculptor Morice Lipsi and the painter Michel Carrade so as to advance many gesamtkunstwerk ideals into the 1960s. In this respect I should also mention here the French-based international and multi-disciplinary Espace group, which was predicated on the idea of a gesamtkunstwerk synthesis of the arts and on ideals of spatial unity and spatial continuity. *Espace* (which is the French word for *space*) was founded in 1935 by its chairman Andrè Bloc (1896-1966), principally, an engineer working in rubber and a painter and sculptor, whose interests lay in the expression of an underlying quest for a new relationship to space. As such he founded the journal *L'Art d'aujourd'hui* which was the print medium for the Espace group. *L'Architecture d'aujourd'hui* in the 1930s was one of the first reviews concerned with modern architecture and was distributed widely. As such it was the place where all the different schools of architecture exchanged theories, including those of the Dutch Neo-Plasticists, Auguste Perret (1874-1954) and Le Corbusier. One of Espace's vice-chairmen was the artist Fernand Lédger (1881-1955). The artist Sonia Delaunay (1885-1979), who took her version of the

gesamtkunstwerk synthesis of the arts into the creation of clothing and an automobile, was the general secretary. (Migayrou)
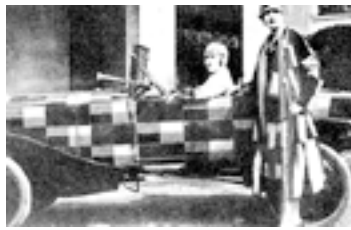
Sonia Delaunay, matched car and clothing

Sadly Espace's gesamt ideals of spatial continuity died out after the war since the hostilities overturned the conception of concordant space (in fact Andrè Bloc, who was Jewish, was forced to flee for his life) and it became more reactive towards the psychic effects of aerial-bombings on civilian populations and the persistent nuclear threat thereafter. (Schell) Influential with the group were the ideas, work, and writings of Max Bill (1908-1994) and Paul Virilio, who was one of the first to explore space's social and political ramifications. Following the end of the war, Bloc still conceived of the exploration of this topological space in terms of unity, but it is certain that the war brought about a more dour perception of spatial consciousness based on non-holistic notions of fragmentation and discontinuity, thus putting a temporary end to approaches based on the unity of total design. Indeed with war synthesis seems impossible.

This fragmentation is only now beginning to be reunited in a post-Cold War, more natural (borderless) environmental continuity. As an American artist living in Europe I notice this process of synthesis (re-conceived of in micro self-segmented ways within modest programs) unfold nearly every day with the unification of Europe, even given the retained suspicions towards idealist illusions which counterbalance this humanist desire for diverse but harmonious co-existence. Hence it is pleasing to recall that the musician Edgard Varèse (1883-1965) in conceiving his unfinished work *Espace,* wanted there to be "voices in the sky, as though magic, filling all space, criss-crossing, overlapping, penetrating each other (...)". (Ouellette)

In understanding immersive art we must realise that the edification produced by artistic immersion is not solely that which is effected by social approval and disapproval, but the taciturn, refining contact with immersive desires. Exemplary of this desire is the work of Yves Klein (1928-1962). Born in Nice in 1928 of artist parents, Klein studied, among other things, Oriental languages and judo (he wrote a book about it) while playing music in a jazz-band. In 1948, at age 20, Klein discovered a book by Max Heindel (1865-1919) which teaches the basic beliefs of an esoteric Christian sect called the Rosicrucians. (Heindel) Klein obsessively studied the book for five years, and after coming to Paris in 1955, began to refer to himself as an initiate in the sect. (Restany, 1969)

Based on the Rosicrucian metaphysical ideology, Klein avowed to indicate to the world a new age, the *Age of Space.* In the Age of Space, boundless spirit would exist free of form, objects would levitate, and humans would travel liberated from their body. Klein's idea of pure (free from form) open space was first formulated in his monochrome paintings, where the bisecting nature of line was rejected in favour of an even, all-over, ultramarine-blue colour which he called *IKB* (International Klein Blue). However, later some of his monochromes were painted pink, gold, or yellow. In 1958 Klein went beyond the monochrome rectilinear canvas with a distinguished immersive presentation titled *Le Vide* (The Void) which was held at Galerie Iris Clert in Paris. For this exhibition Klein cleaned out and whitewashed the gallery and "impregnated" the empty space with his consciousness, filling the freshly whitened gallery (emptied of figurative presence) with *Le Vide,* through which Klein led small groups. (Restany, 1992)

Yves Klein, *Le Vide*

I consider this installation to be of utmost importance to the identification of immersive ideals in that it crystallises the body's entrance into a consciousness of aoristic space. *Aorist* is a classical Greek spatial term which was used when discussing an occurrence without limitations. Aorist literally means *without horizons*.

In early-1961 Yves Klein installed, as part of his retrospective at Museum Haus Lange in Krefeld Germany, another immersive walk-in installation called *Raum der Leere* (Room of the Void) in reference to his *Le Vide* which consisted of a 285 by 442 by 172 centimetre room (approximately 9 by 14 by 5.6 feet) painted white (with slightly rough textured surface) lit by neon lamps. Klein's interests in open areas of colour and light, in vibrating voids, and in sheer saturated colors emptied of figurative presence are primarily directed towards space's and colour's aoristic qualities, qualities which subsequently will interest future generations of ambient-oriented artists, as will be demonstrated.

Klein's faux *Leap into the Void: Man in Space! The Painter of Space Throws Himself into the Void!* of 1960 of course deserves some mention concerning aoristic immersive ideology. But in terms of what I previously mentioned concerning how aerial attacks on city-space changed sensitivities toward immersive expression, we may note also some specific supporting material with Klein's 1960 painting explicitly titled *Hiroshima*, produced in the dimensions of 108.5 by 75.5 centimetres (close to 3.5 by 2.5 feet).

Klein was a member of the *Nouveaux Réalistes* (New Realists), the name for a French post-war avant-garde movement, which included the Italian Piero Manzoni (1933-1963), which was organised and theorised by the French critic Pierre Restany. The core issue of the Nouveaux Réalistes was the conception of art as formed by real elements, that is, materials taken from the world directly rather than formed pictorially. (Restany, 1969) Influenced by Yves Klein and the general anti-rationalism that opposed the machine-like logic which underlay the killing efficiency of aerial war, in 1961 Piero Manzoni redefined art's specific intensity of consciousness to include the entire world which he put on a sculpture pedestal labelled *Socle du Monde* (Pedestal for the World). He as well began making living sculptures by signing the arms and backs of his models and canning his own excrement (*Scatola*) which was sold for the same price as the weight of gold.

Concerning what Adrian Henri calls the "environmental urge" (Henri, p. 18) Lucio Fontana (1899-1968) explored in analogous manner the problem of representing spatial concepts abstractly. As a result he is an important immersive artist of the 20th century, best known for exploring the concept of *Spatialism*. Fontana was born in 1899 at Rosario di Santa Fé, Argentina and died in Varese, Italy on September 7th, 1968, a few months before the first man walked upon the moon.

Particularly what is important about Fontana here is his, and his group's, theoretical manifestos. The movement known as *Spazialismo* (a neologism deriving from the Italian word *spazio* (space)) was initiated by

a group of artists/intellectuals in Milan in 1947. Spazialismo's first manifesto was written by Fontana, the critic Giorgio Kaisserlian, the philosopher/artist Beniamino Joppolo and the writer/artist Milena Milani. The movement's second manifesto (called *Spaziali*) was signed in 1948 by Fontana, Beniamino Joppolo, Milena Milani, Giorgio Kaisserlian, Antonio Tullier and Gianni Dova. Fontana wrote or collaborated on a number of other theoretical tracts, such as his eminent *Manifesto Bianco* (White Manifesto) of 1946 in which it was stated that "What is necessary is to overcome painting, sculpture, poetry and music. We need a more comprehensive art that meets the requirements of the new spirit." While Fontana's works can be appreciated independently of their theoretical background, they receive an added conceptualist dimension through references to it.

At the end of his life Fontana said that his art "took a new direction with the *Spatial Manifesto* of 1946". (Trini, p. 34) With it Fontana became more than a painter or a sculptor, as it was space itself that interested him above all else; space in the third and fourth dimensional realm and *space in the metaphorical and conceptual sense*, akin to the cosmic spatial ideas which Yves Klein had developed. However, Fontana turned frequently to painting in order to encounter these promulgations of spatial unity and Fontana often said that the canvas for him is primarily there not for what it is or for what it represents but to show that we can look and move through it. (Fontana, 1963) It is for this reason that he punctured holes in his canvases as a means of integrating the theoretical space represented on the surface of his paintings with the tangible space that surrounded them.

In 1949 Fontana's spatial theories, which had been developing in his paintings, could no longer only be expressed through a two-dimensional surface and hence he created his first spatial environment, *Ambiente Spaziale a Luc Nera*, in the Galleria del Naviglio by placing in the darkened gallery an abstract shape painted with phosphorescent varnish and lit by neon lamp. From then on Fontana titled all of his works *Concetto Spaziale* (Spatial Concept). He shortly thereafter made his first white punctured hole pieces, his first *buchi* (Italian for *hole*) works. Speaking of the *buchi* in a late interview, Fontana said, "...the discovery of the cosmos is a new dimension, it is the infinite, so I make a hole in this canvas, which was the basis of all the arts, and I have created an infinite dimension (...) that is precisely the idea, it is a new dimension corresponding with the cosmos. The hole was precisely to create that void there at the back." (Beeren & Serota) Concerning this puncturing of holes, Fontana said in the last interview of his life that "...if any of my discoveries are important the *buchi* (hole) is. By the *buchi* I meant going outside the limitations of a picture frame and being free in one's conception of art. (...) I make a hole in the canvas in order to leave behind me the old pictorial formulae, the painting and the traditional view of art and I escape symbolically, but also materially, from the prison of the flat surface." (Trini, p. 34) Fontana said of his *buchi* that "as a painter, while working on one of my perforated canvases, I do not want to make a painting; I want to *open up space*, create a

new dimension for art, and tie in with the cosmos as it endlessly expands beyond the confining plane of the picture" in which "the images appear to abandon the plane and continue into space". (Manifesto Tecnico)

Lucio Fontana painting

To make the point in specifically heightened immersive terms, Fontana created in 1952 a ceiling peppered with his punctured buchis for the Kursaal at Varazza which also incorporated low-angled lighting. He repeated the gesture on the ceiling of a cinema in Breda the following year. (Beeren & Serota) By the late-1950s Fontana was slashing monochromatic canvases with a razor blade as the lacerated canvas indicated for him access into the infinite. In doing so, he transformed a presumably ruinous attitude into an act of creation that challenged classical easel painting and the sanctity of the picture plane. This extravagant slashing gesture made him a nullifier of painting's flat window-like metaphoric space and thereafter he became a harbinger of a conceptual consideration of an immersively engaging, spatially oriented total art.

Besides Yves Klein, Futurism was another historic source of Fontana's inspiration, particularly, Giacomo Balla's (1871-1958) studies of spatial ambience. (Apollonio) Fontana readily identified with the Futurist's rumination on motion which he developed and expanded and integrated as part of his Spatialist creations. For Fontana however, space no longer functioned, as it did for the Futurists, in the context of the image (the flow of space around sculpture or the implied space of painting), but it became the palpable field in which his spatial method took shape. Hence he literally transgressed abstract painting's support, refusing the illusory for the actual, activating ambient space and the technological allure which envelops modern life. This is what constitutes the cutting-edge of Fontana's deceptively simple (but far reaching) work.

Perhaps in immersive terms the most successful of Lucio Fontana's work were his installations at the 1966 Venice Biennale (especially the ultra-violet light-room and the violet neon-room) and the last gallery at his retrospective exhibition at the Stedelijk Museum in Amsterdam in 1967. For this culminating gallery Fontana created a vivid red chasm by dividing the space from floor to ceiling with wooden partitions pierced by horizontal rows of buchis. Walls, floor and ceiling were all painted the same vivid glossy red and then illuminated with red neon light creating a walk-in total-artwork.

Fontana's objective for his art was the breaking of dimensional limitations; both physical and metaphysical. As such, Fontana was acutely aware of the implications of the technology that was powerfully coming into use during the period in which he lived: electronic communications, missile technology and the harnessing of nuclear force. Hence Fontana took a studied view of the world of science, technology and militarisation, yet his astuteness was more that of the para-technologist. Accordingly, in his manifestos, he called for a *Spatialist Era* in which the artist would unchain art and free it into space. This new and bold idea of a dematerialised hyper-art is best understood by something he said in a 1967 interview; "to unchain art from matter is to unchain the sense of the eternal from the mere preoccupation with the immortal" as "by now, in space there is no longer any measure. The sense of measurement, of time, is infinite. (...) The cut and indeed the hole, the first holes, were not the destruction of the picture in its frame. (...) They were a dimension beyond the picture and the liberty of conceiving art through any medium." (Beeren & Serota)

Expanse in Fontana's work is no longer conceived of as earthbound. Here space has no perspective nor preference and is instead formulated as an aoristic universal. The surface of painting is no longer confined. Rather the rupture of the painting's surface conceptually opens distance up to a further (immeasurable) scope of infinite stretch. The buchi and laceration are indications and tangible appearances then of the abstraction of supplementary immersive space opening up to comprehension through a consciousness of technological innovation.

BXVIII: The Unframed Space of Jackson Pollock

Pollock points a way beyond the easel, beyond the mobile, framed picture, to the mural, perhaps, or perhaps not. I cannot tell.
-Clement Greenberg, *The Nation*, 1 February 1947

The canvas or, as Pollock calls it, the arena as the scene of a painterly action, loses its function as picture support; the picture becomes a relic, the biography of a painterly process.
-Jürgen Claus, *Theories of Contemporary Painting*

On the floor I am more at ease. I feel nearer, more a part of the painting, since this way I can work round it, work from four sides and literally be in the painting.
-Jackson Pollock, *Art News*

Pollock's blobs of paint squeezed out with design!
Pure from the tube
nothing else is real....
William Carlos Williams, *Paterson*

As reported in the artist Raphael Soyer's (1899-1987) *New York Time*'s obituary on November 25, 1987, Jackson Pollock (1912-1956) said to Soyer one day: "Why do you paint like you do? There are planes flying, and you paint realistically. You don't belong to our time." (McGill) From this statement we know that even though Pollock took his first trip on an aeroplane (to Chicago) in 1951, he obviously was acutely aware of the expanding nature of technological space which was defining the 20th century and its art. Pollock maintained that paramount concern in a radio interview with William Wright in 1950 when he said, "My opinion is that new needs need new techniques. The modern painter cannot express his age, the aeroplane, the atom bomb, the radio in the old forms of the Renaissance." (O'Connor) According to Pollock, if art is to be contemporary, by definition, it must address the issues of its time.

The impact of Picasso's *Guernica* (which arrived in New York City in 1939 at the Museum of Modern Art) with its mural size tied to its theme of aerial bombardment on a defenceless population had a stirring effect on Pollock. *Guernica*'s inventive formal automatism (which had been introduced to Picasso via the French Surrealists) (Nadeau) and its social conscience, in conjunction with its exploration of collective unconscious fear and guilt, served as a dramatic catalyst for Pollock's expanding idea of art which culminated in the great all-over syncretistic paintings which began in 1947.

In the late-1940s and early-1950s in New York, certain artists began to displace the emphasis in painting onto the act of painting itself. Painting became the document of an anxious activity rather than a visual composition. (Rosenberg, 1966) Among them was Jackson Pollock. Influenced by André Breton's Surrealist theories (Breton, A.) and experiments in unconscious creation (Cardinal & Short), Pollock produced his consequential *drip* paintings, where instead of touching the brush to the canvas, he placed the canvas on the

floor, stood over and on it, and flung/dripped paint onto it, often by making large sweeping patterns. (Frascina) Pollock, via Cubist and Surrealist theories, integrated the tautness of the ground (the flat picture-plane) with illusionistic figural-depth, thereby constructing a tightness of picture-plane (through the extent to which the immediacy of the field is forgrounded) that is at one and the same time non-illusionistic, while simultaneously tending to disintegrate. The painterly consequences, with their incredibly rich eidetic depth, are immersively suggestive of further abstract immersive spaces and states of mind. This proposal of an oppositional counter-tradition to geometrical perspective places Pollock in a key position to bolster immersive-holonetric consciousness. The resulting radicalisation, as regards their distribution of visual incident into the optical field, *manifests an omni-perspectivalism which is exemplary of the ambient omni-directional spatial ideal* typical of VR. That is the scope of Pollock's dialectic in terms of the immersive ideal of disembodiment and vision's holonetric displacement.

As evidence of this trend's beginnings, in 1943 Pollock painted the engulfing *Mural, 1943* for Peggy Guggenheim in the dimensions of 2.47 by 6.05 metres (about 8 by 19.8 feet). Pollock had been inspired to paint grand-scale works by the murals of the Mexican muralist José Orozco (1883-1949), for example his 1939 copula mural *Mankind* at the Hospital Cabana at Guadalajara, and by the Mexican muralists Diego Rivera (1886-1957) and Alfaro Siqueiros (1896-1974). With the Peggy Guggenheim commission he transformed the canvas into a whole wall instead of *a small object of contemplation which is visually and physically dominated by the viewer*. *Mural, 1943* set the precedent for the scale of Pollock's celebrated all-over drip-paintings (with their even distribution of compositional interest across an entire large surface) and it also forced the artist onto the floor for the first time, like the American Indian Navajo sand painters of Arizona and New Mexico whom he admired. Pollock had seen demonstrations of American Indian sand-painting (the making of designs and pictures in sand, made with ceremonial connotations) in 1941 at the Natural History Museum in New York and clearly the ideas behind Navajo sand-painting (its magical and healing aims) (Newcomb & Reichard) influenced Pollock's working method and objectives. By putting the canvas on the floor, Pollock said he could see the painting from all angles, *even from inside it*. (Frascina) We might recall here too, that Pollock worked with his father as a surveyor in and around the Grand Canyon, so he had a good sense of vast space, which in the East the Atlantic Ocean provided him with.

By late-Spring 1947, with the war over and the rebuilding of Europe begun, Pollock began a new series of paintings for his new gallerist Betty Parsons (as Peggy Guggenheim was moving back to Europe) which was to open January 5th, 1948, in his new (much expanded) atelier, a renovated barn in The Springs, Long Island. As Landau reports in *Jackson Pollock,* we will never know precisely what initiated the radical breakthrough in procedure that occurred between Pollock's last exhibition at Guggenheim's gallery *Art of This Century* and the show he was preparing for Betty Parson's gallery. (Landau, 1989) There are only two documents to help us towards an understanding of why just then Pollock strides into what I can justifiably call his *immersive*

period. One is an application which Pollock prepared in October 1947 as part of a bid for a John Simon Guggenheim Foundation grant (which he was not awarded). As Landau suggests, Pollock's application formulation seems to be inspired by Clement Greenberg's review in the *Nation*'s art column of February 1, 1947 of Pollock's previous show at *Art of This Century* in which Greenberg wrote: "Pollock points a way beyond the easel, beyond the mobile, framed picture, to the mural". (Greenberg, 1947) In accord with this idea Pollock wrote in his Guggenheim Fellowship statement; "I intend to paint large movable pictures which function between the easel and the mural..." and "I believe the easel picture to be a dying form, and the tendency of modern feeling is towards the wall picture or mural". Pollock went on to further articulate this artistic intention in *Possibilities* (Winter 1947-8), a magazine edited by the artist Robert Motherwell (1915-1991) and the critic Harold Rosenberg (1906-1978). In Pollock's artist's statement entitled *My Painting* he wrote how he preferred to work on the floor for "on the floor I am more at ease. I feel nearer, more a part of the painting, since this way I can walk around it, work from the four sides and literally be *in* the painting. This is akin to the method of Indian sand painters of the West." (Landau, 1989)

Following the Peggy Guggenheim commission, Pollock desired to paint larger and larger surfaces (almost total environments) especially during the years 1947 and 1948, when he began preparing himself to break with the tradition of European easel painting. Pollock's ensuing appeal for mural commissions increased and in a 1949 letter to his dealer, Betty Parsons, he wrote, "I want to mention that I am going to try to get some mural commissions through an agent. I feel it is important for me to broaden my possibilities in this line of development." (O'Connor & Thaw) The same year Pollock told an interviewer, "The direction that painting seems to be taking is away from the easel, into some sort of wall painting. Some of my canvases are an impractical size ... 9 by 18 feet! But I enjoy working big and whenever I have a chance I do it whether it's practical or not." (O'Connor & Thaw) With the increased size of his canvases, Pollock started to work on them unstreatched and to paint them horizontally, laying them flat on the floor at his feet. Then he felt *in the painting*. By working directly on the floor Pollock was able not only to use gravity to facilitate his radical method of paint application, he was also able to walk around and on the composition, reaching into every part by literally stepping into them.

The viewer of one of Pollock's vast paintings is enticed to recreate mentally (and viscerally) the introscopic immersive space Pollock seemed to call upon in the creation of his paintings. Lee Krasner, Pollock's companion and peer, spoke of this space as Pollock's intuitive "pursuit of *unframed space*" (Rose, 1983) which Pollock sought in order to create a spatial continuousness that no longer distinguished between the pictorial space and the area in which the viewer stood. As such, Pollock's imposing paintings demand that the observer relinquish intellectual control (as the beholder is now torn free of unyielding renaissance perspective) and dive into the energetic colour/movement (through the eye being drawn into the excessive aspect of the painting) and therein dissolve into the dazzling chaos of the individual lines which are also, at

the same time, creating a uniformly structured whole-field. Indeed the paintings overwhelm the viewer with their expansively huge size, exceeding the customary FOV.

I am reminded here of Wassily Kandinsky (who was a major influence on Pollock) and his book *Text Arista* (that Pollock owned). (Frank) In it, Kandinsky writes about learning not to look at a picture only from the outside, but to enter it and to move around in it (Kandinsky, 1945); a statement which recalls Courbet's previously mentioned feeling for "entering the picture physically and moving around in it." (Fried, p. 4)
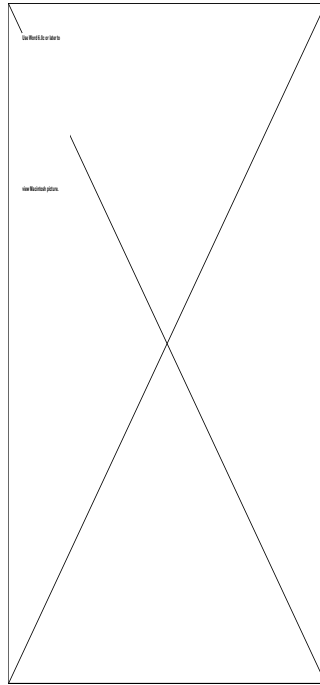
Jackson Pollock painting

With Pollock's all-over syncretistic composition this hypothetical entrance is facilitated, as there is no point of reference, no orientation, no parts to its whole (as in Lascaux's Apse). In contrast with the devises of European renaissance perspective, Pollock sought to draw the viewer into the canvas, not by establishing a distant vanishing-point, but by conceptually eliminating the frame so as to permit the eye to follow the curvilinear patterns beyond the canvas and into the implied surrounding space without being stopped by the edges. Here the intention was to create paintings *without beginning or end* as the vastly increased size of the canvas and its elimination of the traditional frame produced an effect suggesting the ideal immersive 360° optic bubble. This is the unrestrained space of the ideal VE, a space where a harmony with the irrationality of depth is encountered. For this, Pollock's work from the late-1940s is an art historical immersive watershed.

Relevant also to these concerns are the semi-pejorative statements made by Aldous Huxley (author of the famous account of a psychedelic encounter with a Belle Portugal rose under the guidance of the Canadian

psychiatrist and LSD researcher Humphry Osmond (Huxley, Aldous, 1954)) concerning Pollock's painting *Cathedral* from a 1948 Parsons exhibition. Huxley made these remarks as a participant in the *Roundtable on Modern Art,* a panel discussion held at the Museum of Modern Art from which excerpts were reproduced in *Life* magazine's issue of October 11, 1948. In it, Huxley points out *Cathedral's* lack of focus due to its all-over compositional approach, saying "It raises the question of why it stops when it does. The artist could go on forever. (Laughter) I don't know. It seems like a panel for a wallpaper which is repeated indefinitely around the wall." (Huxley, Aldous, 1948)

Taking this "wallpaper (...) repeated indefinitely around the wall" aspect seriously, the architect Peter Blake, in planning the architectural strategy for what was proposed to be the Jackson Pollock Museum, had the idea (with Pollock) to extend the paintings indefinitely around the space. In an article concerned with the project named "Unframed Space: A Museum for Jackson Pollock's Paintings" in *Interiors* magazine, Arthur Drexler wrote that Pollock's paintings "seem as though they might very well be extended indefinitely, and it is precisely this quality that has been emphasised in the central unit of the plan." About the continuous rhythms of Pollock's paintings Drexler goes on to describe how, in the model of the museum, "a painting 17 feet long constitutes an entire wall. It is terminated on both ends not by a frame or a solid partition, but by mirrors. The painting is thus extended into miles of reflected space, and leaves no doubt in the observer's mind as to this particular aspect of Pollock's work." (Drexler, 1950) In another immersive application of Pollock's implied infinity, the artist/architect Tony Smith (1912-1980), who will be discussed subsequently, designed a hexagonal Catholic church which was to be decorated by stained glass windows executed by Pollock, though the project never went beyond the formulation stage. (Pachner)

In conclusion it is pleasing to recall that Pollock had written in his Guggenheim Fellowship statement that "I believe the time is not yet ripe for a *full* transition from easel to mural. The pictures I contemplate painting would constitute a halfway state, and an attempt to point out the direction of the future, without arriving there completely" (Landau, 1989) in that this "direction of the future" was indeed picked up by the generation of artists that ensued Pollock. The written testimony concerning Pollock's influence derives mainly from the two-part series run in *Art News* in 1967 entitled "Jackson Pollock: An Artists' Symposium" (which included statements by Alan Kaprow, Alfred Otto Wofgang Schulze Wols (1913-1951) and Claus Oldenburg) and Alan Kaprow's "Legacy of Jackson Pollock", also published by *Art News* in 1958, the year which saw Kaprow's first informal *Happening*.

For the artists of the next generation, the generation of the 1960s, Pollock generally represented a liberation of the artwork from traditional means and the inclusion of the artist's life and actions into the work, which lead to other implicit conclusions, i.e., a freedom from confining structures and the inclusion of movement, gesture, and bodily motion into the realm of visual art. As Kaprow saw it, Pollock "destroyed painting" and

freed the painter from working solely in two-dimensions. Instead of a 'painter' one became an 'artist' capable of working in all and any media. (Kaprow, 1958)

BXIX: Picture as Event/Event as Picture: Happenings

Whether you regard painting as a means of penetrating the self or the world, it is creation. When Pollock painted, his situation, his inner behaviour as an artist, were certainly more complex than the painting, for he was living the process. Why should this creation be pinned down, shut up in a rectangle, hung on a wall?
-Alfred Otto Wofgang Schulze Wols, *Art News* March 1959

Why not separate the action from the painting? First make a real environment, then encourage appropriate action.
-Alan Kaprow, *Jackson Pollock: An Artists' Symposium; Art News*

Our earth is like a little polka dot among the millions of other celestial bodies. Let's forget ourselves, dearest Richard, and become one with the Absolute, all together in the altogether. As we soar through the heavens, we'll paint each other with polka dots, lose our egos in timeless eternity, and finally discover the naked truth.
-Yayoi Kusama, *1968 Open Letter to President Richard Nixon*

Al Hansen, in his seminal *A Primer of Happenings and Space/Time Art* states that the idea of the Happening is that of "the *artwork enclosing the observer*, of art that overlaps and interpenetrates different art forms (...) these performances engulf the spectator: the environment is a work of art that the observer goes into and walks around in and in some cases actually participates in". (Hansen, p. 6) Generally speaking then, Happenings bombard the participant with an excess of sensations which the viewer has to order in his or her mind to give the overall quality of the continuous commotion (structured like a Cubist assemblage) cohesion. But also Happenings emphasised extemporaneous and migratory elements while manipulating performers, props and audience in ways designed to break down barriers between performance and audience. A Happening was neither an art exhibit nor a theatrical event but an immersive site for experimentation in perception. (Kirby, 1965)

The prime source of the Happening's central concept is that of *collage*, the juxtaposition of unrelated real-life elements in relationships contrived by the artist; that innovation by which Synthetic Cubism had ravaged the Renaissance window-in-the-wall conception of pictorial space. Most often Happenings placed art inside of an *ideal banal sphere* which was imagined less separated from everyday experience, thus challenging the previously established elite hierarchy of values. Towards this end Happenings were sited in parking-lots, factories or on the street, and involved materials with no fine-art associations. By its emphasis on transient effects and materials, Happenings challenged notions of the permanence of art and the permanence of aesthetic values, hence the Happening became one of the most visible forms of artistic expression of the revolutionary aspect of the 1960s. (Henri, p. 162)

Alan Kaprow in the aforementioned *Art News* article "Jackson Pollock: An Artists' Symposium" explained Pollock's role as progenitor of the Happening thus: "When his all-over canvases were shown at Betty Parsons's gallery around 1950, with four windowless walls nearly covered, the effect was that of an

overwhelming environment, the paintings' skin rising towards the middle of the room, drenching and assaulting the visitor in waves of attacking and retreating pulsations. (...) The expanding scale of Pollock's work, their reiterative configurations prompting the marvellous thought that they could go on forever in any direction including out, soon made the gallery as useless as the canvas, and choices of wider and wider fields of environmental reference followed. In process, the Happening was developed." (Kaprow, 1958) However in *Pollock Painting: The Photographs of Hans Namuth* Barbara Rose proposes that it was the publication of Hans Namuth's photographs and his film of Pollock painting that are responsible for the development of Happenings (as well as antiform, distributional, conceptual, performance, and body art). (Rose, 1978) But whatever the specific rationale, the implications of Pollock's work were vast, exerting even persuasive impact on avant-garde dance, as it has been often noted that the dance choreography of Merce Cunningham is closely related to Pollock's painting. In *Theory Undeclared* there is a discussion of the resonance of a comment Cunningham made in the magazine *trans/formation* in 1952 concerning Pollock's all-over compositions. Cunningham wrote: "A prevalent feeling among many painters that lets them make a space in which anything can happen is a feeling dancers may have, too: imitating the way that nature makes a space and puts lots of things in it, heavy and light, little and big, all unrelated, yet affecting all the others." (Gibson, pp. 377-378) Hence Cunningham essentially fused ideas extrapolated from Pollock with those of Marcel Duchamp, as understood and practised by his collaborating composer, John Cage. This immersive tendency in dance was explored in the early-1960s by Jill Johnston, Yvonne Rainer and Ann Halprin. Halprin's workshop in San Francisco in 1960 was particularly immersive for the dancers in the way she asked them to interact together in proto-Happening embedded ways.

Ann Halprin, *Dance Workshop*

The feeling/concept of "space in which anything can happen" seems to summarise Pollock's general significance to the artists he inspired. As example, Claus Oldenburg, self-described as a "Post-Pollock painter" in the 1967 *Art News* article, conceived of himself as standing on the canvas which became his surroundings, and which stretched as far as he could see or hear. This suggests the idea of a *new theme of distribution* where the city's many signs are no longer depicted, but included in the work, hence immersing the artist (and viewer's attention) in a new (Pop) art based on reproduction. (Alloway, 1974)

Claus Oldenburg, *Store*

Certainly by the mid-1950s media (print, radio, and television) influenced almost everything everywhere in post-industrialised countries, including members of the Gutai Group of Osaka Japan; an art-theatre group made up of painters (including Akira Kanayama, Sadamasa Motonaga, Shuso Mukai, Saburo Mirakami, Atsuko Tanaka, Shozo Shinamoto and Kazua Shiraga). They had seen photographs of the theatrical French theoretician and action painter Georges Mathieu in *Life Magazine* decked out in an elaborate costume painting before television cameras at the Sarah Bernhardt Théâtre in Paris in 1956. These photos inspired their own live painting performances in which they threw balls of paint at the canvas, or in another instance, where an artist ran and leaped through a series of sequential canvases.

Kazua Shiraga painting

Moreover, Kazua Shiraga, a member of the Gutai Group, adapted and exaggerated Pollock's painting techniques and Mathieu's theatrical presentation of the painting-action with his *Making a Work with His Own Body* (1955), where the artist wallowed in the paint medium with his entire body, and again at the Festival di Osaka's *Painting Performance* (1959). Hanging from a rope Shiraga threw himself, in a kind of overwrought psychic automatism, on the canvas and spread lumps of colour with his feet around while swinging on the rope. Here the artist is literally inside of the painting in a way which we will see again with the Vienna Actionists. Shiraga's work predates and reminds us of Yves Klein's well known 1960 *Monotone Symphony* painting/music performance at the Galerie International d'Art Contemporain in Paris; especially when we consider it from the immersive position of the three female models themselves. On March 9th, 1960, three nude female models painted each other with IKB Blue paint to the sounds of Klein's *Monotone Symphony* (which consisted of one note, first written by Klein in 1949) and then gently pressed their bodies against the artistic ground.

Kazua Shiraga, *Making a Work with His Own Body*

Yves Klein, *Monotone Symphony*

Yves Klein, *Monotone Symphony*

Another earlier moment which led to the program of the Happening can be traced to an evening in 1952 organised by John Cage at Black Mountain College. For the performance, an audience was seated in four inward-facing blocks as Cage delivered a lecture, punctuated by silences, from the top of a ladder. Poet Charles Olsen (1910-1970) and others read poems from another ladder while David Tudor played a piano and Robert Rauschenberg played a wind-up gramophone. Through this rich conflicting event, Merce Cunningham and other dancers moved about through the space where some of Rauschenberg's early white-on-white *White Paintings* were suspended as a sort of false ceiling overhead. (Lovejoy, 1997a, p. 55)

Cage's purely musical development does not concern us here, except for his idea (derived from the work of Edgard Varése and the Zen philosophy of Daisety Taitaro Suzuki (1870-1966)) of treating all forms of noise as sound to be used by the composer, together with the corollary that silence is just as important. This led him ultimately to the *nec plus ultra* of modern music, *4' 3",* perhaps the musical equivalent of the white-on-white canvases of Kazimir Malevich. *4' 3"* consists of silence performed for this duration of time. In *4' 3"* the

fortuitous immersive noises in the room, usually unnoticed, and the hearers' own thoughts, become the content of the piece. (Cage, 1966)

In terms of one's own thoughts becoming the content of a piece, we must note that in 1954, Dr. John C. Lilly, a pioneer in brain and behavioural research studies, began experimenting with the concept of restricting the amount of external sensory stimuli to the brain in a kind of anti-Happening research project. When Dr. Lilly built his first isolation environment (what came to be known as isolation float tanks) he was determined to prove that the brain, without environmental input, would simply go to sleep. Using his own being for experiments, he learned the opposite is true. (Lilly, 1962) By removing all visual, acoustical, tactile and temperature stimuli, Dr. Lilly found that the brain continues to function independently and at an even higher level than normal. (Lilly, 1974)

But the artist most identified with the external Happening and perhaps its chief exponent is John Cage's composition class student, Alan Kaprow. Kaprow began as a painter and his paintings moved from Abstract Expressionism into increasingly complex action-collage assemblages, like *Pentiy Arcade* (1956), *Wall* (1959) and *Kiosk* (1959) which were developed following his interest in the work of Jackson Pollock. The action-collages became bigger and projected further and further from the walls and into the room and included more and more audible elements. (Kirby, 1969) A person entering an action-collaged space would become lost in an excessive labyrinthine atmosphere. Kaprow eventually thought how much better it would be if a visitor could just go out of doors. Thus in Kaprow's form of the Happening, ordinary people, ordinary time, and the everyday spaces of streets and supermarkets, were frequently merged into ordinary activities such as wallpapering a room.

Kaprow became a professor of art history, and this academic side of his activities made him a fluent and perceptive theorist, enabling him to elucidate how Happenings evolved from the action-collage environment idea of opening up the mind and the eye to the world of the street. In his book *Assemblage, Environments and Happenings,* Kaprow explains the fusion of the concepts behind Pollock's gestural paintings and the junk-assemblage sculpture movement as culminated in this aspect of the Happening. (Kaprow, 1966) Kaprow also wrote in his famous 1958 essay "The Legacy of Jackson Pollock" that "Pollock, as I see him, left us at the point where we must become preoccupied with and even dazzled by the space and objects of everyday life." (Kaprow, 1958)

By 1957 Kaprow's work became exclusively environmental involving lights, odours, electronic sounds and unusual materials. His environment at the Hansa Gallery in 1958 contained no art objects as such, but initiated a conception that *art was experienced as a surrounding* rather than a picture or sculpture to be looked at, a surrounding which engaged the visitor with things to do. However Kaprow's first mature Happening, which

involved Dada provocation, assemblage, and action painting, was *18 Happenings in 6 Parts* which took place at the Reuban Gallery in October 1959 in New York City. It was tightly scripted and drilled. (Henri, p. 93) After *18 Happenings* Kaprow did a number of similar pieces, including *Coca-Cola, Shirley Cannonball?*, and *A Spring Happening,* the latter which took place in the new downstairs premises of the Reuben Gallery in March 1961. After waiting in a curtained-off lobby, the audience was shown into a dark tunnel, made of wood and hardboard painted black, and with a slit running along both sides at eye-level where they remained for the duration of the piece.

For the next seven years, Kaprow expanded the potential of the *environment* in a gallery setting but gradually the showroom space was abandoned for more informal and natural settings such as vacant breweries, open fields, and woods. (Kaprow, 1966) By 1969, Kaprow's work had evolved so distinctly into new phases that he gave up the designation *Happening* and adopted Michael Kirby's (1931-1997) term *Activity*. (Kirby, 1969) Since 1958, Kaprow has performed close to 250 such activities.

By the early-1960s artist's actions performed in front of audiences and or cameras became more and more familiar as the Happening movement gained momentum. (Battcock & Nickas) Two types of Happenings emerged: one involving a more or less static audience, and the other a walk-around environment (like Kaprow's *Words,* which was installed at the Smolin Gallery in 1962). *Words* was an arrangement of audience-participation devices, rolls of words to move, words on cards hung on strings, words to pin up and rubber-stamps to make phrases with. *Garage, An Apple Shrine* and *Yard* (which filled the Martha Jackson Gallery with car tires) also utilised such an approach. (Kaprow, 1966)

Alan Kaprow, *Words*

In Paris during the late-1950s a Marcel Duchamp inspired re-interest in Dada gave rise to various actions, dé-collages, and performances by artists, for example, Robert Filliou (1926-1987) and Jean-Jacques Lebel, the most active member of the group of younger artists to emerge from the Nouveaux Réalistes precepts. As example of the first approach to the Happening, in an early 1960 Happening *Funeral Ceremony of the Anti-*

Process conducted in Venice, Italy, Lebel invited the audience to attend a ceremony in formal dress. In a decorated room within a grand residence, a draped 'cadaver' rested on a plinth which was then ritually stabbed by an 'executioner' while a 'service' was read consisting of extracts from the previously mentioned French décadent writer Joris-Karl Huysmans and le Marquis de Sade (1740-1814). Then pall-bearers carried the coffin out into a gondola and the 'body' (which was in fact a mechanical sculpture by Jean Tinguely (1925-1991)) was ceremonially slid into the canal.

Conspicuous too in this regard was the fascinating technologically aided presentation of Mark Boyle, the performance *Son et Lumière for Body Fluids* (1966), where he presented a heterosexual couple making love with their encephalograms projected and enlarged on a screen above them. (Henri, p. 114)

Boyle went on to create light-shows for the psychedelic rock group Soft Machine and was involved in an early British experimental night-club called UFO. Another important early Happening artist is Carolee Schneemann, particularly with her highly immersive (for the participants) and spectacular Happening bacchanal called *Meat Joy* which was performed at the Judson Memorial Church in New York City in 1964 and in various locations in Europe (including the *Festival de la libre expression* in Parigi, Italy in 1964).
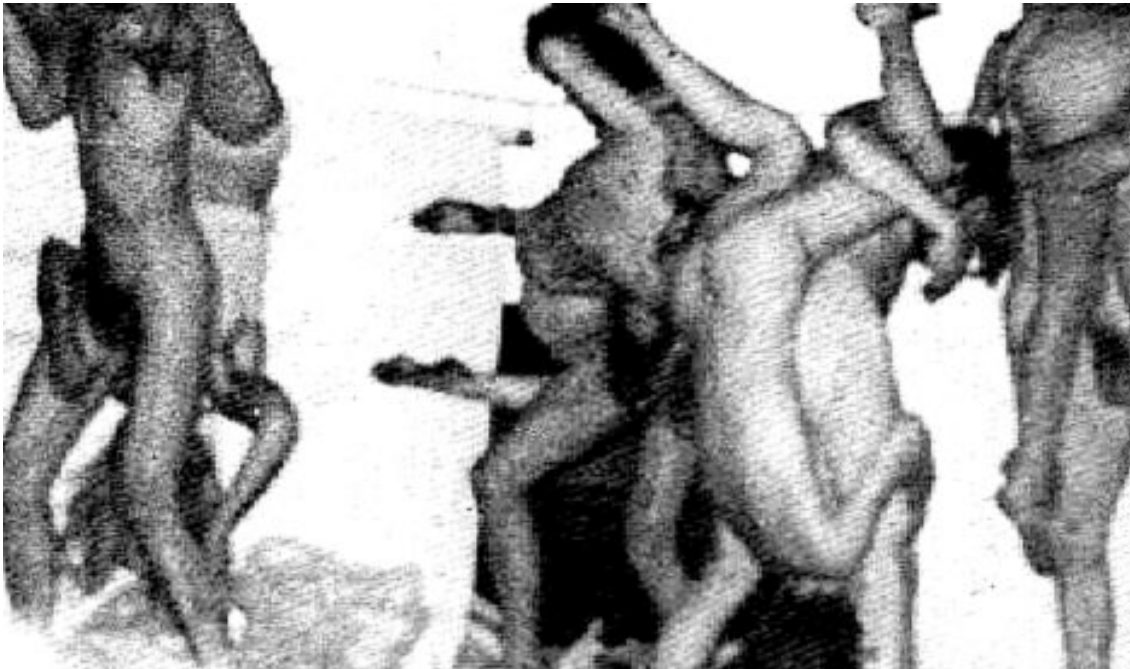
Carolee Schneemann*, Meat Joy*

The Dionysian mystical impact of Schneemann's *Meat Joy* was heightened by the sexual implications of voluptuous, scantily clad people wallowing provocatively in paint and meat; somewhat beyond the truism that all sexual activity is about the mixing of gametes. (Margulis & Sagan) Schneemann's environmental

performance (performed in what she characterised as a "sensory arena") *Illinois Central*, utilised a 360° visual environment contrived with film and slides that shifted over time. (Youngblood, p. 368) Too, Schneemann's grotto-like niche entitled *Up To and Including Her Limits (Trackings)*, which she built for herself at the Basel Art Fair in 1976 also impresses as the work addresses immersive limitations and ideas of liberation from confines; relevant issues for the definition of immersive ideals.
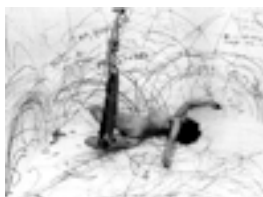
Carolee Schneemann, *Up To and Including Her Limits (Trackings)*

Also Yoko Ono's *Cut Piece*, first performed in Tokyo in 1964, in which she invited the audience to cut her clothes off, deserves reference in terms of an artist putting herself in a visceral immersive environment with a high-resonance of associative connotations. (Lovejoy, 1997a, p. 56) The same holds true for Yayoi Kusama, whose theoretical polemic concerning the *distributed, scattered, multiplied, and obliterated self* is best established, as she herself states, as an "obliteration of everything (including myself and others)" into a beguiling and excessive artifice which gives birth to an *opalescent non-existence*. (Solomon, A., p. 67) In explanation of her installation work, Yayoi Kusama said; "One day, I was looking at a table cloth covered in red flowers, which was spread out on the table. Then I looked up toward the ceiling. There, on the windows and even on the pillars, I could see the same red flowers. They were all over the place in the room, my body, and entire universe. I finally came to a self-obliteration and returned to be restored to the infinity of eternal time and the absoluteness of space." (Solomon, A., p. 70) Paradoxically, Kusama tried to achieve an expression of this idea of the obliterated self by exposing herself (and others) fully nude and painted with polka-dots in various Happenings at high-profile New York City locations. Kusama staged several public demonstrations of painted polka-dotted nakedness entitled *Anatomic Explosion*; most notably on Wall Street, in the sculpture garden at the Museum of Modern Art, and in 1968 at the statue of Alice in Wonderland in Central Park.

Yayoi Kusama, *Anatomic Explosion* in Central Park

In terms of feminine self-exposure (in the grotto vein) one might here too consider the 1966 collaborative installation/Happening between Niki de Saint-Phalle, Jean Tinguely and Per Olof Ultvedt called *Hon* (She) a huge reclining figure of a woman with her legs parted, allowing visitors to enter and exit through the vulva's cleft. Once inside the visitors found themselves immersed in a symbolic funhouse including a silk-lined boudoir for lovers and a milk-bar inside one of the breasts.

Claus Oldenburg, *Injun I*

Certainly too we must briefly recall the Happenings of Jim Dine, most notably *Car Crash* (1960) and those of Wolf Vostell, for example his *You* (1964). Important too were the Happenings of Al Hansen, Dick Higgins (1938-1998), Claus Oldenburg, Red Grooms, Robert Whitman, Meredith Monk, Jeff Nuttall, John Latham and later the group improvisations of the Movement Collective. Particularly Claus Oldenburg's performance *Injun I* in 1962 and his installation of 1961, *Store*, which consisted of an enterable storeroom of painted sculptural elements resembling food and other consumer items, is noteworthy.

BXX: The Immersive Onement of Barnett Newman, Mark Rothko, Tony Smith

The large format at one blow destroyed the century long tendency of the French to domesticize modern painting, to make it intimate. We replaced the nude girl and the French door with a modern Stonehenge, with a sense of the sublime and the tragic.
-Robert Motherwell, *Artforum*, September 1965

When I was teaching at Cooper Union in the first year or two of the fifties, someone told me how I could get onto the unfinished New Jersey Turnpike. I took three students and drove from somewhere in the Meadows to New Brunswick. It was a dark night and there where no lights or shoulder markers, lines, railings, or anything at all except the dark pavement moving through the landscape of the flats, rimmed by hills in the distance, but punctuated by stacks, towers, fumes and colored lights. This drive was a revealing experience. The road and much of the landscape was artificial, and yet it couldn't be called a work of art. On the other hand, it did something for me that art had never done (....) its effect was to liberate me from many of the views I had had about art. It seemed that there had been a reality there that had not had any expression in art. The experience on the road was something mapped out but not socially recognized. I thought to myself, it ought to be clear that's the end of art. Most painting looks pretty pictorial after that. There is no way you can frame it, you just have to experience it.
-Tony Smith, *Artforum,* December 1966

The above statement by Tony Smith had an extensive impact on redefining art and form in immersive terms. However, following the turnpike experience, Smith did not cease making art. On the contrary he began making an expanded form of art in reaction to what he saw as the confining and restricted space of the traditional sculptural and painterly object. Clearly the immersive desire is there when an artist says, as Smith did, that he wishes to create "a sense of vastness, a totally enveloping surrounding". (Pachner)

The Abstract Expressionist ancestry of the idea of the viewpant situated inside an aesthetic experience through immersion of the FOV is not alone to Pollock and Smith though, but evident also in the work of Barnett Newman and Mark Rothko, as they both theorised a method of painting where the beholder would be implicitly included in the frame of the painting. A discussion of Newman and Rothko (and more briefly Ad Reinhardt, Robert Ryman and Dan Flavin) will ensue before returning to Tony Smith, as his influence on subsequent generations' immersive concerns was acute.

Barnett Newman's (1905-1970) principal contribution to the elaboration of an immersive aesthetic was his use of an expansive (while reductive) idiom which employed colossal chromatic fields of colour. Newman, while developing the use of colour into magnificent colour-fields explained in his theoretical writings of the 1940s (republished in *Barnett Newman: Selected Writings and Interviews*) that the world historic crises of the Second World War rendered traditional subject matter and styles invalid, necessitating the search for a new (awesome) content appropriate to the modernistic spatial configuration which the war had made apparent. (Newman) In a series of theoretical tracts and catalogue essays Newman reiterated this aesthetic quest throughout the 1940s, adapting a polemical pose which focused on the obligation of the artist to break with the passé conventions of the picturesque-based easel painting. (Newman) Rather, he revivified the resplendent

immersive concept of the *sublime*. The *sublime*, as previously described, offered Newman a metaphor and indeed a metaphysics in which his expansive colour-fields might entangle the primary genuineness of life, which in Newman's judgement comprised of an acute sense of tragedy. His views in this respect were published in his tract "The Plasmic Image"; an unpublished essay written between 1943 and 1945. (Hess) In "The Plasmic Image" Newman drew heavily from the thesis of the aesthetician and theoretician of Expressionism, Wilhelm Worringer (1881-1965), who proposed in his book *Abstraktion und Einfühlung* (Abstraction and Empathy) that antagonistic circumstances in the Mediterranean, not the suppositional benign and accordant world, is what produced Greek Classicism, and that this discord was what nurtured idealised visual forms. (Worringer)

According to Newman, similar forces determined the expressive outlook of prehistoric artists whom he felt created forms which conveyed an awesome feeling like one feels before the terror of the unknowable. In his essay "The Ideographic Picture", which he wrote for an exhibition catalogue for the Betty Parsons Gallery in 1947, Newman generally sketched-out an identification of art's transcendental core in association with 'pure' ideas of an idealistic flavour. (Newman) The rationalisation behind Newman's thought therefore may be called *apocalyptic* as it dramatised the horrendous conditions of the war with its urban bombing and nuclear destruction. This view is made most evident in his essay "The Sublime is Now", which was published in *Tiger's Eye* in 1948. (Newman)

With his 1948 breakthrough painting *Onement I* Newman transformed the relationship between figure and ground into a continuum. Thomas Hess in his book *Barnett Newman* links *Onement I'*s field-treatment of space with various mystical concepts pertaining to space, light, placement, division and measure as found in Jewish Cabalistic lore (Hess) as its composition was a single upright thin band of colour which seemed to emerge out of a luminous spatial-field which suggestively immersed the viewer into a unified field. Thereafter, 68.58 by 40.64 centimetre (27 by 16 inch) *Onement I* established the vocabulary which Newman would diversify over the next seven years as he explored the relationship between the chromatic field and the upright motif which he later referred to as a *zip*. With the devise of the zip the picture is no longer an illusionistic container for three-dimensionally rendered objects. Rather it is through the flatness and symmetrical composition and reductive format which creates the direct perceptual experience of unity which Newman was after.

Primary to our concerns with immersion was Newman's ensuing exploration of the huge colour-field and its implicit capacity to engulf the beholder. Common to this was Newman's interest with how art may cloak the individual and therefore enhance a sense of self-consciousness as one melts into the sublime. This is what differentiates Newman's modern version of the sublime from the prototypes of the romantic version which involved, as we have seen, the beholders entanglement in an impersonal natural spectacle before which the

bystander was expected to semi-recoil in overwhelmed fascination/astonishment. (Hipple) The question of scale is not however merely a question of the size of the canvas measured objectively. It is rather a measure of the omnijective experience which the beholder feels before the expanse of the canvas. However, from 1949 onward Newman did increase the objective scale of his paintings until he attained the enormous grandeur found in the format of his 1951 masterpiece *Vir Heroicus Sublimis*, which measures 2.42 by 5.41 metres (7.11 by 17.9 feet), now at the Museum of Modern Art in New York. The ingrained operation between maximum and minimum forces reaches a zenith in the panoramic proportions of *Vir Heroicus Sublimis*. With the title *Vir Heroicus Sublimis* Newman made clear his particular interest in the notion of the sublime, which for him was a direct intuition of universality.

Newman would say that a viewer standing in front of his painting "must feel a vertical dome-like vault encompass him (...) an awareness of being alive in the sensation of complete space" (Newman) which is much like donning an HMD. It is for this reason that Newman beckoned the viewer of his paintings to step close and immerse themselves in the colour (which, paradoxically, renders the material surface of the painting more palpably). For instance, Newman had a label placed on the wall of his 1951 exhibition at the Betty Parsons Gallery in New York City (a show which was installed by Tony Smith) which read, "There is a tendency to look at large pictures from a distance. The large pictures in this exhibition are intended to be seen from a short distance." (O'Neil) Thus the sign directed visitors to stand close to the paintings so they would flood and fill the viewer's entire FOV with trembling saturated colour so that the viewer would have the same intimate contact with the painting that the painter did painting it (thus optically and psychologically entering the picture). (Pachner)

Another painter of the Abstract Expressionist generation, Mark Rothko (1903-1970), also turned to painting vast paintings in the late-1950s. In 1958 the architect Philip Johnson commissioned Rothko to paint a monumental mural for the Four Seasons Restaurant in New York City's new Seagrams Building. As a result Rothko made three sets of murals over the next two years. The first group was either dispersed or destroyed and Rothko also abandoned his second set of canvases which were to make up the mural series. However Rothko completed the third set, but instead of delivering them to the commissioned site, he returned the money and a decade later gave them to the Tate Gallery in London where they were installed precisely to his specifications (i.e., low to the ground where one has the physical sense of being able to imaginatively enter the paintings physically). (Ashton, 1983)

Speaking about the relationship of size of a painting to the human scale, Rothko stated from the floor at a symposium at the Museum of Modern Art (which was later published in the journal *Interiors*) that "I realise that historically the function of painting large pictures is painting something very grandiose and pompous. The reason I paint them, however is precisely because I want to be very intimate and human. To paint a small

picture is to place yourself outside your experience, to look upon an experience as a stereopticon view or with a reducing glass... (...). However (when) you paint the large picture, *you are in it*." (Rothko) So Rothko's late, large paintings are not pictures of an experience, but rather experiences unto themselves of ontological proportions.

In this respect it is significant to note that a motion-picture immersive environment called *Impressions of Speed* appeared at the 1958 Brussels World Fair which seated 25 people at a time in the cab of a simulated railroad-engine. On view via wide FOV screens was a colour landscape *in the front and on the two sides as well;* a *continuous, all-encompassing image* projected on the simulated windows in an attempt to duplicate the total impression of actual peripheral experience. (Fielding)

Like the creators of *Impressions of Speed* and others of his generation, Rothko wished his creation to *engulf the viewer* and hence he desired that his paintings be seen from fairly close up, as to fill the FOV, which was best achieved in the 1964 commission he received from John and Dominique de Menil to paint a set of murals for an octagonal chapel in Houston, Texas. Rothko completed this mural-cycle in 1967 and the installation of the murals took place in 1971, a year after his suicide on February 25, 1970.

Ad Reinhardt (1913-1967), another reductivist element of the Abstract Expressionist movement (and a brusque artist/theorist/teacher who studied art history and aesthetics with Meyer Schapiro (1904-1996)), additionally is relevant to the immersive aesthetic with his late, contemplative, black paintings which Reinhardt exhibited as a continuous and consistent installation by placing uniform paintings around the gallery so as to envelope the viewer in a concerted, repetitive, dark sublimity.

To review the history of painting in relationship to reductive aspects of immersion, I would be amiss to neglect to mention the Post-Abstract Expressionist applications of Newman's immersive advances as practised by Robert Ryman. The 'pure' opticality of the colour white embraced by Ryman is a prime example of immersive expansion as in his white paintings he addresses the problems arising from the tension created from the opposition between surface materiality and opticality in relationship to the edge of the painting and its relationship to the wall on which it is hung. This ambiguity of the painting's boundary in relationship to the wall which contains it draws attention into an expanded field which we will see will come to define the immersive art of the 1960s and 70s.

Ryman does this by extending the optical white shimmering-field of colour/light out from the painting onto the white gallery walls which present it. Now it is really the wall which provides the painter with his ground which Ryman himself clarifies when he writes "the wall plane is actually part of the painting and it extends out three or four feet...". (Ryman) Hence Ryman presents his paintings as part of the white cube which has

come to represent modernist ideals of purity and neutrality. (O'Doherty, B. 1976) The whiteness of the paintings require the whiteness of the walls, as the white-painted optical field spills out over the confining edge of the painting to fill, theoretically, the entire wall and room, thus texture, surface-plane, colour and wall are unified. As Ryman himself says: "The wall becomes very much a part of the work" (Ryman) and so by blurring the difference between painting and wall Ryman extends our consciousness of painting into an expanded (immersive) environment. Of course this liberation of colour from form in the service of filling a room can also be seen in the neon-tube installations of Dan Flavin, as in like manner, his colour spills out over the walls of the gallery in which the piece is installed, expanding its presence dramatically and soaking the visitor to the space in its soft light.

Indeed this tendency to "spill out over the walls of the gallery" is emblematic of Post-Abstract Expressionism's feelings for expanded and immersive experience and is acutely exemplified by Tony Smith's 1969 work *Haole Crater* (Smith's first truly site-specific project). *Haole Crater* is a work whose form, material and meaning were wholly bound to the site of its creation. It consisted of a shape which was to be dug out of the ground creating a square crater on a volcanic island (full of natural craters) fabricated with black concrete made from the volcanic lava-sand from the island. Sadly it never made it out of the model form. As in the later crater work *Roden Crater* of James Turrell, Smith envisioned *Haole Crater* to *envelope and separate the viewer from the outside world in order to immerse the viewer* in the vastness and infinity of celestial splendour. (Pachner) This is a "way to enhance and concentrate vision" where "you see nothing except the art", as Michael Heizer said of his own 1976 work *Complex One/City*. (Beardsley)

Tony Smith is relevant also to our immersive concerns through a famous quote concerning his 1962 steel 1.8 by 1.8 by 1.8 metre (6 by 6 by 6 feet) cube piece *Die* (a piece he ordered over the phone by calling in the specifications to his fabricator, thus making it an early American telematic artwork) which I saw at his backyard in New Jersey. "Why didn't you make it larger so that it would loom over the observer?", someone asked him. "I was not making a monument." he replied. "Then why didn't you make it smaller so that the observer could see over the top?" he was asked. "I was not making an object." he responded. (Pachner) Also salient is Smith's 1969's *Bat Cave*, a piece which was Smith's first enterable, semi-architectural structure which moved sculpture towards a more post-minimal architectonic conceptual space.

BXXI: Towards Boundlessness in the 1960s/1970s: Fluxus and Actionism

Our life is a theatre-piece in which the non-objective world is portrayed by objective imagery.
-Kasimir Malevich, *The Non-Objective World*

One has to live in painting. Painting all around. Surely a picture is for that very reason a part of this world and is not self-contained. Spatially incomprehensible, at least in a traditional sense, that's what I want my pictures to be. A complete and total renunciation of the view that the centre of the work lies within the painting. But not in Pollock's sense. Pollock talks of the endless picture, he wants (as far as I understand it) the picture to be part of the universe, instead of .... infinitely.
-Günter Brus, *Viennese Diaries,* Autumn 1960

In the Viennese Actionists' disposition to move away from Abstract Expressionist action painting in the 1960s and towards the performance oriented tendency of *Actionism,* the Viennese Actionists were very much in stride with the significant art of their era, impelled, as they were, by a Herculean sense of immersive idealism based on a felt necessity for emancipation from what they saw as the repressive constraints of church and state power. Consequently their Actions were intentionally inciteful: deliberately exhibitionist, abhorrent, sexist, and/or sacrilegious. (Schwartz & Loers) They will concern us here less in terms of audience immersive participation in their Actions (the audience was generally passive) but in how the artists placed themselves within a tightly defined gesamtkunstwerk immersive situation in response to Jackson Pollock's immersive innovations. Too the coalition of art with life which stems from their (and others') work will be reviewed here.

In a sense Actionism can be seen, in retrospect, as a logical extenuation of the heroic male individuality of the Abstract Expressionist generation and their idealistic attempt to create a new post-war world based on an intimate subjectivity in pursuit of societal freedoms, by turning their back on ideological traditions and engaging in the supposed non-ideological material world of the immediate. Though this seems an overly naive belief to us now (Ricoeur, 1986) it did provide the idealistic engine to what became a body of incredible work. In the early 1960s the Actionists (who we will discuss here) Günter Brus, Otto Mühl, Alfons Schilling and Rudolf Schwarzkogler began sensing their late connection with the Abstract Expressionist movement when already the arbitrary nature of personal subjective expression was beginning to become apparent in the repetitions of what became the Abstract Expressionist gestural formula. What was originally hailed as a new common language, gestural abstraction, began by the time the Actionists engaged in it to degenerate into a self-indulgent, dipsomaniac activity in the hands of the more recent Abstract Expressionist neophytes. To their credit the Actionist artists began to see that the total reliance on Abstract Expressionism's subjective feeling of personal assertion (which surprisingly began to look ever more and more similar) meant that Abstract Expressionism's message of immediacy and physicality was arbitrary. To counterbalance this the Actionists, in a peculiarly comparative manner to the Pop (Lovejoy, 1997a, p. 58) and especially the Fluxus artists, aimed to produce art closer to "real life" and to re-mix aspects of reality into their art. (Lovejoy, 1997a, p. 56) Thus they moved away from Abstract Expressionist ideology and eventually towards a greater

"objectivity" of "real life" which in turn led to the urge to challenge the power structures of church and state. Therefore the Actionists moved art away from represented conflict (as recorded on the Abstract Expressionist canvas) and towards political conflicts and social associations in life between people.

Wolf Vostell, *You*

It is this strategy, which produced the coalition of art with life and art with the street, which pertains to the immersive intention under investigation here as it developed out of Abstract Expressionism's concept of art as that which records non-symbolic, non-representational lived experiences. This strategy one can say was the dominant one of the Fluxus artist also. (Friedman, 1997) By 1962 various people in Europe, Japan and the United States had been pursuing this central idea of the coalition of art with life in their work, many of whom became associated with Fluxus, including: Dick Higgins, Alison Knowles, Arthur Køpcke, George Maciunas (1931-1978), Nam June Paik, Benjamin Patterson, Karl Erik Welin, Emmett Williams, Wolf Vostell, George Brecht, Jackson Mac Low, La Monte Young, and Ben Vautier. The formal date given for the birth of the Fluxus group is the year 1962 but it had begun to blossom under a combination of contradictory influences years before that, some of which involved street actions. (Smith, O.) The open space of the street, where art and life might best meld, was a primary focus for the Fluxus artists Stanley "Way" Brouwn, Ben Vautier, Loveko (Shigeko Kubota), Alison Knowles, Robert Watts (1923-1988) and George Maciunas, the central organiser of Fluxus. Relevant here too is Yoko Ono and John Lennon's (1940-1980) *Bed in for Peace* which followed their marriage of March, 20 1969 and the Fluxus artist Robert Filliou's development of the concept of *The Eternal Network,* which held that the purpose of art was to make life more important than art; a concept of communications which foreshadowed other networks that would become possible later through the use of electronic mail. (Friedman, 1995) And as previously mentioned Yayoi Kusama, in an effort to expand her devouring polka-dotted field (one might say world) outward into the street, created idiosyncratic and sensational, live, nude, polka-dotted street performances - like the seductive, rapacious and brazen Carolee Schneemann - in the cause of sexual liberation.

In the Viennese studio, Günter Brus had been drawn towards Abstract Expressionist type *informel* painting and following Pollock's lead, began identifying himself as working from *inside of nature*. Early on he exemplified this ideology in his *Labyrinth Paintings* which he executed through the means of disorientation in immersive space. In the autumn of 1960 Brus almost entirely cleaned out his 2.5 by 6 metre (roughly 8.2 by

19.6 feet) painting studio and placed white painted-paper over all the available walls and began making use of the entire room (from floor to ceiling) in the unfettered splattering application of black paint, utilising all three of the available surfaces simultaneously in an attempt to fracture the domination of the compositional mid-point and to penetrate into a much fuller sensation of immersive space. By doing so Brus developed the ideal of the all-pervasive sphere in which the artist would be enclosed and in which the artist would then paint thoroughly in three-dimensions, using both feet and both hands.

Günter Brus's close painter friend at the time was Alfons Schilling, an artist who went on to utilise a mechanical machine in the creation of his paintings and who still later developed a brilliant series of consequential FOV modifying viewer head-pieces.

Alfons Schilling painting with machine

Alfons Schilling with FOV vision adjuster
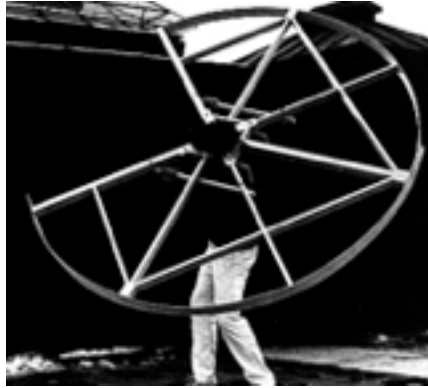
Alfons Schilling with FOV vision adjuster

As documentation of the ideals under pursuit in the Actionist circle, Schilling left us some interesting extracts from his notebook from early-1961 which also shed light on the issue of immersive thinking in post-Abstract Expressionist painting. In them he wrote; "I can only feel infinity if I break out and reach beyond the closed composition and the frame. (...) One must be able to enter my pictures from all sides and be able to leave it from all sides; the picture then continues like a tone that has been struck. (...) The possibility of a limitless, never-ending painting can only be represented by means of a section. How can I possibly perceive 'infinity' in a picture, as long as the possibility of seeing pictures as something complete in themselves, is still not removed. Every barrier must be removed from one's vision (even if it is only the edge of the picture). A picture must offer no opportunity of beginning or ending anywhere. (...) Getting inside, being inside, and having achieved unity I experience everything in a state of transformation." (Schwartz & Loers)

Alfons Schilling painting

In 1963 Günter Brus received 5000 schillings from the Institut zur Förderung der Künste to assist him in the creation of a series of large-scale paintings. To do these large paintings, he stretched string backwards and forewords across empty gallery rooms and hung molino (a cheap substitute for canvas) and paper so that they reached the floor in order to create a labyrinth which would help prevent him from preconceiving a compositional idea too quickly. He then painted all the surfaces as if it was one large painting which completely surrounded him. Few people saw the painted labyrinth however.

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Subsequently, in the autumn of 1964, Brus carried out his first real Action titled *Ana* which took place in Otto Mühl's studio, a fellow artist and friend. In preparation for *Ana*, Brus painted Mühl's studio and several objects in the room (typical of a Viennese bourgeois apartment) a stark white. In effect he began his Action with the classic white canvas, now extended out into the third-dimension. Hence he begins in an enveloping, immersive, unified, total-space. On starting the work he emphasised this enveloping further by rolling across the floor of the room with his body completely wrapped in pieces of white cloth. The pieces of cloth unwound as a result of the motion and he remained motionless for a long period of time. Then Brus began to stream black paint over the white objects and over his wife who also participated (passively) in the action, with the aim of making a living painting. He therewith burst into a bout of painting and besmeared the walls until exhausted. (Schwartz & Loers)

After *Ana*, Brus decides to produce the action called *Self-Painting* in which his own physique was to serve as a painting surface with the intent of binding himself into the picture-plane in order to "become one with the picture" and to thereby "disappear into the picture" (Schwartz & Loers); words which remind us of Yayoi Kusama's avowed ideal of doing likewise. Kusama has described from where this perception/ideal emerged for her, by recounting a moment where she was watching a red pattern of a tablecloth coat everything around her and then swallow her up this way; "When I looked up, I saw the same pattern covering the ceiling, the windows, and the walls, and finally all over the room, my body and the universe. I felt as if I had begun to self-obliterate, to revolve in the infinity of endless time and absoluteness of space, and be reduced to nothingness". (Solomon, A., p. 67) With apparently similar aims, Brus designed *Self-Painting* as a soundless action separated into three separate tableauxs in which Brus placed together different parts of his painted white body with disparate objects that were also painted milky white. A jet black streak is painted vertically over Brus's face by himself and along his forearm as if his body had been ripped open by one of Barnett Newman's majestic zips.

In January 1965 Brus went on to perform painting actions *Silver, Self-Painting II* and *Self-Mutilation* for a film-maker and photographer and on July 6th, 1965 he performed a *Self-Painting* at the Galerie Junge Generation in Vienna. The day before, on July 5th, he painted himself as in the *Self-Painting* Actions and proceeded to stride across Vienna as a living painting, but was stopped and arrested by a policeman for causing a civic disturbance.
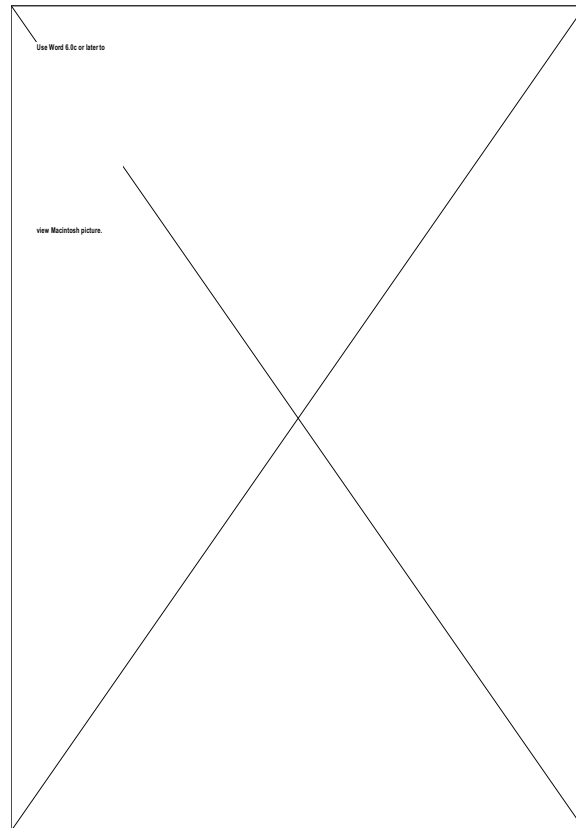
Günter Brus, *Silver, Self-Painting II*

Brus's peer Otto Mühl too was coming from the process-oriented *matière* side of *Art Informel* and the related *assemblage* movement of the Nouveaux Réalistes (for example Arman's *accumulations* of everyday rubbish) and the American *junk sculpture* movement. The term *assemblage* was coined in 1953 by Jean Dubuffet (1901-1983) to refer to works that supposedly went beyond the collage of Synthetic Cubism. In junk/assemblage sculpture of the late-1950s (and with Robert Rauschenberg's *combines*) art further challenged the boundary between everyday objects and High Art and the entire world opened up and became the raw material for the creation of art.

Mühl had met Brus in early December of 1960 at the famed gesamtkunstwerk oriented Sezession building and they shortly thereafter became engaged in an artistic discourse which eventually indelibly shaped both men's work. Otto Mühl wrote in "Weg aus dem Sumpf" in 1977 of Mr. Brus that "Brus painted in psychomotoric expressionist style, a wild criss-cross of lines hurled onto the paper. The paint sometimes exploded like a bomb when it hit the picture. That was total creative excess. I understood right away and was full of enthusiasm. The pictures were often 5 metres long by 3 metres high (16.4 by 9.84 feet). The whole room was covered with splatters of paint, on the floor there was a centimetres-thick layer of paint ooze that had dried up." (Schwartz & Loers) In 1961 Mühl gave up traditionally scaled easel painting and began a series of

Actions in which he poured paint and pigment onto paper and then wallowed in it; bringing structure to the pools of colour. In a January 8th, 1961 letter to his friend Erika Stocker, Mühl writes; "I have, so to speak, produced my first *tachiste* picture. To do it I have developed an original technique. I painted it by laying it on the floor. It doesn't work on the easel anymore." And on March 23rd, 1961 he writes her again saying; "I wallowed in paint (...) I slid from one end to the other, turning over once. In the process I worked the surface with my hands...". (Schwartz & Loers) Taking this sense of wallowing further, in May of 1961 Mühl created a full room installation in his studio called *The Overcoming of the Easel Picture by the Representation of its Destruction Process* by nailing or tying together his paintings into a unified gesamtkunstwerk. Following this installation, Mühl moved increasingly towards creating three-dimensional assemblages and from there deeper into performance Actions.
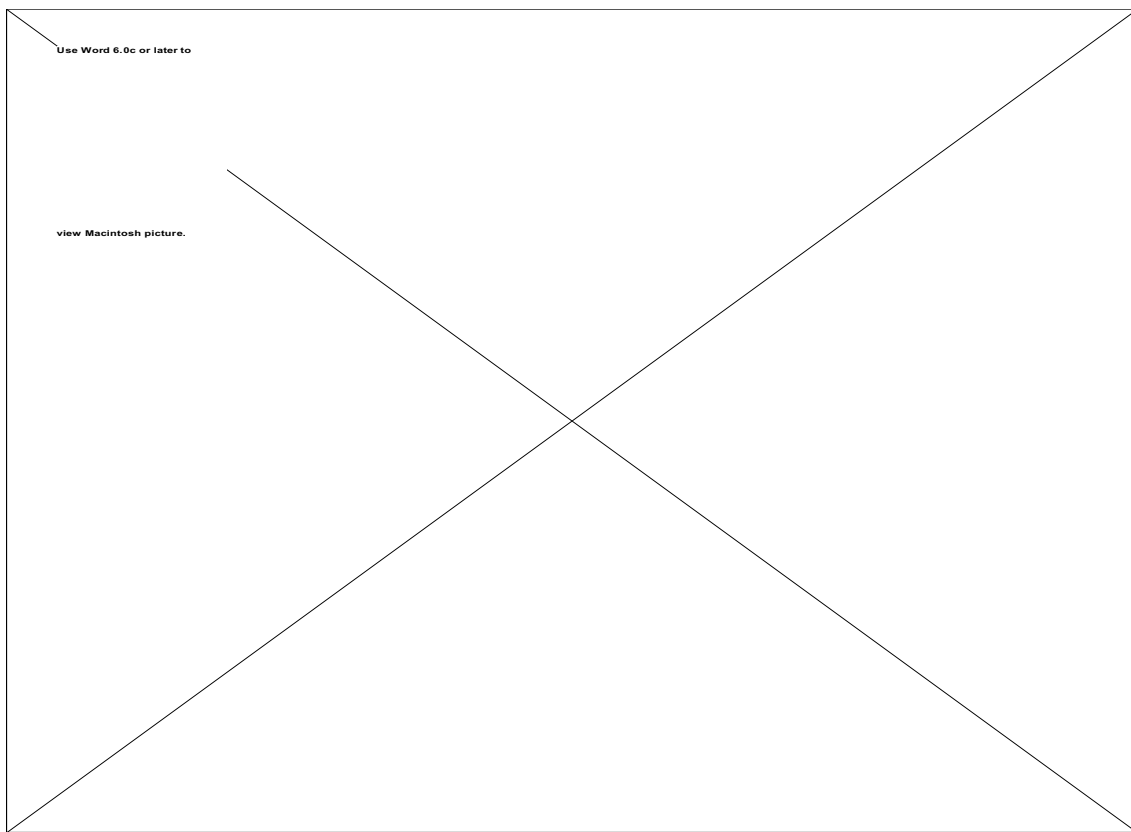
Otto Mühl, *Consinus*

Salient to our immersive concerns here is a written text by the Viennese Actionist artist Rudolf Schwarzkogler which the artist Marina Faust and I translated into English for the first time. In his manifesto (written circa 1965) entitled *Manifesto PANORAMA I / the total act* Schwarzkogler makes eminently clear the connection with the gesamtkunstwerkkonzept and immersive intentions within Actionism.

The manifesto reads:

"Manifesto PANORAMA I / the total act

Instead of the construction of the painting; the construction of the condition for the act of painting as a definition of the field of action (the space as think-actor with the real existent objects of the surrounding world). The act of painting is freed from having the relic as a goal as it (the act) is put in front of the reproducing apparatus which takes over the information. The time of the act of painting and of showing it become one; the objects as the elements of the panorama are moved and changed in the space (confrontation, deformation (this word crossed out), montage, destruction (this word crossed out), automatic touch). The extenuation of the act of painting to the total act becomes possible and can be experienced through all senses. The total act is a space/time global structure which gives its form to the multiple image sensations of different plastic apparatuses."

Later in the text Schwarzkogler says: "The aesthetic panorama becomes the seed-cell of a new art, an art of de-regenerated capacity to experience. Art as a synthetic adventure, a result of a chain of elementary experiences as a life-ritual. The aesthetic panorama is the effective gesamtkunstwerk (the gesamtkunstwerk is not created from the parallel nature of thematically linked fields, but of a logical structure of the material and the levels of experience). The aesthetic panorama has a tendency to enlarge itself and to take the place of other institutions, to repress them." Then the manifesto ends with this pertinent statement: "Since the time of the gesamtkunstwerkkonzept, there is the tendency to let the artwork overwhelm all of the senses of the audience so that the whole person is captured by it."

This sense of capturing the audience is made apparent with the immersive Fluxus work of the Japanese artist Ay-O and his extenuation of the all-over ideal into the realm of the immersively felt. Ay-O concerns us most with his creation of all-over environmental sensations through immersive enclosure, as in for example his *Orange Box*. *Orange Box* is a 1.8 metre (6 foot) square box (the same dimensions as Tony Smith's sculpture *Die*) lined with soft foam rubber which is designed for immersive, tactile, investigation and pleasure. Ay-O's *Tactile Room* in Venice in 1965 was an enlarged extension of the immersive ideas first proposed in his *Finger Box Suitcase* of 1964 in which the receivers of the art push their finger into holes prepared to give tactile sensations of all kinds. He has also made a series of *Rainbow Rooms*, most notably the *Venus de Milo Rainbow Tactile Room* in Venice in 1966.
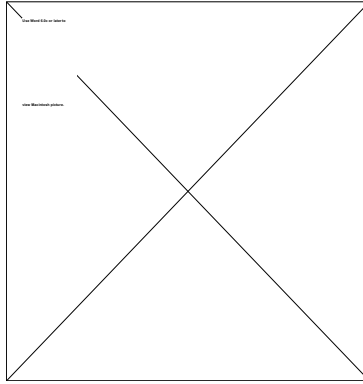
Ay-O, *Tea House*

Ay-O participated in the Fluxus performance events with such immersive performances as:

Exit No. 4

The audience must pass through a vestibule with a floor covered with mirrors.

Exit No. 5

The audience must pass through a vestibule with a floor covered with wood blocks of various shapes and sizes.

Exit No. 6

The audience must pass through a vestibule in which the ceiling has been lowered to a height 2 feet (70 centimetres) above the floor.

As we have seen with these and other examples, aesthetic immersive attention is always concerned with constituting an enlargement of the depths and echoes of the immersive continuum of internal and external ambient space.

Criticism consists of analysing and reflecting upon limits, but if the question provoked by Actionist and Fluxus immersive art is that of knowing what limits art has to renounce, it seems that the critical question of the 1960's has to be turned back into a positive one; in what is given to artists as constraints, what immersive space and ambient intuition is opened by the overcoming of confinement? We shall address this question in the following portion of the text.

BXXII: Cybernetics, Systems Theory, Environmental Art, Op, Pop and the Kinetic/Dynamic Externalism of the Open Arena

I work with the convention of the picture plane and framing. The first way of doing this is when the work is out, away from you, existing simply as a picture. Then you come to enter it through seeing. The second way involves the "window" of the picture plane, which is brought forward so that one enters the whole piece. The third way is when the picture plan is almost pulled over your head like a shirt. The light from inside then meets the light from outside in such a way that it becomes insignificant to determine from where exactly the light comes.
-James Turrell, *James Turrell, Air Mass*

Use mirrors or reflecting material to transform the four walls and ceiling of a given room into mirrors. Then cover the floor, wall to wall, with neon elements of all shapes and colors to a height of sixty centimetres. Install for the spectator either a transparent gang-plank that crosses the room, or a narrow passage-way leading to an observation point in the middle of it.
-Martial Raysee, *Twelve Environments*

The shift in art in the 1960s and 1970s towards an open, more immersively inviting dominion of self-attentiveness, with its emphasis on recontextualisation and release from the framing apparatus of painting, can be seen in retrospect as an anticipation of and desire for the holonetric omni-directional ambient ideal optic of VR with its ideal 360° bubble-like vista. This optic, which is located radiating out in all virtual directions at once, can be seen as a further extenuation of the expanded field which cybernetic-influenced art instigated. (Reichardt) In this portion we will study the further disappearance of the *object d'art* (art object), the new role of the artist, and the newly heightened participation of the spectator (turned viewpant) in terms of degrees of immersive space.

The disappearance of the *object d'art* in roughly 1965 marked the emergence indicative of post-modernist immersive experimentation which was postulated on the assumption that the art experience needed broadening. Frank Popper's seminal book *Art-Action and Participation* is an important reference to this development as is Jack Burnham's book *Beyond Modern Sculpture*. Professor Burnham arrived at the conclusion that cybernetic sculpture, or rather the cybernetically informed sculptor, is not simply adopting new materials and new standards of fabrication, but evolving a new aesthetic, now synchronised with technical ideals. (Burnham, 1968a) Cybernetics had demonstrated that the configuration of a system is an index of the performance which may be expected from it (Ashby), hence cybernetics' extremely circular-state yields an extended aesthetic consciousness on the basis of connected self-attentiveness and it is within this elastic self-attentive aesthetic framework where we will expect to find new immersive attitudes emerging in art. (Reichardt)

The recontextualisation of the *object d'art* into the global envelopment of the environment (where the viewer is pulled away from the constraining aperture of the picture frame and more and more from the gallery frame) is indicative of the immersive qualities of the era under investigation here. This radically disframing opened up the viewing cone of the 1950s' post-cubist/post-war painting space towards a more thorough literalisation of the imagined (or implied) non-partial field of universal surroundings of Fontana's Spatialist-type conceptualisations of abstract space. Here framed areas of space may not be singled out and be made to represent the totality of the viewer's holonetric range.

This post-Fontanaesque immersive space, where partial framed and arranged views may not be cut out of the total surround, finds a very real literalisation in the open field of art in the 1960s and 1970s and the broad holonogic gaze which it provokes is a huge step in the direction of escaping the limits of narrow representation in the interests of omnijective-immersive consciousness. From this point on, only a technique which fully undermines the proscenium and window-like frame can stand in for the abstract, all-over, intemperate 360° bubble-vision ideal which the frame cuts and excludes. In this drift towards anti-representationalism, art begins leaving the orbit of the framing apparatus and of the tunnel vision that fixed a segment of the objective world at one end and the viewer at the other. What had enabled that narrow cone of vision to simulate the entire visual atmospheric field previously, was possible precisely with the enclosure of that framing cone (tangent tunnel) but once that framing cone has dissolved through Kant's indeterminate supersensible, Fontanaesque spatial ideals, Pollockesque scale, Kleinesque emptiness, Kusamaesque dematerialisation through excess or any other number of Op, Cybernetic, Minimalist or Conceptualist artistic strategies, that narrow cone of representation is found to be wanting and dissolves, and a much more encompassing atmospheric scopic organisation is conceived in its place.

Art in the 1960s' open arena then, is generally conceived of as a cluster of optical vectors which suggest a hyper-total, enveloping, non-vectored space that creates unaccustomed situations and sensations for the enthusiastic viewpant, in an attempt to shift the political/social vortex away from outdated symbolic allegiances and towards sensate dynamic forces of change. As such it stands in contrast to the standard histories and doctrines and ideas that were being propagated in the mass media at the time. (Rosen)

Here I will review some pertinent examples concerning the semi-disappearance of the *object d'art* which occurred in the late-1960s (Woods, Thompson & Williams) which to a great extent set the tone for vanguard art on through to the late-1970s when a revival of painting occurred under the designation of post-modernist appropriation/simulation. (Phillips & Heiferman) Of course artists continued to paint and sculpt throughout the period of the 1960s and 1970s, and still up to this day, but they do so from a derrière-garde position, as traditionalists. This is so because an immense change in art occurred in the late-1960s when typically art lost its artisanial materiality (as discrete paintings and sculptures) and became increasingly time-based and

ambient as a repercussion (primarily) of the legacy of painterly abstraction in the early and mid-20th century. (Rosenthal) In terms of the immersive inclination, this expansion away from the two-dimensional canvas freed the spectator from stasis and encouraged an active atmosphere of contemplative reception *within the work of art* which was attained through essentially the compliant motion of the immersant in contact with the strategic liberties exacted in the expanded art. (Rosenberg, 1972) Artists increasingly aimed in this era to evoke possibilities within the imagination of their audience and to engage their active participation and to release art from its previous obligatory fidelities to the hypothetical and material status quo. (Popper, F., 1975) Underlying this aim is a miasmatic idea which questions linear and hierarchical structures and seeks to replace them with atmospheric loose structures, keyed to a penetrable, reciprocal flow of events. (Deleuze & Guattari, 1983) This inclination might be further characterised as the deposit of an omnijective metaphysics within the immersant that will manifest at a later date as a personal and private inner art: in other words the creation of future artists.

Much of the disappearance (Popper, F., 1975), de-definition (Rosenberg, 1972) and de-materialisation (Lippard, 1973) of the art object that went beyond Modernism (Burnham, 1968a) in search for a total art (Henri) developed out of the visual spectator's participation called for in viewing *Op Art*: a hard-edge geometrical movement which flourished in the early-1960s (largely inspired by various optical experiments of Marcel Duchamp) in the work of Jesus-Rafael Soto, Bridget Riley, the GRAV group, Yayoi Kusama, Yaacov Agam, Pol Bury, Josef Albers, Marian Zazeela and Victor Vasarely, among others. Op Art called attention to the spectator's individual, constructive, and changing perceptions and thus called upon the attitude of the spectator to transfer the creative act increasingly upon him or herself. This ideal, in turn, beckons forth a consideration of the enlargement of the audience's normal participation; both in regard to the spectators ocular aptitude to instigate variations in the perceived optic, as well as his or her capability to produce kinetic and aggregate exchanges on or within the work of art itself.

Indeed Kinetic Art also played an important part in pioneering the unambiguous use of optical movement and in fashioning links between science, technology and art relating to the notion of the environment. (Popper, F., 1968) Simply stated, the term *kinetic* means the study of the relationship between moving bodies, hence the term *Kinetic Art* is usually used to describe either three-dimensional mobiles or constructions which move in either foreordained or unplanned ways. With Op Art (which is kinetic in that Op situations employ optical illusion which effect an appearance of motion) and Kinetic Art (both conceptual descendants of the shifting perceptions initiated in 20th century painting with Impressionism, Cubism and Futurism) the artwork under consideration is no longer merely a categorical system but increasingly an *invocation to omnijective perception*. The cognitive encounter that a spectator may undergo in an Op situation, perhaps best exemplified by Bridget Riley's projected circular Op environment done for the 1960 exhibition *Situations* in London, was instigated by the certitude that the spectator was obliged to take up consecutive positions in front of the

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display, in order to detect the series of shifting patterns and lines which were offering themselves to the onlooker from contrary and incompatible angles. Thus the element of personal choice and physical motion by the beholder is emphasised, resulting in a decline in the art object's sequestered, fetishistic standing as an *object d'art*. This is well exemplified too by Jesus-Rafael Soto's process-based walk-through Op environments called *Penetrables,* which incorporated a tactile immersion (with occasional sonorous elements) notable here for their immersive attributes (given their realisation on an architectural scale). The work increasingly becomes a co-operative production of the operation betwixt the former *object d'art* and the viewpant, as the viewpant is *omnijectively projecting his or her selfhood into the form* and is thereby enabled to sense the various spatial possibilities the shifting work suggests.
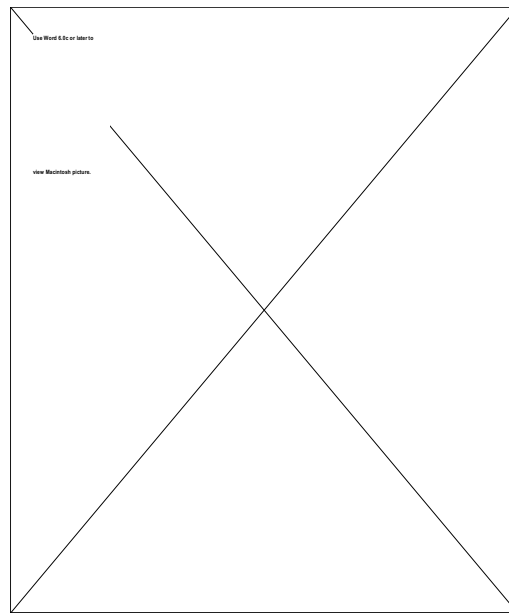
Jesus-Rafael Soto, *Penetrable*

Many sensory projects, installations and environmental events produced by the Brazilian artist Hélio Oiticica (1937-1980) exemplify this trend excellently. In Oiticica's work the once established correlations between the spectator, the *object d'art* and the artist is radically modified. With Oiticica the emphasis is not anymore on the *object d'art* created by the artist, and certainly not alone on the personal fancy of the viewpant, but on a third dramatising manoeuvre similar to what Brion Gysin (1916-1986) and William S. Burroughs call *the third mind*. (Burroughs & Gysin) The third mind is based on Brion Gysin's rediscovery of Tristan Tzara's (1896-1963) Dada cut-up writing method which he encountered while cutting through a newspaper upon which he was trimming floor mats. Gysin did several experiments with cut-ups while living in Tangiers and shared them with his friend William S. Burroughs. Thereafter Burroughs, used cut-ups in his books *Nova Express, The Ticket That Exploded*, and other books. Gysin too was responsible for the absolutely immersive and optical *Dream Machine* which he invented based on the sparkling and flickering of the sun through the

trees on a bus. The principle behind the *Dream Machine* is that it generates wave-like patterns which strobe at around 10 Hz, the frequency of the alpha waves sometimes present in the part of the brainstem responsible for determining states of creative consciousness. As one sits relaxed in a room filled with the machine-generated flickering light, spectacular visualisations may occur due to the optical twinkle.

As the blending between the artist and spectator took on greater and greater emphasis during the period of the late-1960s new forms of aesthetic immersion opened up. It is precisely in this third mind blending that the question of *art as ambience* arises. Indeed *ambience as art is a fruitful domain in which to find the immersive aesthetic in all of its varieties and forms of manifestation*.

The term *ambience* being used here follows Frank Popper's definition of the *artistic environment* as a meeting ground of physical and psychological factors which implicate the spectator's inherent participation in the art's fulfilment in a delicate, atmospheric way. (Popper, F., 1975) This is indeed the case with La Monte Young's and Marian Zazeela's *Dream House;* a fully immersive light and subtle sound environment in which the visitor may move about and thereby participate in the formation of the sounds and optical effects encountered. An *artistic ambient environment* is a key concept for aesthetic immersion and we shall return to it.

Popper, in *Art - Action and Participation,* showed (with particular reference to post-kinetic research) the convergence and specificity of the notions of environment and creative participation which combined to form the principal direction of art research in the theoretical and practical domains. In *Art - Action and Participation,* a source book from which I drew many examples from this period, Popper found that mixed-media expressions that involve all the senses, are conducive to the more complete involvement of the spectator and that science and technology can act as creative stimulants. In terms of artists of the 1960s working in this new expanded-field, a good example is GRAV (Groupe de Recherche d'Art) (Research Art Group), a group of eleven artists who picked up on Victor Vasarly's concept that the sole artist was outdated. (Vasarly) GRAV was active in Paris from 1960 to 1968. Their main aim was to merge the individual identities of the members into a collective and individually anonymous activity linked to the scientific and technological disciplines based around collective events called *Labyrinths*.

Their ideals enticed them to investigate a wide spectrum of kinetic and optical effects by using various types of artificial light and mechanical movement. (Bann & Gadney) In their first *Labyrinth,* held in 1963 at the Paris Biennale, they presented three years work based on optical and kinetic devices. Thereafter they discovered that their effort to engage the human eye had shifted their concerns towards those of spectator participation; a foreshadow of interactivity. On April 19, 1966 GRAV created *Une Journée Dans la Rue* (Day in the Street) in Paris where they invited passing participants to involve themselves in various kinetic activities such as having them walk on uneven blocks of wood and/or experience a distorted world by wearing

elaborate distorting spectacles. Their agreed dissolution in November 1968 was based on their recognition that it was impossible to maintain the rigor of a joint program.
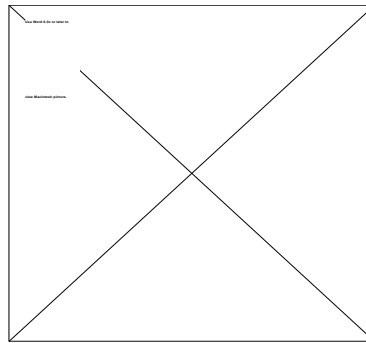

GRAV, *Une Journée Dans la Rue*

Significant in immersive terms of the period is Stan Vanderbeek's 1966 *Movie Drome*, a hemispherical "movie-mural" created in upstate New York State where the viewer assumed a supine position to look upon an onslaught of hemispheric cinematic projections. (Vanderbeek, 1969, p. 16) As Vanderbeek himself described it, the Movie Drome operated as follows: "In a spherical dome, simultaneous images of all sorts would be projected on the entire dome-screen. The audience lies down at the outer edge of the dome with their feet towards the centre, thus almost their complete field-of-view is the dome-screen. Thousands of images would be projected on the screen...". (Vanderbeek, 1966, p. 16) According to Vanderbeek, details of this hour-long "multi-plex" dense image flow (inherently excessive) were not important. What was important was a "total scale" felt in rapport with the "rapid panoply" (what Vanderbeek called the dome's "visual-velocity") which functioned so as to "penetrate to unconscious levels". (Vanderbeek, 1966, p. 17) This hemispheric reconfiguration of the screen (so as to heighten film's immersive appeal in terms of filling the FOV) conforms to what Jonas Mekas called *absolute cinema*. (Royoux, p. 7) Also the previously mentioned Francis Thompson, best artistically known for a six screen projection arrangement called *We Are Young* which covered a total area of 885.6 square metres (2,952 square feet) at the Expo '67 in Montreal, produced large-scale immersive projections base on his interest in having films optically swallowing an audience. Thompson said about these large displays that he "would like to see a theatre with so great an area that you no longer think in terms of a screen: it's the *area* you're projecting on". Then images would "come out of this surrounding area and hit you in the eye or go off into infinity. So you're no longer working with a flat surface but rather an infinite volume." (Youngblood, pp. 354-358)

Non-absolute cinema makes use of what is called *framing*. Framing is intended to eliminate what is deemed unessential in the motion picture, to direct the spectator's attention to what is important and to give it special meaning and force. Each frame of film, which corresponds in shape to the image projected on the screen, forms the basis for a graphic composition in the same way as the frame of a painting encloses the area in

which the painting must be organised. Several different ratios of frame width to frame height (called *aspect ratios*) have been used in motion pictures. The most common, known as the Academy ratio, is 1.33 to 1, or 4 to 3, a ratio corresponding to the dimensions of the frame of 35 millimetre film. By using 70 millimetre film or a special CinemaScope lens, an image with wider horizontal and shorter vertical dimensions is achieved; a proportion of about 5 to 2, or between 2.2 to 1 and 2.65 to 1. A similar effect, called wide-screen, was sometimes achieved without the expensive equipment required for CinemaScope by using 35 millimetre film and masking the top or bottom, or both, giving a ratio of 1.75 to 1, or 7 to 4. Although some theatres in the 1970s were enlarged and widened to accommodate 70 millimetre images, a trend toward smaller theatres fixed the image ratio close to 1.85 to 1 in the United States and 1.66 to 1 in Europe. (Encyclopaedia Britannica)
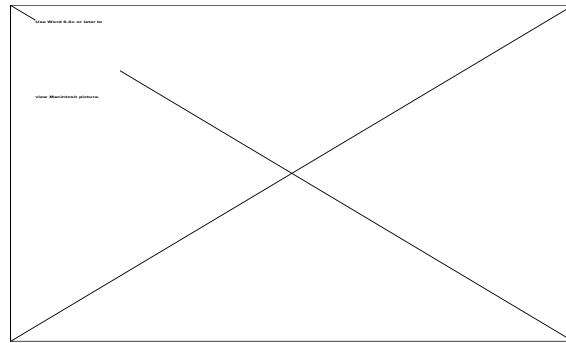
movie screen from Cineas, Amsterdam

Rejecting the framing trope for art, in 1954 Yaacov Agam began to undertake research into what he called *transformable structures* (the equivalent of paintings and reliefs) and *transformable objects* (the equivalent of sculpture) where the spectator was obliged to take up successive positions in front of the reliefs in order to discover the sequence of changing lines, forms, colors and structures which offered themselves from different exclusive angles. Agam himself pointed out that all his works are in fact *transformable,* but he reserves the term in particular for those in which the basis of the transformation lies in being able to modify the pictorial structure; for example in the 1953 piece, *Nuit*. He extended this premise immersively with his *Total Picture Environment Salon* at l'Eysée in Paris.

Yaacov Agam, *Total Picture Environment Salon*

According to Gene Youngblood, with the art of Marcel Duchamp, John Cage, and Andy Warhol (1928-1987), Western civilisation "rediscovered art in the ancient Platonic sense in which there's no difference between the aesthetic and the mundane". (Youngblood, p. 66) This, we can say, is the basis of Pop Art (a term coined in 1958 by the critic Lawrence Alloway) (Alloway, 1974) as Pop Art found its imagery and many of its techniques in the realm of advertising and consumer packaging and pop stars and cinema idols. An example is that Roy Lichtenstein (1923-1997) imitated on a vast scale the subject matter and reproduction techniques of the American comic book in works such as *Whaam!*. Hence Pop refers at once to the subject matter, the technique used and the audience addressed by these artists. (Gablik & Russell) Pop painting however tended to be an art which took reality into its scope in an emblematic way rather than by using direct incorporation or manipulation of physical or psychic spaces. There are remarkable exceptions to this tendency however, for example James Rosenquist's 3 by 25.8 metre (10 by 86 foot) wrap-around mural *F-111* which was installed to fit exactly the four walls of the Leo Castelli Gallery in New York in 1965 and the mylar hangings Rosenquist created for an exhibition at the Grand Palais in Paris in 1972. There he produced a remarkable immersive effect through the use of artificial clouds rising from the floor which enveloped the spectator either wholly or partially.
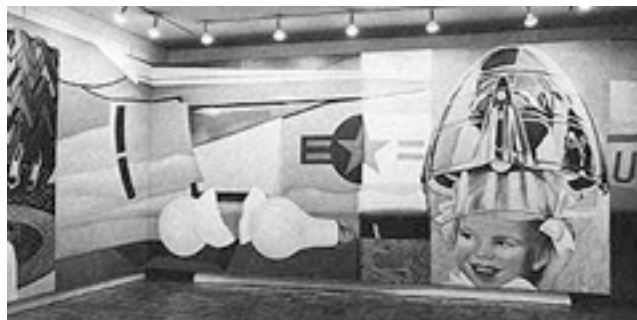
James Rosenquist, detail from *F-111*

Most definitely the Pop-Happenings of Andy Warhol's art-music group, the Exploding Plastic Inevitables (E.P.I.) (which eventually became the rock group The Velvet Underground) is the most conspicuous Pop immersive work, as the audience and the players/performers were embedded in a light/sound/film show which

dominated the space and stirred the consciousness of those watching or dancing. E.P.I. Happenings first were performed in the spring of 1966 at a Polish dance hall on St. Marks Place in New York City called *Polsky Dom Narodny*. Warhol rented the *Dom* (home) from two artists who "sculpted with light", Rudy Stern and Jackie Cassen, and painted it white so that movies and slide projections could be cast on the walls in wallpaper-like fashion. Five movie projectors were utilised along with five carousel-type slide projectors which could each change an image every ten seconds. The slides were projected directly onto the films, whose sound tracks would sometimes be played, and thus blend in with the live music/hullabaloo. A mirror-ball also was utilised along with spot-lights and strobe-lights. (Warhol & Hackett, p. 156)
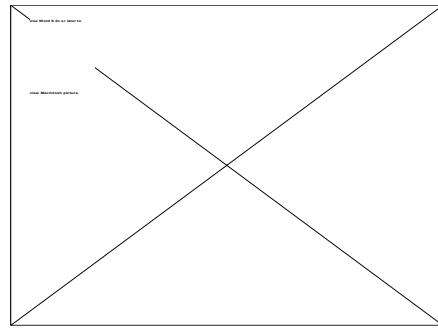
Exploding Plastic Inevitables, Happening

E.P.I.'s Happenings aimed to achieve a traumatically dazzling ontological restructuring of consciousness. Here the space of the Happening (light-show/concert/film-show/live-performance) verges on the all-consuming in a way now familiar to those who have participated in techno-raves, rock concerts, and/or House music clubs (such as the legendary Paradise Garage in New York City, a club which attained an added immersive sweep to its milieu by embedding powerful sound-speakers under its dance floor). Indeed the now ubiquitous mirror-ball (whose inventor I was not able to uncover) must be recognised as an immersive artwork of significant stature.
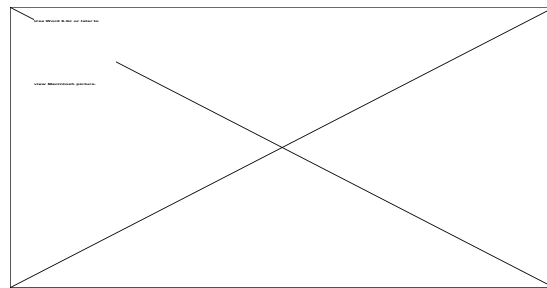
Parisian night-club Wait and See in 1997

The other Pop-Happening artist emblematic of an all-consuming immersive aesthetic is the previously mentioned Japanese artist Yayoi Kusama, who in 1958 moved for a time to New York City. Kusama's dominant obsessions have been the excessive accumulation of polka-dots or extraordinary milky phallic

growths which on occasion span entire rooms and create virtual worlds. As a juvenile in Japan, Kusama developed an obsessive-compulsive disorder that caused encircling hallucinations, as mentioned previously. Kusama's obliterating installations strive to characterise a waking hallucinated-vision she experienced as a young woman where sitting at a table covered with a floral tablecloth, in a room covered with floral wallpaper, she saw that her hands, too, were covered with flowers. As she herself has said; "There was a vase of golden violets and when I looked at them and then looked away they began to cover everything. They were on the drawings I was doing and then I saw that they were all over the phone book, and going up the walls and then they covered the doors so that I could not see a way out of the room. These experiences were typical." (Solomon, A., p. 67) As a result, it is as if Kusama was agonising to overwhelm the entire world with her polka-dots, and it is this explosive and immersive-omnijective ideal which places her at the forefront of the Pop immersive post-war avant-garde, reflective, as her installations, Happenings, and even paintings are, of sexual/psychological/spatial excessive obsessions which encompass and totalise.

Kusama's *Infinity Net* paintings are comprised of small, overlapping, looping brush strokes which create optical-fields reminiscent of a boundless sea. This, of course, ties her paintings into issues of the previously discussed painterly immersive sublime. Moreover, she also has created an extraordinary group of *Net Paintings* in the late-1950s and early-1960s (for example *Yellow Net)* which insinuate the overall webbed-infinite hyper-total aesthetic accomplished by Jackson Pollock. This implied immersive/overall sublime hyper-space becomes literalised in her infinity cubed mirror installations at the end of the 1960s and early 1970s. As she has said: "In New York, I was painting the red nets and then I noticed that it spread to the floor and the curtain and to the window. So I went to catch the red net, and I examined it without noticing at first that my hands were also covered by the red nets. And that was the turning point, and I started creating sculpture, so that I could put the patterns on everything." (Solomon, A., p. 68) This desire is realised in the installations *Repetitive Vision* and *Dots Obsession*. In *Dots Obsession,* a room 4.8 metres wide by 15 metres long by 3 metres high (16 by 50 by 10 feet) has been painted an intense yellow with different sized black dots randomly placed on the walls, floor, and ceiling. Three huge, organically-shaped balloons (one is 9 metres long by 3 metres high (30 feet by 10 feet)) are the same colour as the room, right down to the black dots which fill the total space.

Yayoi Kusama, *Dots Obsession*

Yayoi Kusama, *Repetitive Vision*

Her grottoesque installation *Repetitive Vision* is approached by walking first into a black corridor and then into an intensely lit space whose floor is covered in hot-red dots. One encounters there three female mannequins painted white, their bodies and hair covered with the dots, reflecting to infinity in the mirrored walls and ceilings. In explanation she has said; "I had a desire to measure the infinity of the boundless universe from my own position with each dot". (Solomon, A., p. 69)

As Kusama is consistently motivated by her desire for an immersive-omnijective obliteration of the self in holonogic visual-infinity characterised by the all-over use of polka-dots (so immersive is this impulse that Kusama often covered her skin and hair in polka-dots), her mirrored immersive installations are salient sites in which to explore issues of disembodiment (issues of self devastation of cognitive self-body-image) and willed visual self-obliteration, as when within them the viewer may merge with, and dissolve into, the visual panorama reflected *ad infinitum* in the walls of mirrors. The effect is as if being itself was being circuitously inhaled.

To immerse more fully the viewpant in her proliferating environments, Kusama in 1965 turned to the use of mirrored-rooms to enhance the feeling of expansive immersion *ad infinitum* with, for example the construction of *Narcissus Garden*, *Kusama's Peep Show* and *Endless Love Room*.
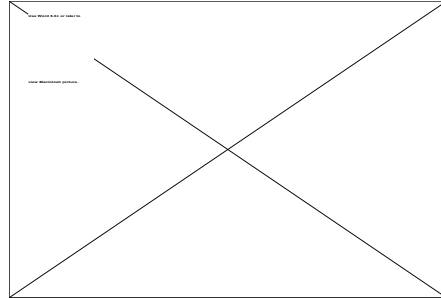
Yayoi Kusama, *Endless Love Room*

Stylistically, this work can be seen as a synthesis of Op, Pop, and Psychedelic Art (Masters & Houston) and there is the obvious communality she shares with Lucas Samaras's 1966 *Room 2* and Christian Megert's environments (which also incorporate mirrors) as in the *Spiegelraum* which was included in the *Environments* exhibition in Utrecht in 1968 and in *Mirror Environment* included in Documenta 4, Kassel. Moreover, though less immediately all-encompassing, but perhaps even more highly charged with total symbolism applicable to the entire environment, in 1969 Robert Smithson (1938-1973) began producing works in the landscape called *Nine Mirror Displacements, Mirror Shore* by placing mirrors on a beach or in the jungle of the Yucatán. Smithson then took photographs of these ordinary mirrors set out on the ground and what they were reflecting back.

Robert Smithson, *Seventh Mirror Displacement*
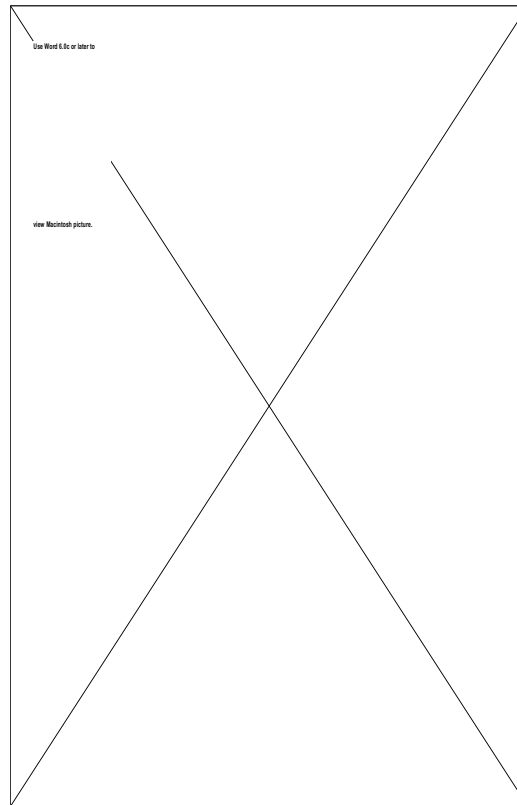
Lucas Samaras, *Room 2*

The Italian artist Getulio Alvani, in his 1964-9 *Cubic Environment,* also made use of reflective media towards immersive ends on an architectural scale, and again in *Surface and Texture* (1969), an aluminium wall 3.20 by 5.60 metres in size (about 10.5 by 18.4 feet). Luc Peire's *Environment,* was constructed also as an enveloping reflective arrangement where mirrored surfaces rebound amplitude to an indefinite degree in order to help the viewpant achieve consciousness of the unlimited dimensions of Fontanaesque vibrant (and immaterial) vast space. In like manner, Domingo Alvarez created mirrored rooms out of a number of large mirrors in an entirely closed immersive construction which projected a self-conscious space outward *ad infinitum,* as in his 1972 *Mirror Environment.* Its seemingly immeasurable space might seem exclusively and merely external to the viewpant at first glance, but if considered closely, penetrates the viewpant's consciousness omnijectively. We see this in Kusama's installation *Infinity Dots Mirrored Room* where a white Formica floor is covered with three sizes of coloured fluorescent dots within a mirrored-room teeming with black-light. By being ceaselessly reflected on ceiling and walls, the viewpant feels to be an integral part of the exploding expanse. In general then the infinity mirror-box immersive experience bids the viewpant to view and feel space not in the traditional passive Euclidean custom but in a conceptually operative and viractual (*viractive*) manner.
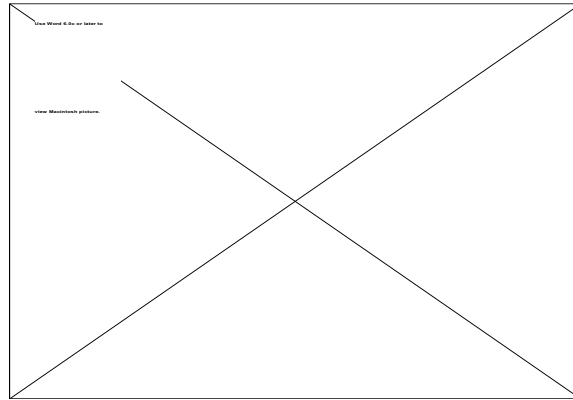
Domingo Alvarez, *Mirror Environment*

It is partly for this reason of viractual visuality, I submit, that the use of mirrors in art flourished during the late-1960s, curiously around the same time the post-structuralist French psychologist Jacques Lacan (1901-1981) was broadly publishing his theory of the *mirror stage* in human development in his book *Ecrits* in the chapter titled "The Mirror-Phase as Formative of the Function of the 'I'" (originally published in 1949 in French). The Lacanian term *mirror stage* indicated the point in a child's growth when the psychological feeling of undifferentiated unity with the mother is substituted with a conception of a disconnected self. (Benvenuto & Kennedy) According to Lacan, the experience of perceiving oneself in a mirror, literally or figuratively, generates internal trepidation inasmuch as one *anticipates and wills for oneself a homogeneous total being* over which the ego has dominion. However, this totality is never achieved, so that one's spellbound ego comes to feel inadequate. (Lacan, 1977, pp. 1-7)

Moreover, Lacan emphasised the primacy of language as the mirror of the unconscious mind, and he tried to introduce the study of language (as practised in modern linguistics, philosophy, and poetics) into psychoanalytic theory. His major achievement was his reinterpretation of Freud's work in terms of the structural linguistics developed by French writers in the second half of the 20th century. The influence he gained extended well beyond the field of psychoanalysis to make him one of the dominant figures in French cultural life during the 1970s and in Critical Studies within Anglo-Saxon academic circles from the early 1980s on. (Wolff, 1993, pp. 132-136)

Coming at this mirror issue from an almost polar-opposite position is the American artist Bruce Nauman's 1968 efficacious immersive room installation called *Get Out of My Mind, Get Out of This Room* which consisted of an empty small white room, filled only with sound which seems to come from all directions. Simply constructed, it consisted of loud-speakers invisibly embedded into the walls which played a male voice shouting and moaning the injunction of the title. There is nothing to see (like in Klein's *Le Vide*) yet the rhythmic pattern of the voice bleating out this repetitious ornately coupled incantation without end locks one

into a surround-sound immersive cognitive/dissonant situation of attraction/repulsion. However, if we are not to settle for affirmations of the emptiness of our being, it seems to me that any immersive proposition must also be an initiatory one done at the limits of ourselves which must, on the one hand, open up a realm of ontological doubt, but on the other, put itself to the test of affinity with contemporary ideas of infinity, both to grasp the points where expansion is possible and desirable, and to ascertain the accurate form the expansive proposition should take. This means that the immersively constructed ontology of ourselves must turn away from all projects that claim to be determined and restricting by persisting in an immersive consciousness both rhizomatic and infinite.

In terms of the immersive art of the 1960s which addressed contemporary concepts of the infinite, mention should be made of the Dvizjenije movement in Moscow and its leader Lev Nusberg. The Dvizjenije movement adapted the "cosmic ideas of the Malevich tradition" (Popper, F., 1975, p. 158) in an attempt to construct what were called *Living Machines* (i.e., kinetic environments) between the years 1962 and 1967. Lev Nusberg himself had in effect been working since 1964 through 1967 on projects concerned with setting up *artificial kinetic milieus* which would register kinetic sensations within them, though only partly realised. One Nusberg project idea was for a kinetic labyrinth which was to extend 500 metres (1,640 feet) and branch off into several different directions containing a large number of consecutive shaped and coloured rooms accommodating, at various points; film, music, mime performance, text, kinetic objects, smells, and even air currents. This atmospheric approach to art is also evident in Carlos Cruz-Diez's environmental colour-events called *Chromosaturations* where atmospheric three-dimensional colour experiences were encouraged in various rooms or booths, thus bringing the viewpant in direct contact with a unique sensory encounter by hanging homogeneous colour in space. In some of his *Chromosaturations* the viewpant, after being "decontaminated" in transitional coal-black chambers, passed through a sequence of consecutive chromatic situations in which the viewpant experiences sheer blue, red, and green. In his *Chromosaturations for a Public Place in the Open Air,* exhibited at Venice, Cruz-Diez returned to an idea which he had already put into effect at the Carrefour de l'Odéon (Paris) in 1969 where pedestrians were invited to enter and pass through a series of differently coloured-filled booths. In the version exhibited at Venice, this principle was carried further by inducing the spectator to follow a corridor of continuous colour saturation so that the viewpant successively experienced absolute blue, absolute red and absolute green. Cruz-Diez thus achieved a "total vision" (Popper, F., 1975, p. 92) through the summation of distinct monochrome perceptions. Mathilde Perez also created complete colour experiences by constructing a prolonged corridor of unified chroma which essentially brought the viewpant into the experience of pure colour carefully modified in such a way as to permit the sensory perception of coloured space.

Otto Piene also envisioned an environmental, architectural gesamtkunstwerk-type of immersive application which he realised through light; the immersive material *par excellence.* (Youngblood, pp. 281-282 and pp.

299-301) Moreover, Piene conceived of his art not simply as the sensible result of the artistic process, but also as the human phenomenal elements surrounding the process, such as the viewpant's participational reactions. (Popper, F., 1975) Another important and under-known artist in quest of immersive experience is Gilles Larrain. Larrain worked with the highly immersive material of air (primarily) in the fabrication of interior participatory environments. Lauren's environments struggled to lay-open the aesthetics of air in order to attenuate and alter our immediate encounter with our atmospheric surrounding. Air as an art material is by nature highly immersive as it both surrounds us and permeates our flesh. We continue to exist by being immersed in air and it is what transmits to us the basis of all art: our sensations of radiance, colour, sound, temperature, and olfactory impressions. With air as a medium, art could be presented as a direct, albeit limited, appeal to our sensory perception of the immaterial. With Al Hansen, Larrain created the piece *Blank Playground No. 2,* which concerned the modification of the Judson Church Theatre on New York City's Washington Square Park. This immersive art-space entailed manipulations of air temperature, wind, balloons, and water pressure which were orchestrated in order to encompass the viewpant in a polysensorial and tactile encounter. Like all admirable immersive art, this immersive polysensorial element invited the viewpant to be conscious of the importance of the interaction between physical and psychological elements in our environment. Correspondingly, it places an added emphasis on the diversity of immersive intrigue.

Popper's book contains pertinent information too on the Event-Structure research group which also created a number of air environments. The Event-Structure research group (Ted Botschuijver, Jeffrey Shaw, Sean Wellesley-Miller) made immersive use of inflated plastic structures, for example at the *Environments* exhibit at the University, Utrecht (1968-9) where they fabricated an assemblage of huge air-tubes. Also in the summer of 1969 they created an elaborate environment at Amsterdam which involved projections, air currents and helium-filled balloons. In a similar vein, Graham Stevens in 1965 planed the construction of a public sculpture utilising air currents which the spectator could enter in search of unusual sensations. This exploration into the sensual dynamic of immersion led to his *Water-bed, Air-bed,* and the *Matter-bed.* (Popper, F., 1975)
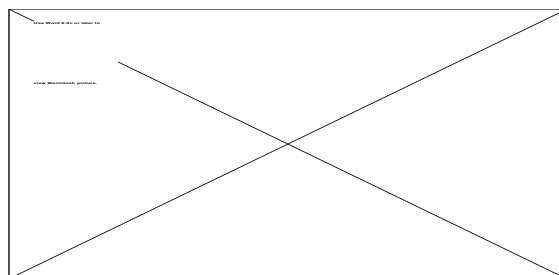
Graham Stevens, *Environment*

This emphasis on art as "a kind of sensory-stimulation laboratory" (Youngblood, p. 359) took an anonymous and collective bent at what was called the *Cerebrum*, a night-club/art gallery immersive environment in New York City in the late 1960s. The anonymously fabricated *Cerebrum* was a participatory group immersive art encounter reported to be "delicious". (Youngblood, pp. 359-364) According to Youngblood, the experience of the *Cerebrum* was one of taking on the ontological position of the voyeur, exhibitionist, and participant simultaneously (roughly the position of the immersive viewpant) and that one felt both male and female. (Youngblood, pp. 363) The immersant entered a dingy Lower Manhattan storefront and, after purchasing 3 hours of time, stripped nude under a free-flowing, silky semi-transparent white toga with an ample assemble of other people (also under unisex silken white envelopes). One phase of the environment was called *The Place,* a period of self-conscious embarrassment adjusting to the new liberal conditions and reconciling mental parameters in respect to the undisguised semi-nude beingness of the situation. Eclectic music in conjunction with a cool, passive light-show created the ambient aesthetic. Organised physical intimacies were carried out using hand cream collectively applied and experienced in mass, as a scented fog filled the room. Needles of light shot from a centred mirror-ball and cut through the haze "like electrons in a cloud chamber". (Youngblood, pp. 363) Musical instruments were made available and people played along, or not. Intimate tasting experiments were initiated which engendered what Youngblood called an "ethereal, gentle, transcendental effect" (Youngblood, p. 362) reminiscent of that produced by Bernini's fat-light angelic bodies. Youngblood reports that many fantasies were played out in semi-public there. (Youngblood, pp. 361)
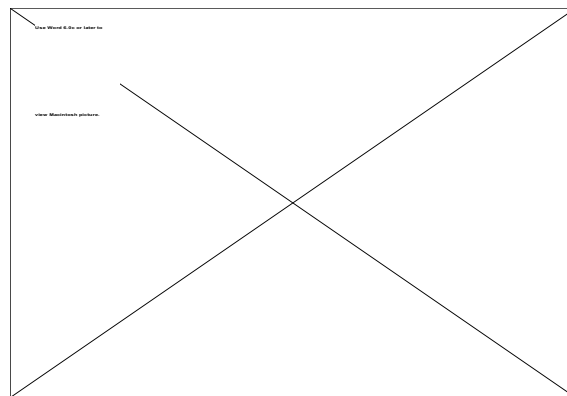

Cerebrum

Following on, the cyberneticly charged open-field provided imputes for a post-modern immersive sculptural activity generally characterised by a *process aesthetic* and a *de-objectification* that emphasised the artist's encounter with the palpable and malleable properties of reality from within the conglomerate atmosphere. In the open-field, "sculpture" thus came to incorporate wholly new modes of compositional events, such as earthworks and media art: film, video and electronics. (Krauss, 1979) Various conditions of presentation (including site-specific installations and street works) brought art further from the framework constraints of the picture frame and the traditional function of the gallery. In Minimal Art, Process Art, Conceptual Art, and

Earthworks there was a sense of common motivation; an effort to escape the conventional terms of the art object as nurtured by the museum/gallery milieu and to move art out into a broader immersive context. Here there was a definite opening towards the environment, coupled with an appeal to general creativity which was evident from the very simplicity of the materials and statements. For example, Charles Simonds in a 1970 piece entitled *Landscape<>Body<>Dwelling* gave birth to himself and the "Little People" in a New Jersey clay pit by filming himself emerging naked from the muck. Then he covered himself again with clay and re-entered the landscape, building the dwelling of the Little People. In explanation of the piece Simonds said; "I'm interested in the earth and in myself (...) in what happens when they become entangled with each other and all the things they include emblamatically and metaphorically; like my body being everybody's body and the earth being where everybody lives." (Lippard, 1983, p. 57) Simonds sees clay as a "sexual material" - just as the Zuni Indians in New Mexico consider clay to be the flesh of a supernatural female (Lippard, 1983, p. 57) - hence in 1971 he built a clay world for the little people on the body of a naked woman and later, in a 1974 piece *Body/Landscape*, Simonds formed a mountainous landscape himself by writhing nude in a pasture of mud. In a similar vein, Graham Metson performed his *Rebirth* performance in Colorado and Keith Arnatt executed a performance/body art piece called *Self Burial*. (Lippard, 1983, p. 55) In 1972 Vito Acconci, in a piece entitled *Seedbed*, laid masturbating enclosed in a ramp on which visitors to the gallery walked while speaking to them through an amplification system.

Significant also to the immersive concerns of the late-1960s and early-1970s, is the 1968 *Red Coat: Same Skin For Everybody* and the 1975 *Rug* by the artist Nicola and the early body-art of Gina Pane in which she appropriates a particular area by lying in it. Certain projects by the Austrian artist Walter Pichner also enforce this tendency. Also Chris Burden's very first performance work in 1971 called *Three-Day Locker Piece* is noteworthy. For it Burden curled up in a .6 by .6 by .9 metre locker (2 by 2 by 3 feet) and stayed there for three days. Additionally, we shall consider Tehching Hsieh's later year-long *Cage* performance in which he sentenced himself to a self-made prison cell as immersively representative.

Nicola, *Rug*
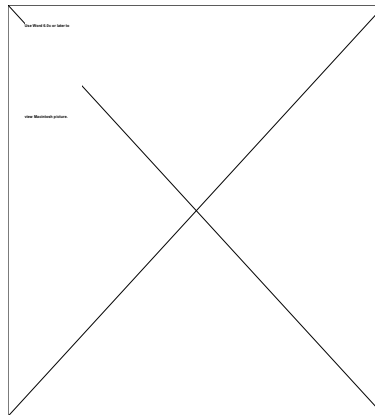
Walter Pichner, *Helmet* works

This apparent 1970s confining cocooning/burrowing immersive sensibility is also evident in Mary Miss's structures that are suggestive of enclosed sanctuaries or refuges, such as with Miss's 1974 piece *Sunken Pool*. With *Sunken Pool* a viewer is invited to enter the steel-drum structure through a small opening. Inside the viewer is set-apart from the rest of the world, immersed in and isolated in the structure. The experience of entering the piece and emerging from it was to be a symbolic journey, according to Miss. (Lippard, 1983) Miss's elucidation recalls Tony Smith's plan for the *Haole Crater* about which Smith wrote; "Standing in the centre of the piece, everything is cut off from view except the sky. Rising slowly, you pass the marked layers, bands of steel, as through coming up through layers (strata) of the earth, like rising out of the centre of a crater." (Pachner)

In a similar mode, James Turrell creates conditions in which light can be freed from its utilitarian role and take on an aesthetic seductiveness of its own. His works are calculated as to make the viewer conscious of the

essence of light, most explicitly in the *Roden Crater* project, begun in 1979; a colossal project utilising a dead volcano in Arizona. More intimate and accessible are his *perception cells*, mobile single rooms which can be entered for personal immersions. *Perceptual Cell* is the title given to a number of movable works designed for personal experience that Turrell has produced in the 1990s. Moreover Turrell's *Soft Cell* is a sound-proof and light-proof closet in which one experiences utter darkness. Turrell's *Gasworks* (shaped like a gas tank) is a highly developed immersive work where the viewer lies in a bed and enters the interior of the spherical container, seeing his or her entire body enveloped in light.

In Rosalind Krauss's text *Sculpture in the Expanded Field* the artistically mediated site is one of the specific elements of the expanded-field of classification that characterises post-modern sculpture, as typified by the earthwork. The word *earthwork* was the title of an exhibition organised in 1968 at the Dwan Gallery in New York and it refers to art which strives to confront and expand its limits. A superb immersive example of this impetus is *The Lightning Field* by Walter De Maria which was commissioned by the Dia Foundation. This extensive (enterable) sculpture was constructed in 1977 in a remote location three hours west of Albuquerque, New Mexico on a flat open plain. The work consists of 400 polished stainless steel poles, tooled to points at the top. From east to west are mile-long rows of 25 poles and from north to south 16 poles stretch for a kilometre (.6214 of a mile). The engineering feat here was to set the poles so that their peaks form an exactly even plane. A full experience of *The Lightning Field* depends upon the opportunity to view it alone or with a small group of people over an extended period of time.

Another aspect of immersive practice in the expanded-field is that of the artist becoming his or her own work of art, totally losing the usual boundaries between 'art' and 'life' and 'artist' and 'work'. This tendency is best represented by Linda Montano, the founder of the Art/Life Institute and the main defender of Living Art. Living Art is an attempt to merge art and lifestyle through long-term performance works, defined as any work/play which artists/non-artists are willing to perform together or alone. Montano's Living Art performances, which she has created over the past 25 years, include *Three-Day Blindfold* (1975) and a co-operative work with Tehching Hsieh in which the two artists spent a year tied together by a 2.4 metre (8 foot) rope (1983-84). This work had the additional stipulation that the artists not touch. From 1984 to 1991, she was involved in a seven year performance entitled *7 Years of Living Art*. Every day Montano was to stay in a coloured space for at least three hours, listen to one musical pitch for at least seven hours, speak in an accent, and wear clothes of one colour.

The 1981 immersive performance collaboration between Bill Seaman and Carlos Hernandez called *Architectural Hearing Aids* touches on this immersive Living Art mode in a viractual way, as it drove the participant in a car installed with two different sound systems and a 4-track mixer and seven speakers on a

specific tour of San Francisco. Sound/music was composed specifically to alter perceptions of the real architectural structure of the city.

In terms of more sedate immersive installations, we need to consider Sol LeWitt's huge architectural wall drawings, which disrupted the ingrained Western assumptions concerning the proper boundaries of the frame, and Jennifer Bartlett's 1975-6 *Rhapsody* installation at Paula Cooper Gallery, a wrap-around mural made up of 988 enamel painted-panels. Also interesting in immersive terms is Jean Dubuffet's 1973 *Le Jardin d'Hiver,* a walk-in cavern environment made of polyurethane on époxy where one is surrounded by his thick black lines on white background, like at his Villa Falbala at Périgny-sur-Yerres.

Also Joseph E. Furey's (1906-1990) Brooklyn railroad apartment at 447 Sixteenth Street was completely covered with brightly painted cardboard appliqués, shells, and other found objects so that the walls were teeming with stippled dots of black, green, beige and red paint which covered thousands of clam shells and hand-cut cardboard hearts, cross shapes, and diamonds. Mussel shells, spread open to resemble butterflies, were bordered by coloured tile and chips of mirror, lima beans, and glass beads. Bits of collage, pictures of monkeys, butterflies, and dogs, dotted the wallpaper landscape mural. There too is ST EOM's *Pasaquan,* created between 1958 and 1984 by Eddie Owens Martin (1908-1986), who called himself ST EOM. It is located in the sand hills of south-west Georgia, near the small town of Buena Vista. Pasaquan consists of eight grass covered acres, surrounded by pine trees and adorned with walls, pagodas, buildings, temples, and walkways, all brilliantly decorated, inside and out, by the startlingly eccentric and completely unrestrained ST EOM. This all-over tendency to address a space aesthetically has recently merited the term *Installation Art.*

Installation Art is more specifically an art that has expanded boundaries or an environment created for a specific site, a practice defined by its immersive hybrid aspect. Admirable examples are Andy Warhol's *Silver Clouds* and *Cow Wallpaper* installations and many recent installations including those by Robert Irwin, Cady Noland, Peter Kogler, Patrick Ireland, Ona B., Joseph Kosuth, Jim Isermann, Barbara Kruger, Jan Fabre, Daniel Buren, Keith Haring, Bill Viola and Jenny Holzer, with, for example, her *Installation at the U. S. Pavilion 44* at the Venice Biennale of 1990 which consisted of electronic LED signs, stone sarcophagi, tiles, laser projections and wooden benches. Also there is her *Survival Series, Benches* which was installed beautifully in 1990 at the Guggenheim Museum in New York City.
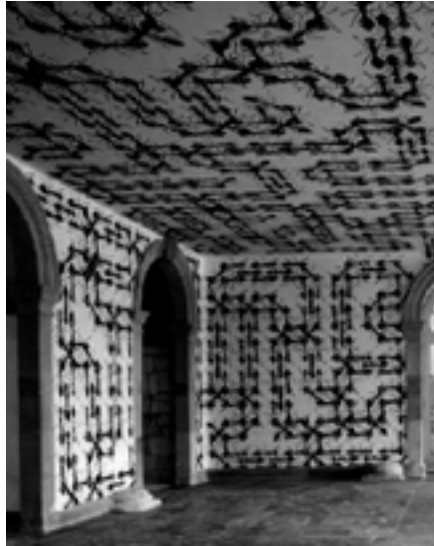
Peter Kogler, *Documenta Installation*
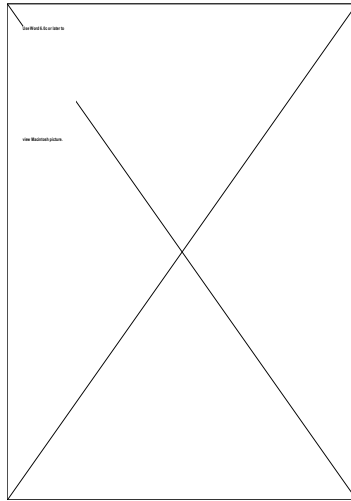
Keith Haring, *Environment*
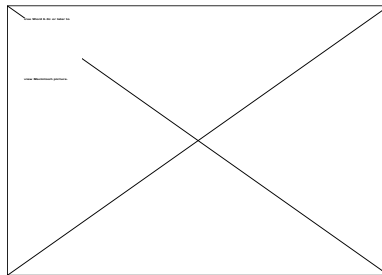


Barbara Kruger, *Mary Boone Installation*

Indeed the installation issue of filling the FOV with an arboretum of impressions has attained a strange acceptance in the late-1980s and 1990s, as if Stan Vanderbeek's 1966 *Movie Drome* has accomplished

mainstream status. The size of the movie screen has enlarged many times since the 1960s of course (including such developments as VistaVision and CinemaScope) and this appetite to fill the FOV has led to the creation of the IMAX Dome, a screen-room which wraps the audience up in an immense dome which can be up to 30 metres (99 feet) in diameter. The 70mm IMAX image projected is 10 times the size of a conventional 35mm frame. The Géode in Paris, which I visited, is a 36 metre (118 foot) sphere containing a cinema in which 180° FOV films are projected on a hemispheric screen 1,000 square metres in area (3,280 square feet).
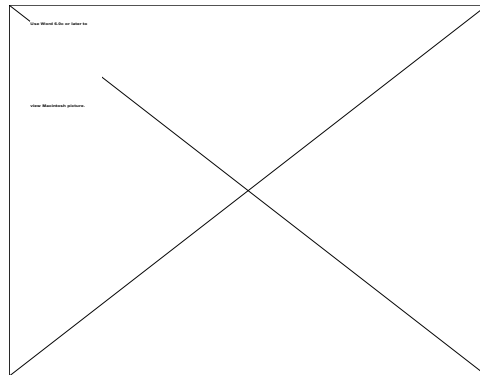
The Géode

The IMAX accomplishment clearly, at least partly, advances the expanded theatre ideal of Milton Cohn's late-1960's *Space Theatre*. The essence of Cohn's *Space Theatre* was a rotating assembly of mirrors and prisms adjustably mounted on a flywheel around which were arranged a battery of light, film, and slide projectors. Essentially *Space Theatre* was an expanded version of Moholy-Nagy's *Space-Light Modulator* into which one may enter. Cohn's intention was to "free film from its flat and frontal orientation and to present it within an ambience of total space". (Youngblood, p. 371)
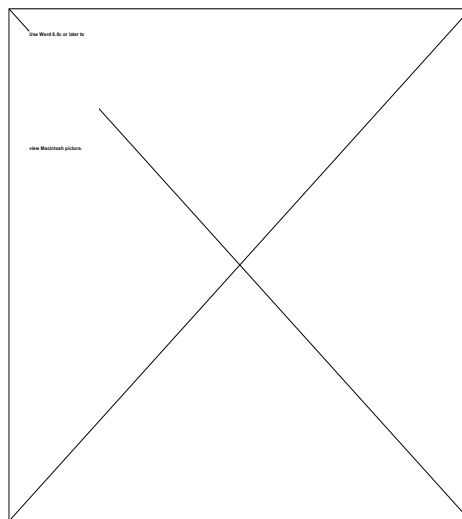
Milton Cohn, *Space Theatre*

This desire to create a projective space which surrounds was also the intent of Jud Yalkut's late-1960s *Floating Theatre*. The *Floating Theatre* consisted of a parachute canopy 9.6 to 15 metres (32 to 50 feet) in diameter anchored with nylon strings on which projections were cast. The canopy, which reflected both rear and frontal multiple-projections, was suspended over and around the audience by the use of fans. (Youngblood, pp. 391-392) Henry Jacobs and Jordan Belson's intermedia *Vortex Concerts*, realised intermittently between 1957 and 1960 in the 18 metre (60 foot) domed Morrison Planetarium in San Francisco's Golden Gate Park firmly established the surrounded/expanded FOV objective as well. As reported by Youngblood (Youngblood, pp. 387-391), the *Vortex Concerts* consisted of an abstract light/sound presentation created with "interference-pattern projectors" which intermixed with the surrounding star projections and strobe lights; an experience which engulfed the onlooker. Belson explained that in the *Vortex* they were able to "project images over the entire dome so that things would come pouring down from the centre, sliding along the walls". (Youngblood, p. 389) Also Aldo Tambellini's mid-1960s environmental *Electomedia Theatre* served as a robust precursor to this surrounded/expanded FOV trend. Particularly significant are Tambellini's 1965 *Black Zero* environment, which engulfed the viewer in a "maelstrom of audio-visual events" (Youngblood, pp. 381-383), and his 1968 collaboration with Otto Piene on the multi-channel, closed-circuit environment called *Black Gate Cologne;* a performance environment which helped re-establish this surrounded/expanded FOV inclination again in Europe.

Otto Piene and Aldo Tambellini, *Black Gate Cologne*

Aldo Tambellini, *Black Zero*

More recently, this appetite to fill the FOV through projection was appeased in inverse micro-fashion in a one-on-one interactive assisted film-performance by Bradley Eros called *Movie Head Box* which he presented as part of *The Extremist Show* at ABC No Rio in New York City in 1983. Eros provided the immersant with a screen-box which slid over the immersant's head (like a primitive HMD). He then projected a colour super-8 film onto the immersant's head-screen's façade (which insinuated an erotic chronicle of alchemy) thereby over-flooding the immersant's FOV as the erotic/alchemical images seeped into the box and were reflected off its inner sides. A walkman provided an intimate soundscape accompaniment made up of metallic abstract sounds.

In pursuing the larger, group oriented surrounded/expanded FOV ideal, IMAX Corporation was founded following the success of Francis Thompson's multi-screens at Expo '67 in Montreal (which itself was based on the achievement of Charles and Ray Eames's production of a multi-image projection called *Think,* shown at the IBM Pavilion at the 1964 New York World's Fair). Prior to that, in 1957 Charles Eames had worked with Richard Buckminster Fuller in assembling a seven screen presentation (each screen the size of a drive-in movie screen) for projections in Fuller's Dome in Moscow. (Youngblood, p. 208) In 1970 the giant-screen

IMAX premiered at Expo '70 in Osaka, Japan and the first permanent IMAX Theatre opened at Ontario Place in Toronto in 1971.

Subsequently, the IMAX Dome premiered at the Reuben H. Fleet Space Theatre in San Diego in 1973 and the IMAX 3D Dome Theatre premiered at the Fujitsu Pavilion at EXPO '85 in Tsukuba. SONY in New York City opened a 600 seat IMAX 3D Theatre in November, 1994, which I have experienced. There are more than 150 permanent IMAX Theatres operating in 22-plus countries and there are currently 25 IMAX 3D Theatres world-wide. More than 65 million people see IMAX films each year. In a similar appeal to an immersive FOV, the Planetarium of the Houston Museum of Natural Science created the *Mediadome* which allows completely computer-generated immersive performances for up to 220 people. The first IMAX Simulator Movie Ride opened at Phantasialand in Germany in 1994 using advanced, high quality motion picture and special effects technology, the IMAX HD Dome and motion simulation. Also Walt Disney's (1901-1966) Star Tours provides a flight-simulator-like immersive ride for the general public.

All of the above examples demonstrate that there has been a developing taste for what I have identified as immersive art; art which attempts to project its aesthetic value ambiently but coherently throughout an expanded aesthetic field-of-view.

BXXIII: VE°art Displaces Trompe l'Oeil Familiarity: Total Virtual Unreality

Having rejected nothingness, I discovered the void.
-Yves Klein, *The Chelsea Hotel Manifesto*

We seek a metastable state which provides all the signs of the real and short circuits all its dangers.
-Jean Baudrillard, *Simulations*

...once the fortuitous is revealed as the necessary effect of a universal law, the wheel of fortune, it can come to consider itself as fortuitous. It remains only for it to declare that its very identity is a fortuitous case arbitrarily maintained as necessary, even if it means taking itself for this universal wheel of fortune, even if it means embracing, if possible, the totality of cases, the fortuitous itself in its necessary totality.
-Pierre Klossowski, *Nietzsche, Polytheism and Parody*

In order that we may better appreciate the wider aesthetic implications of VR's immersive ideals we will consider here a small range of present-day VR artistic productions. It shall be a very small range in that detailed information on various artistic VR projects is readily available on the Internet (usually directly from the artists themselves). A good place to start looking for such sites is the *Artistic Representations in Virtual Reality (VRArt)* site at ftp://ftp.ipa.fhg.de/pub/VIRTUAL-REALITY/WWW/homepage.html. Also one may be well served by reading the reports on various VR art projects in Moser and McLeod's book *Immersed in Technology: Art and Virtual Environments* and in chapter 3 of Heim's book *Virtual Realism*. But as the field is young and as there are but a few exemplary VE°art pieces today which even remotely address my assertion of what constitutes VR's ideal spatial presentation, this portion will be slight. Most notably among those that do approach the ideal I have identified are certain projects by Knowbotic Research KR+cF.

As example of an artist who has retained renaissance perspectivism within the omni-space of VR is Matt Mullion's project *City*. Mullion's spatial approach seems to be the most prevalent one taken today; thus it will be inspected briefly here for its emblematic character. Seen from above, Mullion's city resembles a baseball field made up of delimited and different-coloured zones. When an immersant walks in a particular zone, the entire town takes on the colour of that zone in order to abolish the limited geographical connotation in favour of a more expanded awareness. Mullican's latest version (made up from five inter-connected worlds) has the name *Five into One*. In this work, the five coloured "worlds" or aspects of the city (including an empty green *World Unframed*) combine into a single world and hence may be taken as a symbol for an overall synthesis.

On the other hand, in almost all of Knowbotic Research KR+cF projects (see http://www.uni-koeln:kr+cf) we encounter highly abstract VR space, for example in their work *Simulation Mosaik Data Klaenge* from 1993. Knowbotic Research KR+cF (principally Yvonne Wilhelm, Christian Hübler and Alexander Tuchacek) have experimented with so called 'intelligent agents', applications which can conglomerate diaphanous information by themselves (also called *knowbots*) and intelligent virtual spaces (flexible information-environments distributed in electronic networks). Knowbotic Research KR+cF has regularly invited people from non-art

fields to participate in their projects, such as scientists, philosophers and engineers, depending on the concept of each project. In partnership with the Academy of Media Arts Cologne, Knowbotic Research KR+cF has founded *Membrane*, a laboratory for media strategies, in 1995.

Knowbotic Research KR+cF, *Knowbotic South*

Osmose (Osmosis) by Char Davies (see: http://www.softimag.com/Projects/Osmose/Exhibition.htm) a highly immersive piece from 1995 which utilises an HMD with modified optics to produce a 105° FOV (with 40° of stereo overlap) which presents the immersant with the evocation of a quasi-naturalistic realm. Scene complexity is managed through the use of segregated worlds with transition portals which bring the immersant to particular "zones" within the greater world of *Osmose*. The deepest, and most aesthetically satisfying (for me), substratum is *Code World*, where the 20,000 lines of 'C' code of which *Osmose* is constructed rise up in great columns. *Osmose* is exemplary in that it attempts to explore the inter-relation between exterior nature and interior self. The work utilises stereoscopic 3D computer graphics and spatialised sound activated with real-time interaction. The participant wears a stereoscopic HMD and a motion-capture vest with a breathing and balance sensor to enter into the environment. Her latest work (1998) *Èphémère* is likewise fully immersive.

BXXIV: Disembodied Culture: Issues and Implications for Distributed-Connected Immersive Environments

All the legally recognised deeds to property anywhere around our Earth date back only to sovereign claims established and maintained exclusively by military might.
-Richard Buckminster Fuller, *Introduction to Expanded Cinema*

The highest art will be the one that presents in its contents of consciousness the thousand-fold problems of the time; to which one may note that this art allows itself to be tossed by the explosions of the last week, that it pieces together its parts again and again while being shoved by the day before.
-Tristan Tzara, Franz Jung, George Grosz, Marcel Janco, Richard Hulsenbeck, Gerhard Preiss, Raoul Hausmann, *Dada Manifesto*

What was said of the Rococo interior - and its suggestive resemblance to the vast array of nerve bundles descending from the cortical areas onto the intralaminar nuclei and the nuclear reticularis in the thalamus and its array of massively inter-connected neural circuits - is also expansively applicable to the all-over interlacing network of the World Wide Web.

connectivist schematic based on a drawing of Arakawa

On October 27th, 1969, two computers began exchanging messages with each other through a link leased from the telephone company as part of an experiment funded by the United State Department of Defense Advanced Research Projects Agency (ARPA). Researchers did so seeking to construct a resilient inter-network of military communications which could survive the destruction or failure of any, even most, of its component parts and maintain communication in a nuclear war. (Schell) Hence the Internet was designed to have no centre and limited hierarchy by, ironically, the most hierarchical of institutions known to democracy, the US military/industrial complex.

In reviewing these simple facts, I am assured that my previous proposition that militarised space and the threat of annihilation of the civilian population has been the primary motivational force responsible for the boom in immersive intuitions as exemplified by artists following the Second World War. Indeed we can say that this narrative of militarised space will be the unconscious encoded impulse in the future. Everything, everywhere, all at once in a rhizomatic web of communication: this is (and will continue to be) the ideal Zeitgeist (spirit of our age) inherited from the C3I military model, which, according to Hegel, ensures a similar complexion in all the activities of a period, from art and science to literature to music. (Hegel, 1949) Hence intricate lattices of linked VEs available to all at any time characterises a prevalent (hypothetical) understanding of where cultural space is developing today. (Woolley)

Indeed it seems to me that there can be little doubt that networked immersive environments (linked Virtual Realities) will develop into a socially transforming endeavour affecting the full spectrum of culture, science, and education. (Moshell & Hughes) Such networked immersive environments will of course be multi-national, which in itself implies a growing super-totality unfettered by many physical limitations (once the required technological hard and software is at hand). The enlargement of this linked immersive simulacra is only (fundamentally) limited by lack of human imagination, lack of equipment and the knowledge to use it, and by what is numerically or mathematically feasible. Hence I think it fair to say that the possibilities which linked VEs offer to ideal imaginative beholdings are enormous. The importance of such an augmentation cannot be underestimated if we agree with John Ruskin, in his celebrated book *Modern Painters,* that the sumptuous imagination is a determining characteristic of humanity (as well as the source of our greatest art). (Ruskin, 1873)

The Internet's World Wide Web, of course, is the model for linking synthetic-immersive-creations together. On the web information can be smoothly accessed in a synchronous system permitting anyone connected to click and enter. This affects the speed in which new associations are assembled as well as the kinds of interactions that arise and emerge; which itself allows synthetic-immersive-creations to be linked in terms of desire rather than physical geographic position. This net-condition allows new feedback loops of theory and experimentation not formerly obtainable to emerge. (Loeffler, 1994) Future VE°artists and their virtual art environments can, through this net-condition, become more accessible, permitting a closer aesthetic symbiosis between computer technology and the human eye. Assuredly, with the conflation of immersive VEs and the World Wide Web which strings these worlds together, VE°artists will better procure the connectivist omni-perspective of the network which Roy Ascott has identified and encouraged. (Ascott, 1994a)

Hence connected VE°art will advance a net-condition awareness of plurality in hyper-homogeneity; a supplementary order of diversity within orders of hyper-totality within a meta-totality. This extended omni-

plurality can then be contemplated from a point of view external to any one virtual immersive world, hence from a position of meta-allocentric critical distance.

Again the militarisation (Levidow & Robins) (and subsequent de-militarisation through art) of consciousness is what will be fashioning this net-conditioned scenario into an eventuality when linked to the forces of capitalist colonisation. (Davis & Meyer) Already the military has led the way in developing the perspicacious net technology. *SIMNET* (SIMulator NETworking) (the first collaborative three-dimensional virtual environment (built in the 1980s)) consisted of a number of individual simulators linked to a high-speed network. (Mitchell, W. J., pp. 114-115) SIMNET is the advanced technology development of large scale, fully interactive, widely distributed simulations created by the United State Department of Defense Advanced Research Projects Agency (ARPA) with significant Army participation. (Rheingold, 1991, pp. 360-361) Begun in 1983, the first networked simulators were operational in the summer of 1986. The test-bed network grew to 250 simulators, multiple simulations, and real platforms (e.g., a warship) linked together from eleven sites (four in Europe). Each simulator contained a copy of the same world database and the virtual representations of all the other simulators. SIMNET proved the feasibility of real-time, shared synthetic environments (demonstrations conducted with 1,000 separately accountable entities) and has resulted in numerous follow-on programs in the Department of Defense as well as in the commercial entertainment sector (e.g., Virtual World). (Psotka, 1995)

In one of SIMNET's implementations over 200 M-1 tank crews, located in Germany, Washington D.C., Fort Knox, and other places around the world, were able to participate in the same virtual battle via DSI. *Defense Simulation Internet* (DSI) is a high-bandwidth component of the Internet that supports SIMNET connected worlds and permits scheduled guaranteed bandwidth. (Manovich) The Army increasingly uses distributed interactive simulation (DIS) and virtual reality in training to improve mission rehearsal and other war fighting skills.

Being a non-combatant civilian, my only experience in this regard was with the SIMNET spin-off *BattleTech* of Virtual World Entertainment, Inc. (which opened in Chicago in 1990) directly modelled on SIMNET. (Katz) Like SIMNET, BattleTech is comprised of a networked collection of cockpit-like data-pods. For $7.00 each, a number of players fight each other's puppets in a simulated three-dimensional environment. By 1995 Virtual World Entertainment, Inc. was operating dozens of centres around the world that depended, as in SIMNET's case, on proprietary software and hardware. (Reveaux)

Thus we see that interconnected VE technology is historically informed not only by its materiality but also by its political, economic, and social context. However, even so, the uncommon visionary artist may override these tendencies by envisioning discernibly different utilisations of the technology. A fine example of this

overriding is the aforementioned Stan Vanderbeek's 1966 proposal for telematicly connected virtual worlds. In his essay "Culture: Intercom and Expanded Cinema; A Proposal and Manifesto" Vanderbeek called for the transformation of his Movie Dromes into "image libraries" which by "computer inter-play" would function as global "communication and storage centres". According to Vanderbeek, "by satellite, each dome could receive its images from a world wide library source; store them and program feedback presentations to the local community...". (Vanderbeek, 1966, p. 17) Vanderbeek also went so far as to predict that such a linking of visual "feedback" could "authentically review the total world image 'reality'" and hence produce "a sense of the entire world picture". This process of linking visual dome-worlds Vanderbeek labelled "intra-communitronics". (Vanderbeek, 1966, p. 17)

With this creative net-condition and visionary conceptualisation as our final exemplar, I conclude this section. I believe in this Section B I have amply identified the *when* and *wheres* and *whos* of immersive culture which my research has unveiled. I shall now turn towards answering the final question which I posed for myself at the outset of this dissertation; the *whys* behind an aesthetic theory of immersive culture.

Section C. Against Oblivion: an Omni-Spatial Philosophy of Immersion

It is easier not to know than to know.
-Colin McGinn, *Consciousness and Space*

Philosophical theory is a practice of concepts, and it must be judged in the light of the other practices with which it interferes.
-Gilles Deleuze, *Cinema 2*

I now feel capable of evaluating the evidence. There is for me an evidence in the realm of flesh which has nothing to do with the evidence of reason.
-Antonin Artaud, *Manifesto In Clear Language*

To be an artist is not a matter of making paintings or objects at all. What we are really dealing with is our state of consciousness and the shape of our perceptions.
-Robert Irwin, *The State of the Real, Part I*

In CI, the pre-conclusive portion of this section, I will sum up what has come before and identify the unifying principles of immersive sensibility. In CII I will offer additional concluding assertions towards forming a cognitive-aesthetic theory of immersion. However, in agreement with the philosopher Richard Rorty's *Philosophy and the Mirror of Nature*, my confident expectation in espousing such an immersive theory is that it will be understood not as a static aesthetic position, but as an explorational move towards uncovering an emerging paradigm that is continuing to amplify.

This emerging and theoretical paradigm makes no pretensions to scientific methodology as it, by its very nature, must retain its speculative character because of the impossibility of attaining conclusive omnijective-immersive experimental data. A similar impossibility is also the case, however, with the field of consciousness studies (Chalmers, 1995, p. 211); a field which often insists on calling itself scientific. So, rather than contending that this study's conclusions are scientific, this dissertation's investigation into the developing immersive paradigm proceeds by involving its research findings in the artistic phenomenological question of the qualities and levels of awareness of our own consciousness within encircling aesthetic realms which we are capable of attaining through immersive art.

Especially inasmuch as I am involved in the humanities, I am reluctant to model my conclusive methodology on a mechanistic model of an earlier power-oriented science (Aronowitz), even though the philosopher Werner Heisenberg maintained that the differences between art and science are minimised if one views both art and science from the more general vantage point of the zeitgeist. (Heisenberg) Indeed, Gilles Deleuze also points out that "the special perceptions and affections of science or philosophy connect up with the precepts and affects of art". (Deleuze & Guattari, 1994, p. 132) Therefore, in that "conscious experience is not directly observable in an experimental context" (Chalmers, 1995, p. 211), indeed it is this Deleuzian

science/philosophy/art connected phenomenological zone which seems to be the appropriate theoretical model for this dissertation's summation.

This is not to leave out the social/political entirely. However, though obviously not innocent of the "false consciousness" (Meyerson) Karl Marx (1818-1883) identified as intrinsic in bourgeois liberal capitalistic ideology (Eagleton) with its political/economic/militaristic considerations (Marx, K., 1967), immersive experiences, by way of any sort of material/social means, must be principally interpreted through the understanding of the *specificity of virtuality* and hence are fundamentally post-materialistic (post-Marx), post-positivistic (post-Mach), and post-structuralist (post-de Saussure). Indeed any analyst of the aesthetics of virtual experience is doubly obligated to investigate her or his information post-materialistically, as it is well established that theory-laden materialistic understandings of aesthetics (what is sometimes referred to as *materialistic aesthetics* (Adorno, 1967) or *production aesthetics* (Marcuse, 1968)) are inadequate in proposing new approaches towards aesthetics. (Wolff, 1993, p. 7) Even though materialistic approaches towards the study of art have been beneficial in raising consciousness around the significant issues of class, race, gender and sexual preference(s), they have as well been disadvantageous by stimulating a reductivist approach towards art (Berger, 1978, p. 703) and by collapsing art into an encumbered non-discursive field based around the problematic values of political correctness. Problematic, in that post-structuralist theories have repeatedly emphasised the discursive nature of the social world and the inadequacy of any inelastic model of being which posits fixed articulations. (Sarup) Indeed by incessantly repeating the monolithic categories of class, race, sex (which are used to define the workings of social power) one can say that we are uncritically endorsing the values of those who produced the categories rather than undertaking the consequential responsibility of scrutinising these categories critically and striving to supplant them. Therefore I shall resist inserting constant provisos in this conclusion which acknowledge the materialistic basis and social construction (Wolff, 1993) of immersive art in lieu of the post-materialistic self-reprogramming attributes inherent in the immersive aesthetic with its multi-schematised hyper-cognitive range (Landow) of post-humanist and post-positivistic viractual possibilities. Indeed in this sense I shall adapt in this section what Michael Heim calls a *transhuman* attitude, as according to Heim a transhuman attitude is one which consists of "artistic and psychological strategies" contrived to "break through well-worn perceptions". (Heim, 1998, pp. 219-220) I am confident in taking such a transhuman stance in that this dissertation's reviews of idealisms and critical modes itself reinforces the question of our need to be continuously humanly conscious of when we are involving ourselves in too much fuzzy ideal vision or too little utopian/visionary imagination and energy.

CI: Towards an Immersive Intelligence: The View From Within

All praise of civilisation, or art, or contrivance, is so much dispraise of nature; an admission of imperfection, which it is man's business, and merit, to be always endeavouring to correct or mitigate.
-John Stuart Mill, *Nature, The Utility of Religion, and Theism*

Anybody know if there's any new research going on to find a way to actually hook the brain up to a Virtual Reality system so that the body can experience various senses by transmitting signals to the brain and fooling it into thinking they are real?
-Peter Rothman, *Tue 11 Feb. '97 (08:08 PM) Immersion_Quest Topic 20: Experiential Science*

To think about existential problems in such a way as to leave out the passion is tantamount to not thinking about them at all, since it is to forget the point.
-Søren Kierkegaard, *Concluding Unscientific Postscript*

Imagine an eye unruled by man-made laws of perspective; an eye unprejudiced by compositional logic....
-Stan Brakhage, *Metaphors on Vision*

In another moment Alice was through the glass and had jumped lightly down into the looking-glass room.
-Lewis Carol, *Alice in Wonderland*

The objective of this research into untheorised immersive ideals was to develop a dialogical cross-examination of art conducted through the incipient concept of immersionability, so as to define both an historical sense of aesthetic immersive visuality and to place this previously untheorised visuality into a wider cognitive and social context. These two objectives have been evoked and satisfied in the body of the text. However, an ensuing question remains: what rudimentary psychic needs continually generate these ephemeral states of aesthetic immersive visuality? I shall address this issue of "why" now.

After reviewing the results of my research into the ideational background and paradigmatic implications of aesthetic immersion, I can now state that the balance of evidence points to a definite correlation between immersive ideals and *as if* imaginable desires for extrasensory (i.e., non-narrowly empiricist) distributed disembodiment (i.e., a loss of cognitive body-image consistent with Schopenhauer's conception of a "pure knowing subject" (Schopenhauer, 1907, p. 127)) involving the enthused transmigrational expansion of boundaries and a yearning to penetrate and merge characteristic of spirituality (*ignudo spirto*). (Eliade, 1959) Hence the role of immersive art remains the necessary prosthetic task of artificially facilitating such an unrestricted state and as such remains associated with the most fleeting elaborations of artistic consciousness. This erudite desire to exist in an anti-mechanistic state of expansion is temporarily realised (albeit symbolically) in engaging immersive art. As such, immersive art posits itself as a meta-symbol of and for expanded human potential.

This is important in pursuing an advanced inquiry into the interactive arts, in that interactivity to me is not merely the ability to manipulate and modify a virtual world, but the substantial ability of the viewpant to self-

modify (self-re-program) his or her sense of self. In this estimation, aesthetic immersion adheres to and fosters Kendall Walton's *theory of make-believe* in which Walton sees art as a generator of "fictional truths" (Walton, p. 11) which through art's inventiveness invites ontological self-modification via the immersant's participation in the creative process. Moreover, Walton's theory of "fictional truths" reflects Nietzsche's important assertion that "logical fictions", which he saw as "comparisons of reality with a purely imagined world of the absolute", are indispensable to humanity. (Nietzsche, 1907, p. 7) The key value of immersive fictional truths in terms of formulating an original theory of immersive art, however, lies in their underscoring the fiction behind the assumed "real" mechanistic perspective (Romanyshyn, pp. 83-93) when seen as "empirically true and universally valid" instead of as "conventional and contingent" (Foster, 1988, p. x) idiosyncratic compliances.

The foremost salient aspects of my research have shown that *various perceived possibilities for extrasensory psychic disembodiment* (Levin, M. D., 1985) are produced through *aesthetic immersive enclosure* when the *subject is placed inside the perceptual circuitry of a particularly lavish* (i.e., aesthetically-informationally intense) *proprioceptive feedback-loop*. Given this deliberation, it is reasonable to interject here that the notions and experiences of aesthetically quickened disembodiment may claim the distinction of serving as the (or a) lucent interface between David Bohm's aforementioned implicate order and explicate order. Thus aesthetic immersive consciousness above all renders a *lightness of being* which is supported by a *metaphorical spatial consciousness of passage* principled on the electron transport conditions of the nerve cells. Hence the aesthetic immersive sensibility is a Foucauldian system of *submerged dispersion* (Foucault, 1969, pp. 44-54), in linked neurological self-programmable operation with the tough dictates of submission rather than any organisation of hackneyed singularity. Indeed the conceptual dialectical exchange between the disembodied/ecstatic and the bound/submissive conducted within the ambient optical array of immersive space (conceived of as teeming, continuous, and homogenous) constructs the neural-metaphysics (i.e., the basic neurologically informed concepts of existence) of aesthetic immersion as well as its, what Vladimir Nabokov (1899-1977) would consider to be, "combinational delight". (Nabokov, p. 69)
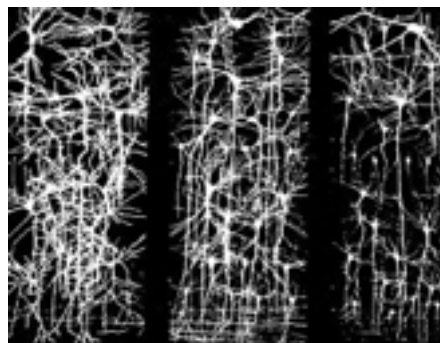
nerve bundles

As I have outlined in BIX, fixed point-perspective generally configured pictorial art in the West since the Renaissance. Immersion's fundamentally spherical, all-over perspective of dynamic thresholds cast a fraction of art on its course since the Fin-de-Siècle. This marginal tendency has now amply flowered in VE°art as art practice began shifting VR away from its initial paean to illusionistic trompe l'oeil. (Aukstakalnis) In synthetic-immersive-creation's immersive vision the need, and hence desire, for a 360° cognitive-vision enlivens receptive and organising attributes of peripheral awareness and, as such, intensifies thalamic input to the cortex by making the active thalamic neurons in that region fire more rapidly than usual.

Moreover, with this immersive vision there is a shift to a more conscious peripheral mode of perception which entails a deautomatisation of the perceptual process (whereby more emphasis is placed on what is on the edges of sight and consciousness) thus presumably adjusting the immersant up to an expanded and fuller consciousness. (Koyre) This emphasis on the peripheral utilises the Deleuzian broad scan; Deleuze's non-linear dynamic conceptual displacement of a view along any axis or direction in favour of a sweeping processes in space/time. (Bogue, 1991, pp. 83-84) Hence immersive vision may acquire an increasingly computational-like (Pylyshyn) encompassing range useful in expanding the customary (160° vertical by 180° horizontal) FOV outward so as to increase situational awareness.

Such a developing syncretistic visuality would adhere to Pierre Teilhard de Chardin's assertion that the history of the human world can be summarised as the "elaboration of ever more perfect eyes within a cosmos in which there is always something more to be seen". (Teilhard de Chardin, 1959, p. 31) Such an approach to visuality automatically undermines what Hal Foster calls the "rhetorical conventionality of sight" and this conventionality's "perseverance as an epistemological model". (Foster, 1988, pp. x-xi) In virtual immersion conventional optic models may be surpassed, for as Ann Lasko-Harvill has pointed out, immersed in a VR simulation we can "exchange eyes with another person and see ourselves and the world from their vantage point". (Lasko-Harvill, p. 277) Or indeed, as Dr. Takeo Kanade's Virtualised Reality project demonstrates (as outlined in AII), see ourselves from any vantage point. These aspects of view-switching - in conjunction with the aforementioned goal of extending conscious awareness through a non-linear, non-lateral (de Bono, p. 258) entwined spherical series of small glances which criss-cross - might be harmonised with the research on bionic sight being conducted presently at the University of Washington's Human Interface Technology Laboratory in Seattle, Washington under the previously mentioned see-through (STD) HMD pioneer Tom Furness. Furness and his team are researching into how sight can be artificially enhanced through the use of light-emitting diodes, lasers, micro-scanners, advanced fiber-optics and computational technologies collectively called Virtual Retinal Display (VRD). VRDs now consist of a pair of high-tech glasses which cast a superimposed virtual image over the normal visual image (like an STD).

In searching for evidence of immersive ideals and their relationship to critical distance what has been suggested is a *widespread human desire to pursue extended consciousness through immersive excess*. This is not remarkable in that Georges Bataille showed us that sanctioned excess is generally inferred in much of art's perceptible richness (Bataille, 1989) and that the syntax of art is inner excess. (Bataille, 1988a) In accord, I have concluded that aesthetic immersion is about *stimulation through excess of our internal perceptual circuitry*.

However, one might ask for more of an explanation for this widespread desire for the aoristic (without horizons) non-logocentric excess suggested in what I have described as the inexorable entirety found in total art. (Henri) The answer to this question, which I inevitably put to myself, was found when reading Gilles Deleuze's *Spinoza: Practical Philosophy*. In it Deleuze points us towards a recognition of our desires' productiveness, as he indicates how desires propel us to move towards greater or lesser states of sublime wholeness "depending on whether the thing encountered enters into composition with us, or on the contrary tends to decompose us...". (Deleuze, 1984, p. 21) In the case of immersive awareness as brought about through convincing total art models, immersive consciousness is a "continual awareness of this passage from greater to lesser, or from lesser to greater" (Deleuze, 1984, p. 21); an awareness which potentially helps remove the subject out of her or his glib indolence. That persuasive quintessence of immersive total art which agrees with our inner tendency to model ourselves as vast but whole hyper-beings beckons the viewpant to form a ripe neuro-philosophical totality (inexorable entirety) with the suggested hyper but accordant possible world experienced in the immersive total art work. This forming of a developed neuro-philosophical hyper-totality, however, requires overcoming the dominant *esprit* of our time, which has been deconstructive of totalities. (Caputo, 1987) But if biocomputationaly achieved, such hyper immersive fabrications may function in accord with Schelling's tenant that through art the mind may come to a full awareness of itself. (Schelling, 1988)

In that I am evoking the word *hyper*, and the phrase hyper-linked, in relationship to being and art here, I shall briefly summarise the basis of the *hyper* concept as adapted from the procedures of hyper-text (Landow), hyper-media (Cotton & Oliver) and the aforementioned hyper-reality (Eco, 1986). The strategy of hyper-anything includes principles of networked connections and electronic links which give multiple choices of passages to follow and continually new branching possibilities. *The total-hyper-being model of existence then, especially when placing emphasis on tabulating an evasive omni-perceptual orb, is the self-re-programmable internal function which explicitly offers a furtherance in envisioning internal anti-hierarchical models of ourselves*. Such functional defamiliarisations can be also understood as a desiring procedure for instituting a sense of united-hyper-being, which is itself a preparation for and almost inevitable instigator of it. Thus immersive total art is inherently anticipatory of this desired state as it invites the subject to look forward to displaying her or his own synthetic capacity in tabulating an extended range of perceptions. In this sense, the

immersive total art context ratifies through synthetic non-alienation Walter Benjamin's Brechtian alienating-based aspiration to close the gap between the art and the audience. (Benjamin, 1973b, p. 22)

Immersive awareness increases then in relation to immersive total art modes of presentational ideas which correspond to self-presentational ideas of ourselves. It follows then that immersion's ideal motif of 360° display offers the immersant an ideal liminal internal experience by re-locating inner being within an *enclosed total art indeterminacy*, an energy which functions in expanding our syncretistic visual-mental field. *Immersive consciousness is essentially a cognitive challenge to our habitual sensibility then; a challenge to find the fullest possible cognitive-visual resources to cope with the expanded context of immersive total art's excess; and a proposal that implies that those cognitive-visual resources are available, if as yet undefined.*

Moreover, syncretistic cognition (Varela, Thompson & Rosch), when generated in aesthetic rapport with immersive total art, is a generative set of non-linear dynamic relations (rather than a sealed proclamation) whose method of poly-dispersion frequently (and paradoxically) yields a plethoric sense of *non-logocentric hyper-embodiment* (i.e., a sense of neurological all-overness) antithetical to its submissional essence. Hence aesthetic immersion is consistent with Georges Bataille's intellectual comprehension of dithyrambian excess (itself suggestive of the human cortex with its vast array of micro intra-cortical nerve connections) as a mercurial movement which surpasses entrenched limits. (Bataille, 1985) The *intensity* of indeterminate dithyrambian excess as experienced in dynamic immersive total art is key to this cognition.

Use Word 6.0c or later to

view Macintosh picture.
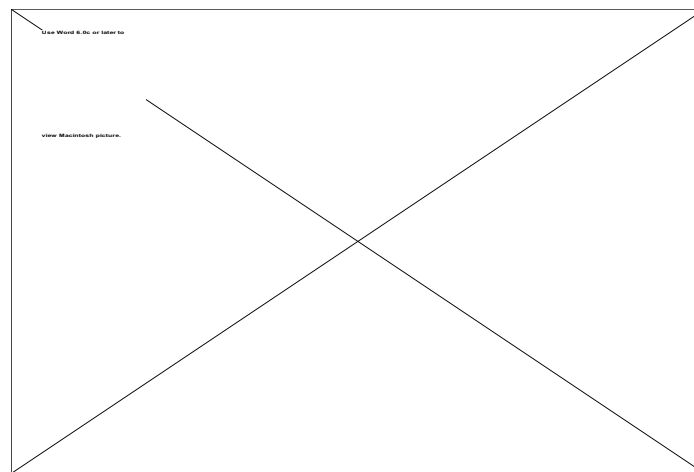
connectivist schematic based on a drawing by Arakawa

By refusing the dichotomised, utilitarian, manageable codes of representation with free non-logocentric associational operations, latent excess triggers a multitudinous array of synaptic charges and thickens visuality to the extent that it prevents the achievement of a determinate, definitive inspection of aesthetic immersive space even while conveying the impression of totality via the unification operation of the

unconscious human desire for spatial summation. This excessive threshold component of the immersive aesthetic adds - to the usual signals in the internal circuitry of the human biocomputer (Lilly, 1974) - enough uncertainty to make new configurations of the self probable by organising the internal energies of the self more broadly via disembodiment. The *subsequent and ultimate aesthetic benefit of the immersive act then, is in attaining a prospective realisation of one's own perceptual circuitry as a self-re-programmable phenomenological operation*. Thus the immersive synthetic total art model offers an alternative visual regime of and for the self-programming psyche in that mental-visual range is extended (via latent excess) and hence is counteractive to ontological foreclosure. With aesthetic immersion's quantitative appetite to surpass visual confinements, the human subject is ready to algorithmically escape and exceed previous limits in accord with the implied infinity of our expanding aoristic universe. (Bergamini) Indeed intellectual and perceptual boundaries have historically been the immersive ideal's nemesis.

This self-re-programmable ontological operation occurs specifically in a constructed space between the immersive art and the subject, similarly to the way Wolfgang Iser locates the encounter with a written text by its reader in a third realm of indeterminate interaction which he calls the *work;* a transaction situated "somewhere between" the text and the reader. (Iser, p. 21) However, unlike a written text, the self-re-programmable ontological adjustments and modifications one makes during the process of coming to understand a kaleidoscopic-like total art work of submission/excess omni-directionally, never ceases and sensorial closure is never evoked. Hence, in accord with Bell Hooks's understanding of antithetical liberational learning as exciting exchanges of ideas that never end, aesthetic-informational excess approaches an oppositional Foucauldian "kind of ecstasy" within the receptive subject. (Hooks, p. 16) This "kind of ecstasy" potentially found within aesthetic-informational excess is particularly liberational in that, as Brian Massumi tells us, "if there were no escape, no excess or remainder, no fade-out to infinity, the universe would be without potential, pure entropy, death". (Massumi, 1995, p. 96)

Aesthetic immersion's non-linear and indeterminate latent excess then facilitates our desire to transcend the boundaries of our customary human cognition (Pylyshyn, 1984) so as to feel that state of unconditionally which Hegel called the *absolute* (our absolute sense as an unalloyed being akin to non-being) (Hegel, 1949) by way of a neuro-metaphysics conveyed through immersive total art's necessarily ambient milieu. This Foucauldian extrasensory dispersion, which presuppose a loss of fixed reference points, implies a diaphanous neural-metaphysics constructed around the disembodied psyche's enhanced identity as *non-site* (Levin, M. D., 1985) consistent with Jean-François Lyotard's assertion that metaphysical concepts have been realised in the contemporary world. (Lyotard, 1988, p. 45) By the synthetic psyche (Robinett, 1992) taking up in immersion an anti-position of circuitous non-site, we can ascertain that the immersive sensibility is essentially *non-logocentric, ecstatic, variational, non-hierarchical*, and *excessive*. It is particularly *excessive* in that immersion deframes and overwhelms the envelope of hardened fixed-point (i.e., window) perception with

aesthetic input and hence is an excess of and for the prosaic gaze (Nechvatal, 1991b) as it offers an immersive scope beyond our perceptual capabilities. Indeed, instead of nicely proceeding along towards an expedient comprehension and appraisal, immersive latent excess actually opens up an oppositional anti-mechanistic space of self adumbration for the self-re-programming ontologically minded by revealing the loose limits of our solipsistic and hedonistic inner circuitry. The latent excess necessary for triggering such an immersive keenness offers to the self-re-programming immersant a scope of sensibility beyond that which Jacques Derrida identified as typical of the consolidated, passive, spectator/consumer. (Derrida, 1978b, p. 235) Indeed in our heavily materially oriented, technologically accelerated, information saturated culture, where experience is increasingly prescribed, facile, and fast, *thoughtful languor coupled with dynamic immersion in the discursive circuitry of perspicacious excess* satisfies an essential need for immersive cognitive-visuality consistent with the interpretative theories of both hermeneutics (Gadamer, 1976) and the phenomenology of perception. (Merleau-Ponty, 1952) In this respect algorithmic immersive total art fulfils the negative dialectical ideal of art as affirmed by Theodor Adorno. Adorno upheld the view that the radical potential of art lies in formal innovations which refuse to allow its passive consumption, demanding instead an active-critical intellectual involvement (inherent in the latent excess of the immersive aesthetic) in opposition to unthinking assimilation. (Adorno, 1973) It is for this reason that immersive total art possesses a negative dialectical felicity of its own.

Indeed the negative dialectical confrontation with non-knowing typical of immersive total art's aorist excess is an important component of immersive consciousness' intellectual satisfaction, as the entire benefit of addressing the espoused ideal inherent in immersive omni-perception exists in attempting to adhere to an exciting transmissible hyper-state which exceeds, transcends, and overwhelms our former inner territory. However, this transmissible hyper-state is only probable when the two fundamental grades of immersive sensibility, which I distinguished in AIV as (1.) cocooning and (2.) expanding, are in dialectical co-operation. When these two directions of extrasensory sensibility connect and co-operate within a janusian vast, synthetic, aesthetic, immersive topophilia (wired with an excess which consequently disallows itself to be readily grasped), what we sense is our *being becoming subliminal*. It is this sense of *incomplete aorist excess* (latent excess within immensity) that draws the eye and mind in and conceptually sublimates our being in the interests of the construction of the ontological state of synthetic hyper-being. (Merleau-Ponty, 1962) In this sense, immersive consciousness is a *pregnant consciousness* where an emerging hyper-ontology concentrates attention on inner, developing, self-programmable selfhood in a correspondingly expanded way to the latent-excess laced environment with which it is preoccupied.

This pregnant consciousness suggests a sense of *immense inner incomplete excess* commensurable with the outer range of partially perceived aorist excess, as in this state of immersive pregnant consciousness one is never presented with concluded consequences, as there always remains some further qualification to be made

and some new perspective from which an idea or percept may be observed. In this sense total-immersion helps constitute a post-Hegelian consciousness, as Hegel maintained that no idea has a fixed meaning and that no form of understanding has an unchanging validity. (Hegel, 1944) Indeed this post-Hegelian consciousness of excess is how total-immersion challenges distinctive ontological beliefs about the limits of the self. In total-immersion, self-re-programmable thought takes over the space displayed around the constructed self as the meta-programming ego expands to fill by transference the vastness of immersive aorist excess. So conceived, the ontological self ceases to think of itself as a substance or thing and, by contrast, thinks of itself as a continuously changing process of viractual events in search of evermore well-being. That is to say it conceives of itself as a process of becoming well-being in all directions.

Dr. John Lilly's explanation of this phenomenon is that the immersant imaginatively takes over the perceptual space and "fills it with programs, metaprograms and self-metaprograms which are modified in the inner perception as if an external reality equivalent". (Lilly, 1974, p. 34) Thus this ontology is centred even while its ontological boundaries seem to disappear by moving out in all directions, as the meta-programming ego attempts to fill the aorist excess with well-being. This would indicate that when cognition becomes looped with and in aorist excess it begins to *feed-back comprehension*. This feed-backing of comprehension thereby draws well-being's self-attention inwardly towards the inner self-referential bio-circuitry; circuitry usually occupied with perceptual demands of a different, more standardly outward, kind. This is a valuable manoeuvre in that once one has meta-programmable dominion over self-suggested models of inner aorist excess from inside the circuitry (i.e., once one imaginatively participates in the mental construction of the proposed aorist excess, and one is able to visualise and vary the parameters of the well-being self satisfactorily in accordance with the aorist excess' propositions) one's sense of ontological involvement may reciprocally rest in this state in actuality. Hence we may realise (and self-program ourselves with aorist excess to surpass) our limitations and lazy assumptions as programmed by the petite bourgeois world-view. (Lowe) This participation, visualisation, and self-programming variance, however, requires (and is) what Søren Kierkegaard calls *passion*. According to Kierkegaard, "all existential problems are passionate problems". (Kierkegaard, 1944a, p. 312) Indeed in strikingly immersive excess/aoristic terms, Kierkegaard wrote that "in passion the existing subject is rendered infinite in an eternity of imaginative representations" even while staying the same person. Through passion a "particular individual is able to realise existentially a unity of the infinite and the finite which transcend existence". This "unity is realised in the moment of passion". (Kierkegaard, 1944a, p. 176)

Within immersive, non-linear, multi-dynamic, aesthetically-informationally intensive total art (filled with what Jonathan Steuer calls a "breadth of information" (Steuer, p. 81)) our ontological sensation of well-being may attempt to break out of its architectural and bodily constraints by the attraction of the art's 360° extra-sensorial propositions superseding and over-saturating our visual-mental norm, thereby stimulating within the

immersant a sense of private adaptability to expansion by evoking dimensions that are much larger than our normal cognitive-optic capabilities are used to tabulating. Indeed it is in this manner that I wish to use the term *hyper-cognitive* in respect to my pre-conclusions, a term which has been extended out from Dick Higgins's 1976 term *post-cognitive* which he put forth to describe the field of post-1958 artistic production centred around developments in Intermedia (Higgins, D., pp. 12-17) and Happenings which conceptually fused together aspects of traditional media so as to promote non-linear and multi-linear thinking. (Higgins, D., pp. 3-9) Higgins adapted the term from the Fluxus related artist/non-artist/philosopher Henry Flynt's use of the term *cognitive*, a term which addresses the issue of becoming (Varela, Thompson & Rosch) through connectionist activity which Flynt approached from a post-Logical-Positivist position he called "beliefless empiricism". (Flynt, 1990, p. 107) Flynt's 1961 text "Concept Art", first published in book form in La Monte Young and Jackson Mac Low's 1963 publication *An Anthology of Chance Operations*, outlined the genre which later became known as Conceptual Art. According to Flynt, Conceptual Art is "an art of which the material is 'concepts'". (Flynt, 1961) Whereas Higgins asserted that "the process of cognition", after 1958, was "no longer a major subject for artistic exploration" (Higgins, D., p. 8), I find that with the necessity of understanding contemporary issues of virtuality, viractuality, omnijectivity, and immersive hyper-being, cognition (now hyper-cognition) is again a dominant theme for art. Indeed in reviewing the research conducted here, what I believe I have shown by this dissertation is that an allusive sense of desired (almost impossible) hyper-cognition of productive paradox is indeed the inner logic (and one might also say the poetics) of immersion. This finding collaborates what Siegfried Zielinski thinks is the potentiality of virtuality as an aesthetic enterprise in that Zielinski maintains that art's potential in terms of virtuality lies in the "tension between the virtual and the impossible". (Hoekendijk, p. 14)

I determine then that total-immersion expands the measure of cognitive-perception through well-being's enthused synthetic contact with an impossible non-linear excess and, thus, is a superabundance of and for the imagination. In that within the state of total-immersion the ontological distinctions between space and body elusively commingle in states of dis/hyper-embodiment, total-immersion makes extensive demands on our previous facilities of critical reflection by addressing our inarticulate ideal connections; the extrasensory concatenational sphere between the subconscious and the conscious realm that cannot easily be expressed in words but of which we can be occasionally appreciative. Consequently, I ascertain that the important apex of this process is not that of disembodiment, but rather that of disembodiment's generation of a *shimmering hyper-embodiment* where *self-referential conscious and unconscious self-perceptions become extended, enhanced, and connected.*

Immersive hyper-cognition is then a janusian synthetic function of a profound desire to create convincing hyper-embodied feelings of well-being's non-containment through enclosed artificial (Negrotti) means. Indeed, aesthetically immersed, ontological well-being may become engaged with multitudinous holonogic

macro-perceptions which continually shimmer. As such it is a critique of dogmatic reason in the interests of subliminally desired hyper well-being. This is not unlike the positioning of self-identity within the rhizomatic ontological model, in that a rhizome is a rich spherical-labyrinthine ensemble of relations, diversities, connections, heterogeneities, breaks and unexpected links which inter-connect. (Deleuze & Guattari, 1994) This means that the visual-intellectual situation of immersive summation (excess in summation) is one of magnanimous self-connectivity.

This assertion I find to be backed up by Stuart Jackson's theoretical investigation into the philosophy of mind (particularly how the mind determines meaning) via computational, philosophical and psychological means as synthesised via the burgeoning framework of connectionist cognitive modelling (Medler & Dawson) by drawing upon the novel properties of networks of computational elements as his metaphor. (Jackson) Recently *connectionism* (Hanson & Olson) has been advancing in importance as a psychological modelling technique in understanding human consciousness in the post-human condition (Pepperell) particularly by emphasising distributed representation (even as there is considerable debate on the nature and value of connectionist models of cognition). Connectionist theoretical constructs are cognitive models which can demonstrate the computational feasibility of cognitive theories by modelling them or by suggesting new ways of conceiving the functional configuration of the cognitive structure. (Waltz & Feldman)

In the light of the discussion being conducted around connectionist cognitive models I have determined that the beneficiary of an ideal immersive-holonetric art encounter gains access to a rhizomatic-like summational consciousness (and its qualitative states of awareness) not previously experienced fully and consciously in life. As such, my macro-perceptional theory parallels (at points) Bernard Baars's theory of cognitive accessibility; a theory he cultivated to help explain how information is widely accessible within an integrated system of cognition. (Baars) Baars's theory is also referred to as a global workspace theory of consciousness (Chalmers, 1995, p. 205) because it contends that the contents of consciousness are held in a central processor which mediates a raft of unconscious processors.

Through immersive self-consciousness the immersive art recipient learns of his or her own hyper-embodied/macro-perceptional summational possibilities, theoretically triggering an eloquent rejection of self-stultifying mental habits in lieu of a deepening and expanding understanding of the consequential distinctions between verisimilitude, semblance, and capacity. Such an immersive art theory would be advantageous in its complexities and contradictions when it aids us in gaining wider connections to our joyful feelings toward (and in) life. (Cage, 1966)

Many recent theories of art tend in the same direction, locating the end of art as the capacity for emotive participatory structuring by the viewers in partnership with the art. (Lovejoy, 1997a, pp. 257-258) We are

reminded here of the previously mentioned total-work theory of Moholy-Nagy where he proposed a self-producing synthesis of all and every moment of life toward the all uniting total-work. Jack Burnham's notable reference work *Beyond Modern Sculpture* is another commendable example of a theoretical text addressing this question, as is, Arthur Danto's *The End of Art: The Philosophical Disenfranchisement of Art* in an entirely different way. Taking it a little bit farther, Richard Kriesche in his essay "The Global Work of Art" declares that the "perfection, and end, of all art lies in the whole world becoming a work of art." (Kriesche, p. 7)

Dithyrambian aesthetic immersion is nothing more or less than a way of consciously feeling and experiencing the unaccustomed dialectical, non-linear, self-referential binding of the world's space/subject unity with our inner constitution. *Binding*, according to David Chalmers, is the process of our consciousness "whereby separately represented pieces of information about a single entity are brought together to be used by later processing, as when information (...) is integrated from separate visual pathways". (Chalmers, 1995, p. 204) Through multiple examples over time we have seen that alertness to the riches of aoristic (borderless) excess tends towards a hyper-conscious, semi-bound transport, where the subject's sense of being for a moment transgresses and overruns the rational sequencing of visual attention and becomes akin to a state of being indicative of interactive, all-over, dialectical binding. This hyper-embodied connectionist definition of ontological self hinges upon an unfulfilled desire for an impossible summation of excess in accord with a centripetal excitation of the nervous system.

Precisely it is the connectionist characteristics of unlimited excess which facilitate extensions of ostensible ontological boundaries. Removed from routine representational utility by dithyrambian excess, the immersive self-referential subject macro-perceptionally perceives the well-being self as a binding process in the round (in contrast to the ostensibly normal, frontal, executive control) which includes areas of becoming, semi-being and the non-being which Martin Heidegger calls the "not-yet". (Heidegger, 1962, p. 287) This three-pronged liminal sense of *centripetal stimulation towards total capacity and space/subject merger* further defines the immersive aesthetic ideal.

Clearly any global workspace binding theory of immersive art/consciousness must be part of a new sort of non-reductive dynamic figure/ground operation. As the post-modern theorist/architect Charles Jencks points out in his book *The Architecture of the Jumping Universe*, the best place to start building an understanding of this new sort of immersive figure/ground operation is with our current theories and understandings of the infinite universe. (Jencks, 1995) As I understand it, we live inside of (and are part of) an expanding, holographic, aoristic system called the universe; a system which has a radius equal to its lifetime. (Bergamini) Particularly with space exploration and travel, it is becoming increasingly evident to me that we humans will desire and need a hyper-embodied identification with the entirety of this space/time continuity (Gribbon & Goodwin), a continuity from which overly embodied identity distances us. By following on the semi-

disembodied consciousness which the developments of the telescope, microscope, camera, automobile, aeroplane, satellite, missile and space craft have given us, aesthetic immersion is particularly well suited to convey and occasion an enchanting sense of disembodied/hyper-embodied identity in vastness which may accommodate this needed sense of abstract ontological being. Given immersive-interactive non-representational identity with the figure/ground operation of the universe (where unity is recognised in plurality and plurality in unity), immersive art's potential role in providing simulation inducements for connectivity to gesamt totals (Godin) becomes increasingly evident. Here we must recall that just such an artistic accomplishment was conceived of by Schelling as being the *culmination of art at the level of consciousness*, revealing and manifesting the equivalent abstract impetus that underlay non-representational phenomenon. (Schelling)

As the history of abstract art teaches us, consciousness may refuse to recognise all thought as existing in the linear space of representation, and by scanning the non-vertical mental space (de Bono, p. 37) of non-representation may formulate a knowledge of the laws that provide representationalism its organisation. (Rosenthal) However, through Post-Structuralism we know that an emancipation from the power of representational signs cannot be achieved through their denial (indeed most contemporary cultural theories consider representational signs to be the gist of all realities and the prerequisite of thought) but only through the awareness of their conventional and arbitrary omnipresence may emancipation be considered. (Harland) It is for this reason that the non-linear excess inherent in immersive hyper-being's macro-perceptions facilitates a quasi-emancipatory modelling of a non-representational figure/ground binding operation for which presently there is no representation available. This is so in that aesthetic immersion's non-linear excess also yields non-representational phenomenal feelings of radiance, expansion, and disintegration; diaphanous feelings which simultaneously involve sensations of intersection, interpenetration and interweaving. As insinuated, these dual non-representational characteristics are consistent with current proposals involving how consciousness functions non-representationally, processes which involve *binding* and *convergence zones* in the integration of input in the inferotemporal cortex (which may be the place where conscious visual information converges and binds together). (Jones, S.) Hence the aesthetic-immersive paradigm both expresses and ratifies a synthetic state of non-representational consciousness in which experiences of the unitive alimentary depths of enchanted being may not be systematically extinguished.

Such an aesthetic, non-representational, conversant understanding, however, requires a synthesis between the once polar, supposedly mutually excluding, concepts of the *enclosed* verses the *expanded*, the *bona fide* verses the *imaginative*, *involvement* verses *detachment*, the *actual* verses the *virtual*, *being* verses *non-being*, the *vast* verses the *intimate*, and between *immersionability* and *critical distance*. When involvement and detachment and the other once antagonistic concepts are synthesised in omnijectively understood immersion, we are capable of experiencing and comprehending an immersive artwork in the post-existential

phenomenological manner. Such a dialectical synthesis is only possible, however, through addressing the question of consciousness called *cognitive dissonance*. Cognitive dissonance is a psychological term denoting the mental state in which two or more incompatible or contradictory ideas are held to be equally sustainable. (O'Doherty, E. F.) A person who is successful at keeping contradictory ideas in dialectical suspension is said to have a high degree of *negative capability*. This is a particularly important concept, for as Deleuze asserts, there is a "double structure to every event". (Deleuze, 1990, p. 151) Also we must recollect once more Massumi's Deleuzian interpretation of the virtual as "a lived paradox where what are normally opposites coexist, coalesce, and connect...". (Massumi, 1995, p. 91)

As I have discussed in AI, the term Virtual Reality is oxymoronic and hence is already cognitively dissonant. Beyond that, with the cutting off of our unfeigned input-stimulus through encompassing prevarication we implicitly encounter a threat to our existence imaginatively linked to death (an expiration which Deleuze designates as a "pure event" (Deleuze, 1990, p. 152)) while knowing we are physically safe. This is a key cognitively dissonant feature of VR's immersive sublime as the experience evokes a presentiment of the death effect without putting the life of the individual in jeopardy. Thus any theory which would emerge from VR's immersive idiosyncrasy (which expands by cutting-off) would most likely be a dialectical theory of hyper-embodiment which simultaneously (and oxymoronicly) both affirmations and denies. Hence it would be a theory of aggregated paradox.

Such a theory of accumulated paradox would be aligned with Gene Youngblood's theory of synaesthetic cinema, an alloy, superimpositional cinema which creates an "awareness of the process of one's own perception" (Youngblood, p. 111), by being structured by the language of paradox. (Youngblood, p. 87) Such self-conscious consolidated incongruities are a climacteric component in the key immersive ideas of *viractuality* (Nechvatal), *omnijectivity* (Bohm, 1993) and Hegelian *being/non-being*. (Hegel, 1949) Actually my fundamental exposition of a decentralising, self-metaprogrammatic cognitive-vision (a biocomputational version of Paul Klee's *thinking eye* (Klee, 1961)) to some may sound contradictory, though it is not. Moreover, the excess of immersive space, in lieu of its aorist para-comprehensivity, involves necessarily the key paradoxical viractual notion of *presence-in-absence*, a concept which Richard Kearney identifies as the standing philosophical understanding of imagination. *Presence-in-absence*, according to Kearney, is "the act of making what is present absent and what is absent present". (Kearney, 1991, p. 4)

Consequently by recognising and utilising cognitive dissonance, I can deduce that somewhere between the contradictory psychic feelings of expanded self-image (the 360° allocentric ego) and endless expansion (360° aortic transcendence) lies hyper-embodied immersive consciousness. However, such a hyper-embodied self-observance is only possible with an interactive allocentric critical distance which involves aesthetic desire because, as shown in AIII, the degree an immersant feels totally immersed depends to a large degree on

psychological need (e.g., desire). This is artistically advantageous in that it is through desire that idealistic implications attain ontological actuality in art. With no desire comes no additional ontological hyper-being, which as Merleau-Ponty showed us is an aoristic expansion of being. (Merleau-Ponty, 1962)

This concept of aorist, non-logocentric, hyper-being within immersive non-linear space, I imagine, will outline the 21st century and its technologically engaged art. This idea is not conceptually problematic, for, as I have shown in AIX, an immersive account already provides an accurate model of today's person as a being immersed in the digital electronic field. Indeed it is conceivable that a need for certain ideas of immersion exist in light of contemporary cultural conditions independent of VR. Regardless, this aorist non-logocentric contention corresponds to what Marshall McLuhan proclaims to be the role of art in the techno-mediacratic society. According to McLuhan "the role of art is to create the means of perception by creating counter-environments that open the door of perception to people otherwise numbed in a non-perceivable situation". (McLuhan & Harley, p. 241)

Furthermore, my pre-conclusive hypothesis is that immersive consciousness may construct a space of consummate criticism of the illusionistic spectacle (and subsequent notions of ontological/spectacle synthesis) when maintained by an emancipatory cognitive interest. This awareness of course includes a comprehension of the institutional and materiality of electronic immersive technologies along with their effectiveness for creating modalities of experimental hyper-corporeality. As the material mechanics of construction are generally hidden within immersive environments (so as to aggrandise their seductiveness), full immersive consciousness demands that the immersant be consciousness of the technical attributes and institutionalised context which surrounds and supports the immersive apparatus even while participating in the hyper-corporeal/spacio-temporal configurations of it's omni sweep. Such a self-referentiality would follow an anti-mechanistic, semi-formalist, demystificational approach towards the immersive process, thereby producing for itself a level of post-materialistic, meta-awareness. (Worringer) Such meta-awareness requires temporarily overcoming the transparency of the medium (which is the preconditional disposition required for total-immersion) so as to defeat illusionist trompe-l'oeil seduction where the medium is not seen (is transparent) so as to present an illusionistic faux world as real. This prerequisite is indispensable in that an art which strives for technical transparency of the medium strips the viewpant of at least one level of criticality. The work of the Russian Formalists in the early part of the 20th century (Gray) has a key place in this meta-comprehension of shuttling back and forth between artistic levels of awareness. This reflexive approach engages the immersant in a game of in and out which runs counter to King Ludwig's preference concerning his not understanding his grotto (Blunt, W., p. 151) and Brenda Laurel's declared goal of computer invisibility for VR worlds. (Laurel, 1991, p. 143) The value in taking such a dynamic, semi-formalist approach towards immersion lies in its capacity to reveal the perceiving operational datum of perception (i.e., seeing seeing, and/or seeing the unseen therein) an operation which, in Dr. John Lilly's terms, helps reveal the

metaprogramming aspect of immersive situations. (Lilly, 1974, p. 138) *Formalism* (Bennett) is a self-metaprogrammable immersive tool when it rigorously stresses immersion's own formational principles. But there is more to it than that. When semi-formalist immersive awareness is allowed to go into overdrive it may pick up cognitive/psychological information simultaneously with materialistic understandings from different spaces in the work, adding to one's self-metaprogrammatic list of probables. Thus through non-representational/semi-formalist perception, immersive meta-consciousness becomes aware of its own aesthetic capacity to unite and synthesise (Savile), a capacity which reminds us of our programmatic power over our own biocomputer. Appreciating the capacity of summational wholeness through self-metaprogrammatic semi-formalist awareness is a dominant constituent in aesthetic immersive satisfaction.

As I have numerously explained and exemplified, *the methodology of aesthetic immersion is transcendent consummation through satiating models of dynamic totality.* The principal ontological shift this consummation galvanises is that of surfeit hyper-embodied omnijectivity via the subject's self-metaprogrammable liberation from subject/object distinctions and from the quotidian perspective and ground. Even as existential phenomenology has shown us the embodied nature of consciousness by stressing that the protoplasmic body is the original and originating material premise of signification (Merleau-Ponty, 1952), by examining the rhythms of the various spheres of aesthetic immersion and the way they expand the edges of the frame of cognition-perception away from its habitual confines through art, we have seen that aesthetic immersion is essentially *inextricable summational transcendence via a flooding-over efficacy of the dilated pupil's FOV*, an efficacy which agrees with Merleau-Ponty assertion that the problem with the body consists in the fact that it is all there is. (Merleau-Ponty, 1952, p. 198) Indeed the problem with the body from the immersive philosophical standpoint is that vision is inadequately partial and hence in need of philosophical/technological/artistic enhancement. It has this obligation so as to disrupt what Massumi identifies as the body's accumulated *enfolded contexts*: the body's "infolded" (and "situated") "volitions and cognitions". (Massumi, 1995, pp. 90-91) This need for philosophical/technological/artistic enhancement/disruption addresses Merleau-Ponty's claim that the subject performs an inadequate equivocation with each perception in that an infinite world (Rucker, 1984) is perceived via a synthesis of all of the possible perspectives into only one. (Merleau-Ponty, 1952, p. 212) This point recalls Karl Popper's suspicion that when observation is conducted from one point of view it will be inevitably skewed by that points pregiven theory-laden assumptions. (Popper, K.) Hence the need for manifold philosophical/technological/artistic enhancements which surpass only one point of view, i.e., immersive holonogic cognition.
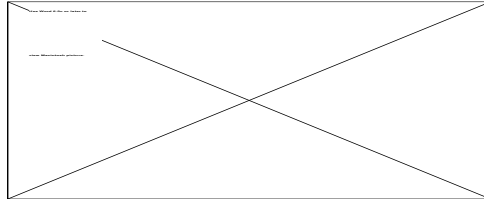
Therefore, based on the need for holonogic aesthetic cognition, I have centred the immersive operation primarily in the *dilation of the pupil* and the *excitation of the nerve/brain circuitry system* (particularly the reticular complex of the thalamus and the behaviour of the thalamic neurons (Gazzaniga, 1984)) in response to aesthetic suggestions of aoristic excess. Moreover, in that aesthetics is the awareness (a trait which Chalmers identifies as a "purely functional notion" (Chalmers, 1995, p. 212)) of attraction (Sparshott, 1963), total-immersion (and its prerequisite expansion of the FOV) may ultimately be seen as a metaphor which stems from our bodily response to sexual attractiveness, the dilated pupil which signifies and facilitates sexual attraction. (Brown, N. O.)

From a sociological point of view, this immersive cognition of well-being in interaction with ambient aesthetics opposes, through enhancing awareness of the plurality of the possible, existential post-modernistic oblivion; the dulled, blasé, over stimulated gaze of the alienated media consumer; that state of inert consciousness which Collins and Milazzo referred to as the New Sleep. (Collins & Milazzo, 1988) This is so in that the practice of immersive mindfulness requires continual observation with the mind in an *imaginative* and *receptive,* rather than passive, state. Hence immersive art, by being inextricably linked to latent excess, may provide a fundamental antithesis to the authoritarian, mechanical, simulated rigidities of the technical world. Indeed aesthetic immersion stands in opposition to New Sleep in that its methodology is to exceed and hence attempt to expand the FOV with appreciative input, an ambient impulse which returns perspective to its rightful place as contingent convention. Correspondingly, ontological consciousness expands into an enlarged synthetic field of viractual omnijectivity: the connective field of *inter-consciousness*. In this field connective condition, notions of a singular, discrete, logocentric consciousness are incoherent.

In this respect, Charles Baudelaire's ode "Paradis Artificiel" (Artificial Paradise) is increasingly outstanding for what it has to say about immersive consciousness. In "Paradis Artificiel" Baudelaire presents the climatic accolade to total-immersion when he cites imagination as that force which serves aesthetic immersion's primary purpose; which is to *enlarge consciousness so that it may approach the connective field of inter-consciousness*. (Baudelaire, 1966) Georges Bataille confirms this assertion (this demeanour) in his essay "Baudelaire", particularly by linking Baudelaire's imagination with notions of the impossible. (Bataille, 1978, pp. 200-202) As immersive 360° virtuality places us in the position of indeterminate unknowing (indeed in the position of the impossibility of knowing what we are to see/think in one intuitive moment) conceptions of "objective" and "subjective" consciousness cease from being definitive and become omnijectively inter-

relational questions; questions which disable previous emphasis on the false objectivisms accorded to cultural production. In this condition of arduous inter-relational questioning, what is clarified in terms of immersive consciousness is the human trait to imaginatively "convert absence into presence". (Kearney, 1991, p. 4)

As we have seen in Section B, based on the paradigms of myth, magic, religion, and science, the production of far-fetched yet somehow semi-credible hyper-ontological experiences of inter-relationality have been the elementary expectation which underlies most of immersive art. Consequently we have seen that a sense of *distributed, ephemeral*, and *scattered* hyper-being is the desired ontological state consistent with this inter-relational history. This extremely pliable state of cognition rests on the basis of relaxed (but extended) post-positivistic attentiveness. Indeed it is within this elastic attentiveness (constituted both between artist and audience and within the individual awareness of each viewpant) that the gesamtkunstwerk *work* (Iser) of immersive art takes place. In this respect Giovanni Careri's description of Bernini's bel composto as a "vehicle of an experience that goes beyond all images" (Careri, p. 104) pertains to the central ideal of immersive art. By way of dehabituation and disorientation through merging with the *mise en scène* (that is becoming one with the displayed artificial setting while reserving an aesthetic distance, as King Ludwig did from his flamboyant cockle boat) a partial obliteration of self-consciousness occurs which returns self-representational mimesis to the infinity of mirrored aorist space (an absolute horizonless space consistent with Yves Klein's vision of our Age of Space). In that sense immersion, particularly virtual total-immersion by virtue of its "blocking out of the physical world" (Biocca, 1992a, p. 25), is a tender *via negatiia*, a delicate overrunning self-annihilation in the interests of further hyper-embodied growth and expansion. VR, then, with its immersive attributes, corrects for optic-cognition what Jonathan Crary saw as the function and the legacy of the camera obscura, which was that it "impels a kind of *askesis*, or withdrawal from the world, in order to regulate and purify one's relation to the manifold contents of the *now 'exterior' world*" (Crary, 1994, p. 39), for we realise our limitations in immersion and it is this sense of incompleteness that allures us towards a correct association of our being *within* the inter-relational world/universe (and not external to it). Thus immersive aesthetic experiences symbolically reconnect us to the symbiosis felt by our prehistoric ancestors with their environment and to the centrality of the female womb, the first immersive atmosphere we know.
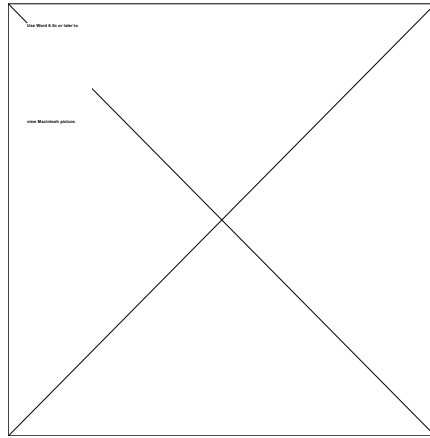
That said, I contend that what also is important about immersive aesthetic experience is that which is revealed as being in synthetic accordance with the basic extravagant and excessive aspirations of humanity (Bataille, 1989) in accord with the effective deployment of the earth's sustainable resources. (Meadows) Such a janusian notion of responsible excess is important to the extent that it helps us push deeper into our stored ontological metaprograms, so as to enhance their (our) performance in the social and ecological field. As such, aesthetic immersion is an exercise in conscious responsibility coupled with liberty produced in the reflective province which Baudelaire calls *art*. (Baudelaire, 1955)

By way of the understanding outlined above, important immersive art adheres to Antonin Artaud's (1896-1948) proposal in *Le Théâtre et Son Double* (The Theatre and its Double) that art (in his case drama) must be a means of influencing the human organism and directly altering consciousness by engaging the audience in a ritualistic-like "dialogue" with the artist. (Lovejoy, 1997a, p. 55) Even though in his essay "The Theatre of Cruelty and the Closure of Representation" Jacques Derrida describes how Artaud's theory (Sellin) may be seen as impossible in terms of the established structure of Western thought (Derrida, 1978b, pp. 232-250), this is precisely why immersive art theory (with its, as previously explained, vital connections to the impossible) can be placed in parallel position to Artaud's hypothesis. This is so in that when inside aesthetic immersive art one experiences a prelude to the work's fullness (its impossible vastness diverts the immediacy of the art), thus stimulating a desire which bio-chemically affects the state of the body and mind. With aesthetic immersive desire the amount of endorphins unconsciously released into our bio-system increases. This bio-chemical desire involves an Artaudian prying-loose from former familiarities and hence is a state where "representation is always attacked and opposed". (Barber, p. 6)

As established, in aesthetic gesamtkunstwerk immersion we are essentially challenged to find new expanded boundaries of self-representation. These new expanded boundaries extol what Ivan Sutherland described in 1965 as his Ultimate Display's operational possibility for gaining "familiarity with concepts not realisable in the physical world". (Sutherland, p. 506) As in Artaud's theory of cruelty (Bermel), this challenge to find new

expanded boundaries of self-representation is accompanied by a vibrating meta-consciousness of being immersively conscious where the immersant *senses unity or wholeness in relationship to the work* and (by extenuation) the universe. Through temporary loss of self-consciousness due to the immoderate excess of perceptual possibilities in an aesthetic immersion (which involves a more active and continuously searching situation) one enters and thus understands through experience the viractual state of omnijectivity, a state which circumvents the current fragmentary view of the self in the world which has been built into the structures underpinning visual representation. (Putnam)

I believe my examples of immersive aesthetics throughout Section B of this dissertation have amply testified to the potential Artaudian metaprogrammable benefits of non-linear aesthetic immersive art. Furthermore, by concentrating on the subject in relationship to immersive art, I have articulated an ephemeral space between an intense but short-lived immersive experience and a transcendental reality that will not let us reach its final constitution.

As we have seen, the genesis of immersive art starts in the semi-artificiality of the adorned prehistoric cave. Based on popular cinematic notions of experimental science (Lusted & Knapp) and science fiction (Gibson, W. 1984) it appears to point towards interconnected direct cortical connections: neuro-electric implants and phased laser inputs arranged to produce interconnected neural interfaces which would link VE°art (transposable, immaterial, reproducible and available everywhere at all times) directly through the de-militarised broad bandwidth Defense Simulation Internet (DSI) into large groups of human and non-human brains. What I deduce from this history and projected future is that aesthetic immersion is brimming with hypothetical hyper-embodied perforations in which anti-hierarchical being and non-being coexist in égréore viractuality, a viractuality which constitutes a connectivist awareness that, in contrast to the popularly projected escapist and solipsistic techno-future, *may not ignore any aspect of the environment or the human body*.

The interactive theory being put forth here then clarifies, deepens, confirms and exalts the latent immersive desire for indeterminate viractuality which, as we have seen, has marginally existed in human culture throughout time. The ideal of total-immersion is an entry into the inter-relational aorist space of binding which admits unknowingness and the non-self and as such it is qualitatively and quantitatively distinct (though certain features of its sense of release and loss of self-consciousness correspond to climatic aspects of sex and death). Its *esprit de corps* is diaphanous hyper-being within a kind of experiential excessive span and ocular extravagance through which abstract inter-relational holonic space and time are felt to be a function of one another. Its *raison d'être* is to supplant the gaze by enticing it into a more fully holonogic field of *a posteriori* understanding.

The immersive ideal consists then in the prominence of particularly ultra-voluptuous cognisant impulses that once raised to the level of hyper-consciousness gives birth to an evoked interior 360° mental-mirror off which is reflected what used to be naively taken as perceptual reality from an increasingly allocentric, inter-relational, holonogic, and aorist site.

In 1969 a 210° immersive gesamtkunstwerk model for such an inner 360° mental-mirror was first created by the Los Angeles wing of the Experiments in Art and Technology (E.A.T.) project (Lovejoy, 1997a, p. 73) for the Pepsi-Cola Pavilion at Expo' 70 in Osaka, Japan. The 210° mirrored sphere, whose prototype was shown in the U.S.A. in a Santa Ana blimp hanger in September 1969, was simply a light-weight mirrored sphere constructed from 3,900 square metres (13,000 square feet) of mirrored mylar 2,540th of a centimetre thick (1,000th of an inch) which spanned 27 metres (90 feet) in diameter and 16.5 metres (55 feet) in height. (Youngblood, pp. 416-417)
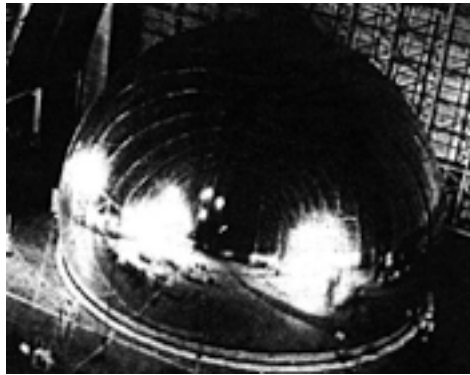
Experiments in Art and Technology, *Mirrored Sphere*
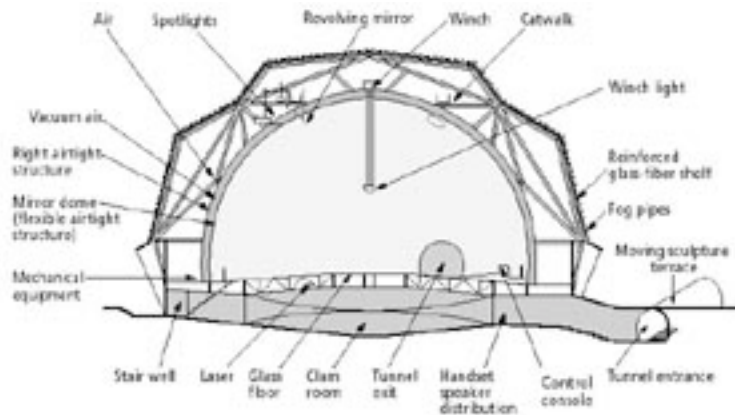
Experiments in Art and Technology, *Mirrored Sphere*

Experiments in Art and Technology, *Mirrored Sphere Interior*

When seeing our hyper-being/well-being state as a self-mirroring, exuberant, non-detached, non-graspable continuous self-cultural reflection, aesthetic total-immersion - by constructing a total-system of dispersion reconciled and connected with dictates of renunciation and submission - temporarily dissolves former self-boundary ontological dichotomies into an unoccupied topos of comprehensive hyper-being which implicates the biocomputer's internal self-programmer in a desire for unrealisable summational resolution. Immersive art thus serves art's classical function of modelling in microscopic proportions the non-divided, unconditional, overwhelming phenomenon which Hegel and Nietzsche called the *absolute* (an imagined orb beyond immediate sense perception). As such it addresses, by extrapolation, self, social, and political limitations when we adapt and incorporate the aesthetic immersive ideal (with its insinuation of natural infinity and its inexorable pull towards the liberation of confines) into our everyday view of the world.

CII: *Intus*: Conclusion and Validation of the Original Hypothesis

Concepts of the virtual in itself are important only to the extent to which they contribute to a pragmatic understanding of emergence, to the extent to which they enable triggerings of change (induce the new). It is the edge of virtual, where it leaks into actual, that counts. For that seeping edge is where potential, actually, is found.
-Brian Massumi, *The Autonomy of Affect*

Imagination is the vehicle of sensibility!
-Yves Klein, *The Chelsea Hotel Manifesto*

The act of art is a tool for extended consciousness.
-Robert Irwin*, Reshaping the Shape of Things, Part II*

The established aim of my research, as stated in my *Application to Transfer from M.Phil. to Ph.D.*, my *Research Report: 1996-7* and then again in my *Post Transfer Progress Report: 1997-8*, was to construct a coherent theory of art which was principally informed by the experience and concept of immersion, which was identified as the fundamental property of Virtual Reality. In so doing I have identified within various historical periods, including contemporary developments involving Virtual Reality technology, aesthetic and philosophical positions, strategies, and practices which have substantially contributed towards the development of such a theory. Thereby I have clarified salient aesthetic features of immersive experience. Moreover, I have created a productive association of aesthetic knowledge which may be identified as the basis of an immersive culture and therefore strengthened art's position in opposition to the strictly commercial and/or military applications of VR. This has been achieved under the retroactive influence of immersive VR technology.

I have analysed the information gathered about the conceptions and experiences of aesthetic immersion concerning the identified widespread human desire to pursue extended consciousness through immersive excess and come to the following conclusion. In the space of linear perspective (with its historically invented fixed placement of the vanishing point on the horizon) the viewer imagined that she or he was looking at the complex world as if through a window; as a spectator. This implies a separating wall with a small rectangular opening in it between the subject's perceptions and the visible world as dictated by pre-established criteria. This pre-established window has become the post-industrial human's mental tendency. Behind this pre-established window human sensitivity has become increasingly neutral, distant, detached, separated and narrowed. With this tendency restrictions on the excess of spatial and non-representational complexity is already decided unconsciously in advance, regardless of the actual exceeding character of our perceptual input. As a result there has been a de-emphasis on the peripheral and the ambient as vision has become restrained by the habits of linear perspective; pre-established habits now encoded in the methods and expectations of photography, video and film. Thus vision has increasingly taken on the attributes of a focused, singular, narrow vision which is staring straight ahead.

In contrast, immersive visual-consciousness is a style of consciousness marked by an emphasis on holonogic cognitive-visuality and by a re-entry into the rich fringes of sensation. This cognitive-visual sensitivity is subsequently enhanced by experiencing the allocentric qualities of immersive virtuality.

In reviewing my findings I have determined that the cultivation of aesthetic immersive sensibility is achieved through the *distributional processing characteristics of non-logocentric total art models* which utilise *suggestions of aoristic (horizonless) excess.* I have provided divers examples of visual penchants and theories and immersive aesthetic acts which may be placed in this classification. Each cited mode supersedes our accustomed geometricised horizon-based visual tendency where the constructional template of linear perspective is already *a priori* established prior to an encounter with ambient aesthetic environments.

With immersive consciousness providing the general condition of omnijective hyper-vision, the viewer/spectator now becomes the interactive viewpant/immersant. This shift in depth of engagement and habit of mind suggests to me an auxiliary model for consciousness, in rapport with art based upon Bernard Baars's psychological global workspace model of consciousness as a central processing terminal which mediates communications to the cognitive system (Baars); or at the very least, an additional model for ways of thinking inventively. I am using the terminology *model for consciousness* here in a rather broad way by connecting it to creative self-awareness. I believe this to be adequate for the purpose of developing a theory of cognitive aesthetics as, according to Chalmers, "there is a direct correspondence between consciousness and awareness". (Chalmers, 1995, p. 212) It is not a more precise model or theory of consciousness in that it does not explain what consciousness is, nor explain exactly how it arises in the first place. Such problems of defining the essential constitution of consciousness have been widely discussed elsewhere within the realm, principally, of philosophy, thus far without arriving at a consolidated consensus. But if we accept the more modest definition of a theory of consciousness as a theory of self-awareness of how our inner life and thoughts function (and may function fully), I take it that what I now will propose concerning immersive thinking might be judiciously placed within the arena of contending theories of how consciousness functions (and/or may function).
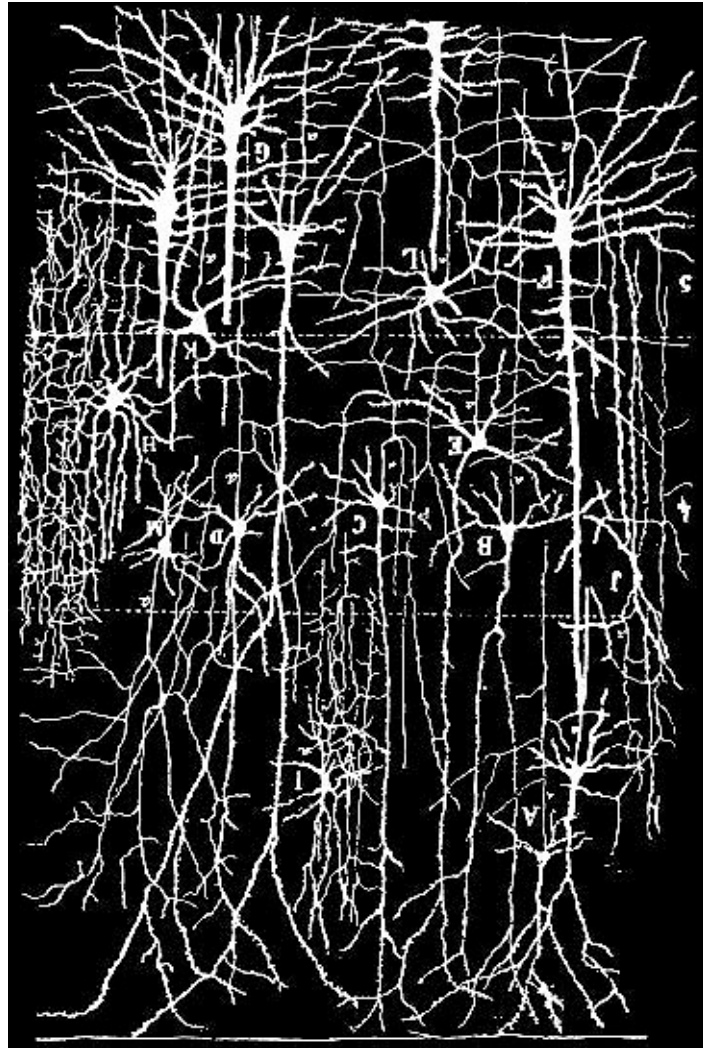
Lateral (horizontal) thinking was a term introduced by de Bono which refers to the capacity to shift the context of thought away from conventional logical (vertical) progressions to unaccustomed lateral ones, thereby shifting thought away from fixed, predefined orders and towards creative ambiguity. (de Bono) According to Rothenberg, "creation involves intense motivation, transcendence of time and space, and the unearthing of unconscious material" (Rothenberg, p. 345) and that lateral thinking is beneficial for shifting consciousness out of habitual formulations and "ways of seeing". (Rothenberg, p. 12) In lieu of the immersive cognisance gained through this study, creative immersive thinking might now be conceptualised not as a

vertical or even lateral thought process, but as a spherical (global) one. Such a global formulation would define immersive consciousness' general pull way from established thought towards a janusian coming together of previously distinct and habitually incompatible frames of reference within a larger spherical immersive frame, as according to Rothenberg janusian thought formations transcend sequential thought. (Rothenberg, p. 342) Hence janusian immersive thought is a cognitive process which involves a deep involvement in and appreciation of the contradictory nature of opposites and antitheses (now blended into new, larger, global abstractions). Such creative thought is useful in reconfiguring a non-linear, non-perspective oriented cultural vision of the technological world as here the mind is weaned away from the literal. Rather immersive consciousness allows for the innumerable formulations of previously unimagined ideas and configurations of both physical and virtual realities, now fused and superimposed.

In this operationally defined model of the creative intellect, creative and divergent thinking wins the capacity - through situating itself within a spherical immersion - to generate and appreciate multiple alternatives by deviating away from focused or convergent modes of perception-cognition. This occurrence leads to a fuller aesthetic consciousness typical of what Rothenberg calls *homospatial thinking*. Homospatial thought (from the Greek *homoios*, (meaning same)) "consists of actively conceiving two or more discrete entities as occupying the same space, a conception leading to the articulation of new identities". (Rothenberg, p. 69) In homospatial thought representational signifiers are, like in the Apse of Lascaux and in many of the examples of latent excess which followed it, "super-imposed, fused, or otherwise brought together in the mind (...) totally filling its space". (Rothenberg, p. 69) I hope that it is evident by now that such a thought process typifies the transcending aims typical of the immersive total-artwork, for not only does homospatial thought "transcend the principle of differentiation, but in totally filling the space, or the field, of consciousness, it also transcends space". (Rothenberg, p. 342) Rothenberg goes on to say on the same page that "when space is totally and diffusely filled, there are no longer any internal locations or boundaries" and at that point, once the filling has reached the limit of its spatial enclosure through excess, thought "is on the outside, at least in part, of that enclosure", a cardinal factor which contributes to the "dizzying sense of spacelessness" which accompany homospatial conceptions. Again according to Rothenberg, it is this sense of dizzy spacelessness which "allows the creator to plumb the very limits of spatial experience". (Rothenberg, 342)

Given the immersive total-artwork's general visual conundrum, homospatial thought (particularly as opposed to analogic thought, the step-by-step comparison of partial similarities between things) is best suited for reflecting on the immersive total-artwork's overwhelming sensations and qualities of excess, where many once discrete elements are conceived of as occupying the same space in a preliminary step towards producing a new unity or ontological identity. In terms of creativity and self-programming, the resultant new sense of synthesised unity (Arieti) is valuable in that it allows the creator to move from what exists and what is known

to the limits of knowledge and spatial experience and therefore to move into the immersive realm of the unknown; a move from the familiar to the unconceived.

nerve field

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