

The Reality of Dreaming

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In dreams we feel like fish in water. Occasionally we surface from a dream and skim an eye over the world on shore, but we again descend with yearning haste, for it is only in the depths that we feel good. During these brief sorties we notice on dry land a strange creature, more sluggish than ourselves, accustomed to breathing in a manner different from our own, and glued to the land with all its weight, deprived of the passion we inhabit like our own bodies. For here below, passion and the body are indistinguishable, they are one and the same thing. That creature out there, that too is us, but a million years from now, and between it and us, aside from the years, lies a terrible calamity that has befallen it, because that creature out there has separated the body from passion . . . (Milorad Pavic, *Dictionary of the Khazars*)

Dreaming, the Night-side of Culture

Native Americans in British Columbia claim to hunt real prey in their dreams, while further south on the plains, the vision-quest culminates in a dream which reveals a boy's adult identity. Both love and war have been made on the basis of dreams, not to mention scientific discoveries. In ancient Greece dreams were medicinal parts of curative sleeping or 'incubation' rites in the temple of Aesculapius, and many psychoanalytic physicians today still consider dreams as possessing therapeutic potential. The ethnographic literature gives ample testimony to the great significance accorded to dreams by all of the world cultures. Dreams form a rich store of ethnographic evidence, and their indigenous interpretations can often illuminate the central issues and conflicts of a people otherwise hidden from obvious view.¹ Given these facts, plus the physiological facts that the dream process itself involves deeply-rooted material brain functions, and that rapid eye movement, or REM, sleep, which is the key indicator of human dreaming, is shared by all mammals, it remains strange how little attention is given to dreaming as a formative aspect of human evolution and culture.

I hope to address this theme — dreaming as a formative aspect of human evolution and culture — by viewing dreaming as a

Theory, Culture & Society (SAGE, London, Newbury Park and New Delhi), Vol. 9 (1992), 119-139

borderland between biology and culture, a thoroughly social, yet private experience. Dreaming not only highlights the 'cultic' roots of culture — the spontaneous impulse to meaning — but also illustrates one of the ways in which the technics of the biosocial human body itself form the primary source of culture (Rochberg-Halton, 1989c, 1990). Sociologists have seldom considered dreaming itself, perhaps because it seems to them to be non-social. Yet I will attempt to show why dreaming, although private, is a thoroughly cultural, biological, communicative activity.

Culture and biology are often treated by social scientists as though they were oil and water, not to be mixed. I should inform the culture theorist at the start that I am fully aware of the assumed nature-culture dichotomy, and that I reject it. I do so not because I am a sociobiologist, quite the contrary; rather because I am a semiotician, and my studies of signs have led me toward a critical reconstruction of the concepts of nature and culture. In what follows I beg the reader's patience, since I will draw from diverse materials and project some speculative hypotheses in places in order to make my argument.

Culture is More than Convention

To archaeologists fixated on physical things, dreams offer no material substance on which to base interpretations: the very intangible nature of dreams would seem to defy standard archaeological interpretation. To most social theorists, dreams emanate from a twilight zone of questionable value: dreams are 'imaginary' and therefore unimportant aspects of modern life. The task of modern social theory, after all, is to wake humanity from its dream and bring it to critical self-consciousness. Yet dreams, I claim, cannot be wished away from our evolutionary past, from our socio-cultural present or from our potential futures. There is good reason to suspect that dreaming was a significant component of the experiential world of the proto-humans: the fantastic image-making process, autonomously produced by the psyche, a private, though social self-dialogue of the organism, its 'language' fashioned from the forms of experience. Dreaming may very well have helped to 'image' us into humanity. And we may yet remain creatures of the dream.

If one is to explore the dreamworld as a significant aspect of culture, one needs a theory of culture broad enough to encompass the dynamics of dreaming in their own terms. Yet the dominant

theories of culture today are insufficient to come to terms with the full reality of dreaming, so far as we can comprehend it. These theories share a common belief in conventionalism, the view that culture is constituted by conventional signification, whose meaning is revealed through arbitrary codes, interpretative understanding, or some sort of objective scheme.² By and large, conventionalism eschews the possibility of natural signification. In the case of academic sociology, this prejudice is revealed in the widespread belief that biological processes per se are not legitimate sociological concerns. Thus the fact that dreaming is a biological process is regarded as of no sociological consequence or, as I have heard it put, the proper sociological topic would be the recording of dreams or the cultural content of dreams, but not the activity of dreaming in itself.

Would that social life were so neat as to be easily categorized into the academic disciplines. Unfortunately, I will have to disregard the disciplinary 'no trespass' signs in what follows, in the interest of understanding one of the most basic human *social* activities, dreaming. Not only is dreaming more than what the academic 'culture club' will admit, but so too is culture.

One cannot deny that much of meaning is conventional, though conventions themselves — contra conventionalism — are inherently purposive and subject to cultivation. Conventionalism is frequently proposed as an antidote to reductionism, yet it radically reduces the realm of significance, meaning and the social. That which is outside the system is regarded as meaningless until it is 'systematized'.

The conventionalist assumes that conventions or codes encompass culture. Hence a number of recent sociological studies take the position that art can be understood solely as social conventions, thereby denying aesthetic quality (Wolff, 1981; Becker, 1982; Bürger, 1984; Griswold, 1987). Similarly, attempts to discuss either the brute factuality or the aesthetic or inherent meanings involved in human experience are frequently dismissed by cultural theorists as reductionistic or obsolete, because these approaches fail to see that all meaning is conventional, that is, dependent on cultural belief systems. Hence the expressive outpouring of an artist is meaningful only insofar as it can be related to existing cultural values, beliefs or constructions. A work of art's own inner compelling expressiveness is reduced to outer considerations, and the possibility that art may actually create perceptions and beliefs is

sidestepped, as is the possibility that culture may involve other modalities of signification than the purely conventional, such as iconic or indexical signification (Rochberg-Halton, 1986).

The inner social aspects of culture – subjective meanings, aesthetic qualities of works of art or common experience, the ‘spontaneous combustion’ of new ways of feeling, doing, and conceiving – are either proclaimed to be not sociological, or reduced to external considerations, or are ignored. The outer aspects, the externals of culture such as reputations, ‘tool-kit’ strategies of action, social networks and production standards, although clearly social and admittedly legitimate topics of study, are enlarged to cover the whole meaning of culture (e.g. Becker, 1982; Swidler, 1986; Griswold, 1987; Wuthnow, 1987). Such a theory can be termed a *doughnut* theory of culture, after the American pastry which is hollow at the center. The result is that ‘culture’ legitimates new topics of study while simultaneously being tamed to meet the expectations of actually existing sociology: old wine comes out of new bottles, and we remain, to paraphrase Shakespeare, most ignorant of what we’re most assur’d, our glassy social essence.

In contrast to the ethereal, conventionalist theories of culture and meaning which dominate contemporary intellectual life, I claim that the ‘cultic’ – the extra-rational, living impulse to meaning – was and remains an essential ingredient to a conception of culture as semeiosis or sign-action. In this perspective, culture is a living, social metaboly of signs, not limited to an ethereal convention but in transaction with the inmost recesses of the person, and with the qualitative, physical and significant environment. The question is not whether culture is a ‘system’ or not, but whether we shall continue to conceive of culture as an inert, mechanical system or code, incapable of self-critical cultivation, or as a ‘living system’ – a way of life – fully open to contingency, spontaneity, purposive growth and decay. Only the latter route, by my lights, can begin to comprehend the evolutionary and cultural significance of dreaming. Putting the ‘cult’ back in culture requires a reconception of the relations between human biology and meaning, and between non-discursive, non-rational reason and modern rationality.

The deeper implications of this paper are that contemporary modern culture in general, and intellectual culture in particular, have unnecessarily narrowed our conceptions of meaning and culture, and that by undertaking a broad reconstruction of the history

of human consciousness and communication — or what in the German context has been known as philosophical anthropology — we can come to see why culture percolates down into our very biological constitution: *cultus*, the impulse to meaning.

Tangible Dreams

The history of archaeology has been plagued by the unwarranted acceptance of found objects as representative objects. Physical anthropologists, for example, have frequently been only too ready to graft the bones and stones they have found on to standard evolutionary explanations. Hence one of the early Neanderthal skeletons was reconstructed to reveal a shuffling, stooped ape-man, an image which still persists, and only later was it shown that the particular skeleton was the remains of a severely arthritic individual and by no means representative. This problem is perhaps related to the evolutionary, functionalist fallacy to assume that what exists is the most evolved or adapted, and what no longer exists was not adapted to its environment. Some species were very well adapted to their environments, yet destroyed through sudden catastrophe. When archaeologists and physical anthropologists prematurely use found artifacts as representative samples of a culture, and then uncritically interpret this evidence in the light of Darwinian theory, they reveal an unscientific unwillingness to allow empirical flexibility to evidence and hypotheses. Archaeologists have countered these tendencies more recently, developing sophisticated techniques for determining the representativeness of data and for vastly broadening their data through biochemical analyses, computer imaging and other means. Yet there still seems to be an unwillingness to allow purposeful activities their own emergent evolutionary significance, perhaps because such interpretations might necessitate fundamental revisions of Darwinian theory. Nevertheless, it must be admitted that evidence is needed to suggest hypotheses or draw conclusions about the emergence of the human symbol creature.

Sociologists might take the view that dreaming is non-social and therefore not suitable material for sociological analysis, except perhaps as dreams are somehow recorded and become social 'texts'. This sociological view remains insufficiently social, however, in not acknowledging how actual dreaming itself, like speaking, is both a social trait of all humans and consists of narrative-like structures and a 'language' of images incorporated from cultural experience. Where speech communicates publicly shared meanings,

however, dreams can incorporate private meanings that transcend local culture. For this reason it is important to view dreams as private, yet thoroughly social, experiences. Dreams are self-communications, feelings which have already been elaborated into communicative, imagistic signs. Dreams may not only be passive indicators of individual development, but formative experiences in the inner growth of the person and the origins of human symbolic activity.

Susanne K. Langer drew attention to how dreams, like myths, may be:

the spontaneous production of 'natural symbols' for ideas that are intellectually too advanced, too great with implications, or emotionally too disturbing for conscious formulation and expression in words . . . The favored fantasies are likely to have been richly overdetermined ones, which, while they gave many people some emotional catharsis, gave a few of them a mythical formulation of precocious insights which were not remotely ready, as yet, for literal statement: conceptions of life, with little distinction between human and animal or even plant life, and all the circumambient forces of nature, winds, waters, earthquake, and fire; beginnings, growth and its metamorphoses; and the intolerable, unbelievable breakdown of every personal life in death. Gradually, by dint of much repetition, connection with the fixed features of place and tribal activity, and the emotional value of the dream symbols, the tales that expressed an apprehension of such realities became traditional; and tradition, the greatest phyletic product of communication and assertion, is essentially sacred. (Langer, 1988: 312-13)

In attempting to fathom the vanished past from visible remains, we tend to ignore the most perfect archaeological artifact of human evolution: the living human body. Although archaeologists have become quite sophisticated in using medical and physical evidence from ancient corpses, they have not been as willing to use the living human body today as evidence for prior likely evolutionary developments. Yet 'archaeo-neurology' remains an area of potentially great significance, not only for an understanding of how humans became human, but also for understanding human nature and signification today.

Though I am not familiar with earlier uses of the term 'archaeo-neurology', the idea was something familiar to Sigmund Freud, the neurologist and archaeologist of the psyche, and amateur archaeologist of ancient civilizations. If anti-semitism had not prevented Freud from following an academic career, he might have become a noted archaeologist instead of the founder of

psychoanalysis. Yet Freud's investigations of the unconscious show that he remained a psychic archaeologist, attempting to show how the dreams of his turn-of-the century patients revealed both a personal history and a biological drama as old as the human race. In *The Interpretation of Dreams*, Freud uses a stratigraphic method of symbol interpretation in which the contents of dreams are shown to reveal underlying sexual and familial themes, such as the Oedipal myth, and these themes are ultimately rooted in Freud's nineteenth-century neurological understanding of the reflex-arc concept. The layers of the unconscious are like the layers of time embedded in an archaeological site: each level a further step down into the past, until one arrives at the mechanical model of the reflex-arc as explanation.

Freud's archaeo-neurology is a curious blend of literary interpretation and scientific mechanism. Freud posits a divided psyche which is a classic example of cultural nominalism: there is the subject, whose question is, 'How do I know?' and the object, whose question is, 'How does it work?' In effect, the subject and object appear in Freud's use of the vernacular terms *das Ich* and *das Es*, the I and the it, which were latinized by his English translator to the *ego* and the *id* to give them a scientific aura.³ The *id* is the realm of mechanical force, whereas the *ego* is the realm of symbolic purpose. One might also read the *id* as Thomas Hobbes's 'state of nature' and the *ego* as a kind of 'social contract', that is, symbolic representation is achieved through the successful resolution of the Oedipal conflict, in which the metaphoric Oedipus in us all comes to harness the inner 'natural' urges to murder and to commit incest by identifying symbolically with the same-sexed parent and thereby 'having' or relating symbolically rather than genitally to the opposite-sexed parent. One establishes an inner triadic, psychic family representation, which serves to mediate the subject to the object, the unconscious.

One of Freud's positive achievements was to show the power of the human family in the psyche. Just as Feuerbach had unmasked the 'holy family' as standing for the earthly family, and Marx had unmasked the earthly family to reveal the bourgeois family, Freud attempted to show that the bourgeois family was itself a surface manifestation of deeper and darker forces of the unconscious. Yet his choice of the Oedipus myth and his own myth of a 'primal horde' who had collectively killed the primal father and then banded together to form a social contract against further killings, have come

to look much more, with the passage of time and the accumulation of archaeological evidence, like the *fin-de-siècle* fictions they were, when all of Europe, and Vienna in particular, banded together to kill off the past. Freud's 'primal horde', perhaps more than his other images, reveals the workings of a mythic nominalism, of a world of convention banded together for its own protection and set utterly apart from its own ground of development: competitive struggle for individual survival is natural, relationship or mutual aid is not, and must therefore be invented.

One sees in Freud's psychoanalytic theories the deep imprint of Hobbes and other English thinkers admired by Freud, such as John Stuart Mill, transposed to the 'innerness' of German/Austrian thought. Freud helped to open up the flood-gates of the unconscious in the face of twentieth-century rationalism, yet his view of the workings of the psyche is itself another manifestation of that rationalism: tethered to an outmoded mechanical model of biology, and to a conception of human communities and communication as epiphenomenal aspects of consciousness, 'superimposed' on the underlying reality of the 'id'.

Freud's junior colleague C.G. Jung broke with him because of Freud's rationalism. Jung came increasingly to a greater appreciation for the purposeful role of non-rational symbols, and to the limited place of rationality in the purposeful activities of the psyche. One might say that where Freud's unconscious becomes darker the farther down into the unconscious one penetrates, Jung's unconscious becomes increasingly luminous. One moves from the darkness of the personal unconscious to the archetypal figures of the collective unconscious. By archetypes, Jung meant that the deepest processes of the unconscious contained inborn patterns or collective, purposive symbols: literally collective personalities. The images of trickster and the hero, two of Jung's examples which form part of a developmental narrative both in individuals and cultures, were not solely the products of legends and myths, but were organic realities embodied within the psyche. These personalities were related through narrative inner transformations which could be observed in dreams, in artistic activities and, Jung believed, in the symbolism of myths and religions.

In many ways Jung comes closer to the idea of 'archaeo-neurology', but he remained, as did Freud, bound by an overly inner view of the human psyche, and too ready to deprive experience of its own formative influence in the generation and meaning

of symbols. Freud and Jung opened new dimensions for the human sciences, but their theories give short shrift to the thoroughly social nature of dreaming and psychic life in general. Freud's metapsychological foundations are rooted in the nominalistic individualism of Hobbes — with symbolic consciousness the inner psychic equivalent of Hobbes's social contract, erected over the 'Warre of Each against all' of the state of nature, or in Freud's terms, the id. Jung's concept of the archetypal unconscious is more social than Freud's but still is based on a Kantian-like structuralism which does not explain how archetypal structures came about or how human social experience and culture may transcend archetypal imperatives. From the Freudian perspective, Jung's archetypes provide an escapist model of transcendence which denies or undervalues the tragic nature of human existence.

The tendency of both Freud and Jung to view dream images as signs standing for something else — for genitals or archetypes — ignores how dream images may be iconic signs, that is, signs that directly signify their own qualities rather than only symbolic signs 'standing for' something else. The concept of iconic signs was developed by Peirce, who distinguished between degenerate and pure icons as follows: the degenerate icon

is defined as a sign of which the character that fits it to become a sign of the sort that it is, is simply inherent in it as a quality of it. For example, a geometrical figure drawn on paper may be an *icon* of a triangle or other geometrical form. If one meets a man whose language one does not know and resorts to imitative sounds and gestures, these approach the character of an icon. The reason they are not pure icons is that the purpose of them is emphasized. A pure icon is independent of any purpose. It serves as a sign solely and simply by exhibiting the quality it serves to signify . . . It asserts nothing. (Peirce, 1976, vol. 4: 242)

Peirce's distinction is interesting in the context of dream images, since it affords a view of how a sign can be seen both as non-purposive — as a pure icon — and as purposive or communicative — as degenerate icons, which include symbolic elements. Dreams seem to partake of both purely expressive and representative modes of signification.

The evolution of humans is marked by various anatomical changes, such as the development of the upright stance, the radical enlargement of the cranium and specifically the fore-brain, and the creation of a vocal cavity with lowered larynx and subtle tongue and lip movements capable of producing an enormous variety of utterances. Clearly speech is one achievement of this process that

uniquely identifies us as humans. But so too, for that matter, is artistic expression. Both are sign-practices dependent on the achievement of symbolic representation, and both reveal how to be human is to be a living, communicative symbol. Now a symbol, in the Peircean view I have adopted, is a social fact: a triadic relation whose meaning 'depends either upon a convention, a habit, or a natural disposition of its interpretant or of the field of its interpretant' (Peirce, 1958 Vol. 8: 335). In the case of the symbolic sign, as distinguished from iconic or indexical signs, the process of interpretation comes to the foreground and, from a cultural perspective, this is to say that to be human is to be an interpreter. The very achievement of symbolic signification stands upon the vast capacities for pre- and proto-symbolic communication developed by our forerunners and tempered into our physical organisms. And dreams may very well have provided the inner drama necessary to provoke us into interpretation by presenting us with images of a phantasmagoric 'here and now' which break into the habits of everyday life.

Current neurophysiological studies of dreaming reveal that it occurs as a result of (1) the activation of the brain, (2) the blockade of information from the outside world, (3) the blockade of motor information to the body, (4) the internal generation of signals, most likely originating in the brain stem and with a high degree of spatial specificity, interpreted through internally stored memory and treated as though real (Hobson, 1987: 338-40). From a purely rational perspective, dreaming can be seen as a universal form of schizophrenia, in which the brain cuts itself off from the world. But I want to suggest another interpretation.

The neurophysiology of dreaming suggests that dreaming is the inner life of humanity in a virtually purified state: the inner conversation of brain and mind. Unlike most brain researchers who equate brain and mind, I mean by mind here the self, which is not limited to the organic body and is in transaction with its spatiotemporal environment, as both Simmel and Mead noted. Mind includes all those signs we inherit from the legacy of our culture and its languages, as well as all those conceivable consequences we may engender in the future: we are still living out the consequences of Albert Einstein's mind, even though his pickled brain sits in a glass jar in Weston, Missouri.⁴ In dreaming, the brain 'speaks' its ancient voices of phylogenetic experience through neurotransmitters which emanate from the old 'reptilian' brain and flow upwards to the cortex, where visual, associative and motor areas

are excited. In this process ancient neurophysical impulses become transformed into acts and associated meanings expressed in the images — whether visual or not — themselves.

Some physiologists, such as Professor Jerry Siegel of UCLA, would disagree with the idea that neurochemical waves emanate unidimensionally from the brain stem, claiming instead an *interaction* of brain stem and higher functions. Should this hypothesis prove true it would support even more the idea of dreaming as a brain–mind dialogue.

The brain stem area is also known as the ‘reptilian brain’ because it is a structure basic to all vertebrates, and therefore is the oldest phylogenetic component of the human brain. The neuroanatomist Paul McClean, who in the late 1940s came to define the ‘limbic system’ as an organized brain structure, has proposed a model of the ‘triune brain’, in which he argues that the human brain consists of three phylogenetic systems, the *reptilian*, which is responsible for basic autonomic functions such as cardiovascular regulation, respiration and maintenance of consciousness, the *paleomammalian*, which includes the limbic system and is responsible for the regulation of homeostatic centers controlling feelings — pain, pleasure, fear, anger, smell, sex and satiety — among other things, and the *neomammalian*, or neocortex, which is responsible for those characteristically human processes of cognition and perception (see Turner, 1985: 249–73). In McClean’s view the human brain consists of three sequentially evolved and interacting ‘brains’, of which only the neomammalian has the power of discursive speech. Although the older portions of the human brain are less open to cultural learning, it is important to remember that they are still human through their communication with the other ‘higher’ centers.⁵ What I would like to highlight here is that the communicative relations between the three levels of brain represent an ongoing conversation of evolutionary history. The physiological and instinctual achievements going back to the reptiles — the autonomic nervous system and its organs, including the regulation of temperature, breathing, heart-beat — remain as incarnate truths in the human brain, and perhaps it is this tempered ‘knowledge’ which is engaged in the dream dialogue of non-discursive images and feelings.

Iconic signification, which is to say the inherent presence or communicative character of the sign itself, is the predominant language of this inner world, the meeting place of brain and mind. Yet in contemporary humans, those icons of dreams are themselves

frequently shaped from the reservoir of cultural experience and symbolic signification.

Dream Culture as Recombinant Mimetics

Dreaming is the cultic ground of mind. By this I mean that through dreaming, mind touches base with reality, with the fantastic reality of its own brain. That brain is the evolved product of tempered experience over eons of life on the earth. Dreaming, the most purely subjective experience, is thus also the most objective. In closing off the outer world, including for the most part the peripheral body, brain and mind speak in intimate conversation. Brain communicates the incarnate sum of its evolutionary experience, as well as the neurochemical 'sum' of its daily experience, in the compelling, yet inarticulate, language of neurotransmitters to mind, which gives articulation to these stimuli. Stated differently, the symbolic resources and capacities of the human mind and human cultures are intimately, if vaguely, connected to the deepest archive of eons of biological experience, the human brain. To say that we are the stuff of which dreams are made then suggests both that there may be some inherent biological limitations to human social life but also a point which cultural reductionists tend to deny, namely that the most revolutionary capacities for imaginative projection may also derive from our biosemiotic dreaming proclivities.

The resources of mind and memory, incorporating both collective cultural experience, such as language, as well as personal experience, play an active role in bringing the neurochemical dance to consummation or to frustrating it. One could see how a crabbed life, for example, one deprived of relationships, emotional 'vocabulary', images and dramatic scenarios, might provide a poor means of channeling and thereby utilizing the neural messages. One can also see how a life richly lived could provide a commonwealth of possibilities for the tasks of dreaming. But we should not forget *The Secret Life of Walter Mitty* phenomenon, meaning that some people can live drab external existences which are compensated for by a rich dream life. What then, is the purport of dreaming?

Dreaming is a communicative activity between the most sensitive archive of the enregistered experience of life on the earth, the brain, and the most plastic medium for the discovery and practice of meaning, the mind or culture. Most explanations of dreaming have tended to view it as ultimately passive, as a compensatory mechanism for daytime existence. In the Freudian view dreaming

is the way that repressed wishes of the unconscious can be actively disguised through symbolism, thereby 'venting' their energies, but in a way that will not undo consciousness. In many recent neuro-physiological views, dreaming allows the 'recharging' of the brain's neurochemical 'batteries'. If human bodies were simply machines, these theories would perhaps be adequate. But it is important to realize that just as mind is formative, generating new ideas collectively and individually, so too may brain, as the chief organ of mind, also be formative or active.

D.H. Lawrence expressed the 'recharging' function of dreaming seventy years ago using the marvelous metaphor of street sweeping:

As we sleep the current sweeps its own way through us, as the streets of a city are swept and flushed at night. It sweeps through our nerves and our blood, sweeping away the ash of our day's spent consciousness towards one form or other of excretion. This earth-current actively sweeping through us is really the death-activity busy in the service of life. It behooves us to know nothing of it. And as it sweeps it stimulates in the primary centres of consciousness vibrations which flash images upon the mind. Usually, in deep sleep, these images pass unrecorded; but as we pass towards the twilight of dawn and wakefulness, we begin to retain some impression, some record of the dream-images. Usually also the images that are accidentally swept into the mind in sleep are as disconnected and as unmeaning as the pieces of paper which the street-cleaners sweep into a bin from the city gutters at night. We should not think of taking all these papers, piecing them together, and making a marvelous book of them, prophetic of the future and pregnant with the past. We should not do so, although every rag of printed paper swept from the gutter would have some connection with the past day's event. (Lawrence, 1921-22/1960: 193)

Although recognizing the importance of flushing out the brain, and the relative worthlessness of the 'day-residue' as a basis for deeper interpretation — in contrast to Freud — Lawrence went on to suggest that certain dreams affect not only the automatic functions of the brain, but also the non-automatic centers of the unconscious or soul:

Most dreams are purely insignificant, and it is the sign of a weak and paltry nature to pay any attention to them whatever. Only occasionally they matter. And this only when something *threatens* us from the outer mechanical, or accidental *death-world*. When anything threatens us from the world of death, then a dream may become so vivid that it arouses the actual soul. And when a dream is so intense that it arouses the soul — then we must attend to it . . . That which is lovely to the automatic process is hateful to the spontaneous soul. The wakeful living soul fears automatism as it fears death: death being automatic. (Lawrence, 1921-22/1960: 194, 196).

Where Freud believed that all dreams ultimately connect to the id, Lawrence's view was perhaps closer to Jung's, who believed that not every dream has an equal weighting, that some dreams involve deeper archetypal symbols. Yet Lawrence did not see archetypal symbols per se as the key as much as the living, spontaneous soul becoming occasionally engaged or threatened by automatism. Physiology includes more than mechanical processes in Lawrence's view: it includes the 'integral soul', the organic sum of reasonableness incarnate in the human body.

The neurophysiologists seem none too sure of their hypotheses concerning the function of dreaming, let alone its purport. Researchers also suggest that dreaming compensates for neglected daytime processes, and that it maintains circuits critical for survival — whether called upon for use during the waking state or not. This last view is given by a neurophysiologist, J. Allan Hobson, who also describes REM sleep as 'adverse working conditions' for the brain/mind to make sense of its internally generated signals, and dream mentation as 'defective cognitive properties of dreaming'. With such a rationalist perspective — one which neatly avoids the fact that REM sleep is apparently one of the most successful adaptations built into the human, and more generally, the mammalian body — we are unlikely to achieve much insight into the fantastic reality of the human psyche.

One wonders what the neurophysiologists' answers to other human activities might be: why do we make music, images and dance? Why does belief play such a central role in human affairs? Why can dreams wreak such havoc upon habituated experience and memory through fantastic associations or inversions? Why are all humans compelled to participate in these strange cults of the night? Why are such bizarre goings-on — the nightly mad hatter's party of REM sleep cycles to which we are all invited whether we remember so or not — absolutely necessary to our ability to function in the day world? When we begin to ask questions such as these, it becomes possible to turn the dream question around. In other words, only by exploring that strange culture within us in its own terms, taking the 'native's' point of view toward our inner life, can we begin to understand the alien within, and our glassy essence.

Perhaps dreaming itself is the purpose of dreaming, the end for which the neurophysiology is the means. As Milan Kundera (1984: 59) expresses it in *The Unbearable Lightness of Being*,

Dreaming is not merely an act of communication (or coded communication, if you like); it is also an aesthetic activity, a game of the imagination, a game that is a value in itself. Our dreams prove that to imagine — to dream about things that have not happened — is among mankind's deepest needs.

This may strike the reductionists among neurophysiologists and social theorists as too fantastic, but perhaps the fantastic is an inbuilt aspect of evolutionary reality, difficult though this may be to understand in our utilitarian age.

Current research on REM sleep, which appears to be not only a unique but also a sophisticated adaptation of mammals, shows that human brain activity during the nightly REM sleep cycles is almost as active as in waking states. But where waking states are characterized by the use of neurotransmitters such as norepinephrine and serotonin, REM sleep experiments show these neurotransmitters to be relatively inactive, while nerve cells using acetylcholine are active. Nerve cell interconnections depend on use, and dreaming apparently promotes the use of these nerve cells, while possibly allowing the cells of daily activity to rest and revitalize. The purpose of these processes is not yet clear, but one possibility is that dreaming is 'brain exercise', which can promote genuine and perhaps literal growth of the organ.

Although it is frequently acknowledged that the unconscious is the source of creativity, dreaming, the night music of the soul, may help to generate new neural pathways as well. In other words, dream images may function as prospective symbols for mind, just as REM neural activity may function as neural network-making for brain: perhaps the two work in psychophysical relation, as might be indicated by the large proportion of time devoted to REM sleep in fetuses and infants, when the brain itself is rapidly growing. The newborn infant sleeps about 16 hours per day, of which half are REM sleep. Thus one-third of the infant's life is spent dreaming. The percentage of REM sleep decreases with age, especially with the elderly. These facts suggest to me that REM sleep is a manifestation of inner experience of great consequence for the development of the human brain, and perhaps a means through which outer experience becomes internalized through non-discursive, deeply embedded dream patterns.

Dreaming and Human Development

Lewis Mumford (1967: 51) proposes that man's inner world,

must often have been far more threatening and far less comprehensible than his outer world, as indeed it still is; and his first task was not to shape tools for controlling the environment, but to shape instruments even more powerful and compelling in order to control himself, above all, his unconscious. The invention and perfection of these instruments — rituals, symbols, words, images, standard modes of behavior (mores) — was, I hope to establish, the principal occupation of early man, more necessary to survival than tool-making, and far more essential to his later development.

Although humanity has become increasingly conscious of itself, it has never stopped dreaming. Nor have its dreams become any less wondrous and terrifying. Communicative signs, not utilitarian tools, were the first human technics, created out of the human body itself, which was then and remains today the most sophisticated human achievement.

If we consider then the influence of dreaming as creating a movement toward interpretative order, we can see how that process could lead to an excess of order. When stretched beyond organic limits, such as life-purposes, local habitat, local social organization, the tendency toward interpretation could take on a life of its own. Archaeological evidence suggests that proto- and early man lived for the most part in environments which could localize and thereby neutralize the tendency to overreach for order or system. If we think of early cities and emergent civilizations as going beyond the earlier environmental resources and limits, we can suggest that the 'megamachine' — refied centralized order — was a product of this time, as Mumford (1967, 1970) claims in his monumental two volume work *The Myth of the Machine*, but that it was also a latent possibility already built-in to the human creature as a negative consequence of the dream-induced body technics.

Biological evolution and cultural development are not simply a progressive casting off of shackles toward a greater and ultimately unrestrained freedom, but involve trade-offs of one kind of limitation for another. The achievement of human symbolic consciousness may have cost us a somewhat diminished perceptual or emotional life: who is to say that the forms of feeling produced by Neanderthal burial rituals, and the dawning significance of death and mortality for Homo Erectus and even earlier creatures, may not have more to do with the real essence of human symbolic consciousness than a modern rationalist treatise on culture produced by a human product of that consciousness? On the other hand, the Mozart or Verdi *Requiem* provide ample evidence that the achieve-

ment of symbolic consciousness also makes possible an enlargement and enhancement of perceptive and emotional capacities. There may have been a trade-off of emotive brain power in the overall reduction of brain size from earlier humans such as Neanderthal to *homo sapiens sapiens* — the slightly smaller-brained anatomically modern human — but the subtilizing of brain through the enlargement of the fore-brain may have provided compensation. One is reminded of Herman Melville's dictum: 'Why then do you try to "enlarge" your mind? Subtilize it.'

Mumford and only a very few other social theorists point to the unusual fact that our big brains seem possessed of excess energies, and that this may explain a number of peculiar features of human existence. But there is an even more fundamental question which seems to me ignored, even though it goes to the crux of the evolutionary debate going back to Darwin and Wallace: how did our big brains come about? It is not simply that we had big brains which we then had to control, but also that we evolved big brains, presumably through an evolutionary increase of brain use and adaptiveness. What was it that made big brains adaptive? Increasingly complex social organization? Increasingly complex dreaming? Or both? Did the human brain evolve in the context of an evolving mind? Did mind, and not simply chance variation or adaptiveness, need more brain? Did the emergent symbolic consciousness need more fore-brain and therefore 'select' for the growth of this region?

Is it possible that Mumford's idea of the megamachine goes back much further again than the emergence of civilizational structures, back to the emergence of *homo sapiens sapiens* itself? If proto-humans evolved the tools of ritual, speech, artistic expression and mores of conduct as means of controlling the inner anxieties, anxieties related to our big brains, perhaps there was also embedded in the central nervous system the tendency to automaton-like order. Hence we would be creatures biologically impelled toward autonomy and meaning, as Mumford says, yet also biologically tending to take the quest for meaning too far, thereby substituting order for meaning. The acquisition of meaning and autonomy may have been achieved at the cost of repetition compulsions — or even the removal of biological inhibitions against over-centralization. Largely liberated from the genius of instinctive determination, we may be creatures neurologically constituted to walk the knife-edge between autonomy and the automaton, our task being not to escape biology, but to make human autonomy instinctive.

Or let me express this in another way. Perhaps the symbol itself, as the medium of specifically human consciousness, is so constituted both in its freedom grounded in human conventions and also in its mysterious relations to the central nervous system, that it *needs* to be connected to perceptive and critical, that is, lived, experience. Contrary to celebrated views of the symbol (or 'sign' in Saussure's terminology) as completely 'unmotivated' or arbitrary, the symbol, I claim, is that sign most dependent on vital and perceptive (or, critical) experience for its continued development.

One problem with the widely shared view that humankind is devoid of instincts, is that it leaves out of account 'secondary' instincts or 'instinctual symbiosis', whereby one organism learns from, observes or is in transaction with the instinctual idea of another. When one species of animal follows the instinctual migratory pattern of another as a food source, such as bears following the run of salmon, that migratory instinct becomes life-sustaining to the second species as well. When certain species of ants instinctually clean and defend a plant that acts as a food source, that plant is sustained by the ants' instinct.

So the evolution of proto-humans, though it was marked by the greater reliance on symbolic intelligence, did not necessarily mean the complete loss of instinctive intelligence as some theorists, such as Gehlen, have implied. On the contrary, one of the key aspects of the emerging symbolic intelligence may very well have been the ability to listen to and learn from the rich instinctual intelligence of the surrounding environment. The close observation of birds, not only as prey, but as sources of delight, could help to inform one of an approaching cold spell or severe winter.

A better example might be the empathic relations to animals and natural phenomena shared by many tribal peoples. One frequently sees both an identification with an animal or plant related to the practices of a people, such as the cult of the whale for fishing peoples or the choice of an object that somehow symbolizes a central belief of a people, such as the white muddy tree as a symbol of the milk of the matrilineally rooted Ndembu of Africa. There exists then a range from a practical, informing relationship to nature, or a symbolic elaboration of that relationship, to a purely symbolic relationship to the environment that may be unrelated to the surrounding instinctual intelligence, or even a kind of veil which might obscure the informing properties of the environment. These relationships were crucial to the emergence of humankind: the deeply

felt relationship to the organic, variegated biosphere, which was manifest in those natural signs or instincts of other species, and the corresponding pull away from the certainties of instinctual intelligence toward belief, toward humanly produced symbols which created a new order of reality, and in doing so, both amplified and layered over the voices of nature.

Through mimesis, emerging humankind could become a plant or bird or reindeer, and thereby attune itself to the cycles of nature through the perceptions of these beings. A mimetic understanding also involves the generalizing of nature into symbolic form. A man dressed as a raven or bear at the head of a Kwakiutl fishing boat, or the lion-headed human figurine found in Germany 32,000 years ago (a very early find possibly suggesting interaction between Neanderthals and anatomically modern humans), signify the symbolic incorporation of animal qualities into human activities, and serve to provoke human reflection, through what William James called the 'law of dissociation', on the meaning of human activities.

Dreaming is central to mimesis, and dreaming itself may be seen as an inbuilt form of 'recombinant mimetics' — with all the power and danger of recombinant genetics — in which fantastic juxtapositions of neural pathways and cultural images and associations take place. Dreaming is perhaps the primal 'rite of passage', through cult, to culture.

In examining the brain-mind dialogue of dreaming we see a domain which bridges nature and culture, which may have been essential to the emergence of human symbolic culture and may remain essential to its continued development. In that sense dreaming opens an unexpected window on to the cultic roots of culture: the spontaneous springing forth of belief.

The origins of culture are to be found in those communicative practices through which emergent humanity literally bodied itself forth, creating a fore-brain with language, speech and personality capacities, creating a tongue, larynx and throat capable of articulate speech, creating forms of inward and outward expression, rituals of affliction and celebration, dramas of mythic, social and personal communication, and stable institutions such as agriculture, villages and, later, cities, which have endured from neolithic times to the present. Contemporary culture and culture theory seem to be bent on etherealizing many of these achievements out of existence, and may very well succeed. Relativists refuse to consider the possible meaning-generating nature of human biology and objectivists refuse

to consider that which cannot be formatted into the machine of scientism. Yet dreams, 'the night-side of science', as Schelling's colleague Gottfried-Heinrich von Schubert once so graphically put it, forcibly remind us that we can neither excise the inner world of image and emotion nor assume that human meaning is completely disconnected from the needs of human biology, despite the requirements of rational culture.

Notes

1. Some sources and discussions of dreaming in historical and anthropological contexts can be found in Tedlock (1987), Lincoln (1935/1970), Kelsey (1968), O'Flaherty (1984).

2. Indeed, many conventionalists like to fancy themselves as 'critical theorists', but their uncritical acceptance of convention as the only modality of signification renders them as merely conventional rather than critical.

3. I am using the term 'object' in this sentence in the general sense, not in the specific context of Freudian 'object relations' theory. Object relations is concerned with the individual's relations to inner affectively charged representations of parents and others.

4. When Einstein died, a doctor hoped that his brain would provide tangible evidence of genius, and so removed it for examination. But it proved to be 'unremarkable'. No relativity lobe was ever found.

5. Brain researcher Terrence Deacon has claimed that the triune distinction should be viewed more as functional than phylogenetic.

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