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Chapter 1. Styles of Thinking

§ 1. Dawns of day

Night is dead – we killed her

To find traces of the night, we must travel far. Flying over Northern Canada, from one metropolis to the next, amidst endless darkness beneath, some sparkling lights may be discerned, twinkling anthropogenic stars radiating towards us from the freezing depths – craving for help almost, for communication. It is undoubtedly very dreary and cold down there. The sight invokes memories of a past we never experienced, when small bands of humans spent their lives in clearings of light and rudimentary comfort. Now, we are approaching the moment when one gigantic global network of light bulbs will cover the earth. We do not have to experience cold any more. In darkness, we no longer have to wait desperately for the dawn of day. The day has expanded further and further, at the expense of the night, and the latter has retreated into inhospitable areas, and even there she is no longer safe. Our artificial days have marginalized the night, thus depriving us of a basic experience. Notably city dwellers live continuously in “enlightened” environments. The night has been eliminated by neon flooding. It seems impossible to imagine that, until quite recently, historically speaking, night was still night (Lacan 1991/2001, p. 41). Night became memory, a reserve. We only see the immensity of the starry sky when we, temporarily and deliberately, by way of intermezzo, leave the metropolitan ambiance behind. As metropolitan novelist Michael Crichton phrased it: “Modern city-dwellers cannot even see the stars at night. This humbling reminder of man’s place in the greater scheme of things, which human beings formerly saw once every twenty-four hours, is denied them” (Crichton, 1988/2002, p. xii).

The starry expanses, which inevitably invoke in us a sense of awe and admiration, have been erased. The morning likewise has died. We now decide for ourselves when the break of dawn commences. Now that daybreak has been transformed into an event of relative significance, as a consequence of clock-time, it became all the more difficult to realise that, besides the normal dawns we know from daily experience, there are also moments of dawn of much greater significance. Terms like day, night and daybreak do not refer exclusively to the rotation of the earth around her axis, but also to human culture as a whole. Moments in history can be pointed out, when a new epoch, a new way of thinking, suddenly commences.

In *Kleine Weltgeschichte der Philosophie*, one of the first philosophical books I myself once read (and which therefore, for me at least, became a book of dawn, a moment of awakening), Hans Joachim Störig (1961) brought a cultural daybreak of this type, a philosophical dawn as it were, into the spotlight. About 550 B.C., according to Störig, the world suddenly began to think. At different locations, in China and India for instance, but also along the shores of Asia Minor

and Southern Italy, on the edges of the Greek sphere of influence (Magna Graecia), the world became conscious of itself. In the West, a whole new mindset emerged that summoned humans to put an end to mythical thinking (i.e. the tendency to attribute changes and events to supernatural powers). Philosophers (itinerant sages) hit the dusty roads to articulate fundamental insights in the form of maxims, such as: “for every change, there is a natural cause” or: “truth is correspondence between thinking and being”. What was remarkable, however, was that this awakening was a worldwide phenomenon. Störig emphasises the global scope of the transition. The rise of Greek thinking was not a stand-alone event. Buddha, Confucius and Lao-Tse were contemporaries of Parmenides and Heraclitus, as were Jeremiah and Zarathustra. It was as if thinking *as such* suddenly came into existence (Jaspers 1949).

This event, that at several places on earth, more or less simultaneously, but independently and at great distances, consciousness suddenly seemed to make a leap, is so miraculous, Störig argues, that we find it difficult to consider this as mere coincidence (1961, p. 140). Especially because thinking, once spurred into action, never completely expired again and even managed to reach impressive heights in a short period of time. In Greece, mathematics was suddenly practiced on a remarkably advanced level and it was only a thousand years later that Greek thinking came to a halt. After a whole millennium, its spiritual energy finally seemed spent. As if a spiritual climate change had occurred that was to last for about a thousand years and then extinguished. Jacques Lacan, speaking of Greek thinking, likewise refers to this worldwide intellectual awakening as an exceptional event without precedent, but above all as a global event, a global “choir” that arose more or less simultaneously in various cultural regions (Lacan 1991/2001, p. 100). In the history of thinking, of human culture, of consciousness, there appears to be a limited number of psychic daybreaks, moments of commencement when a new style of thinking suddenly begins to hold sway over human consciousness.

§ 2. Different times, different thoughts

The way we experience, investigate and interact with reality has been subject to drastic changes in the course of history. The world of Plato was different than that of Jesus, that of Jesus different than that of Newton, that of Newton different than ours – this seems to speak for itself. Less obvious is how we are to conceive the dynamics of such changes. Are these changes occurring gradually, or can we pinpoint radical turns, punctuating periods of relative stability? Is it true that an increase of pace in the history of thought can be discerned, or is this an optical illusion? That is, if we have the impression that, in the distant past, things developed at a much slower pace than in the seemingly turbulent present, this might be due to the distance in time, so that we observe events with historical

myopia – with the implication that the apparent stability or tenacity of processes in the past only exists in the eyes of biased beholders.

Styles of thinking can be discerned in the history of thought. The term “style of thinking” refers to the way we observe, manage, modify and interpret reality. “We” refers to human beings in general, although special attention will be given to certain spokespersons of this “we”, to authors and witnesses who articulated a particular style of thinking in a recognisable and convincing way, giving it a voice and a face: scientists, artists, politicians and other actors who left tangible and documented traces. The concept of style draws attention not to individual elaborations, however, but rather to the general momentum, the typical profile pervading individual words, gestures and actions. Each style of thinking builds on a grounding concept, a basic conviction, which expresses itself in particular ways of observing, deliberating, building and acting. During a certain period of time, a particular style manifests itself in a wide variety of cultural domains: science, philosophy, art, architecture, religion, politics, medicine, economics, sexuality, ethics, and so on. A style arises in a particular location, from where (after a period of incubation) it diffuses relatively quickly across a cultural zone, achieving dominance and persistence, although eventually every style is bound to expire. At a certain point, a style of thinking will be eliminated and replaced, although it may briefly resurge in later times. The beginning is a kind of mental leap, a moment of discontinuity – we recognize truly important transitions by their dramatic speed (Spengler, 1918/1923, p. 37). It is more than just a philosophical event, although philosophical insights may provide a concise articulation of the transitions at hand. This is how we could define the task and ambition of philosophy: to articulate or question the style of thinking of its own era in a convincing manner and to work-through its grounding idea, its basic conception, its key philosopheme.

This study is a thoroughly revised version of a previous effort to develop a styles-of-thinking perspective on human history, written in Dutch (Zwart 2005a). Again, I will focus on three styles of thinking in particular, namely the Apollonian, the Magian and the Faustian style, building on Oswald Spengler book *Der Untergang des Abendlandes* (1918/1923), who borrowed his ideas partially from others. My use of his methods and concepts will be non-dogmatic, however, for the goal is not to duplicate or gloss his work, but to elaborate it further. The styles-of-thinking concept is a collaborative idea, developed by multiple authors and thinkers, and although Spengler’s elaboration proves very inspiring, I will not necessarily follow him in all details.

The basic idea of the Apollonian style entailed that a perfect geometric structure could be discerned in reality, conceived as cosmos. The world as cosmos (literally: order or ornament) consisted of concentric spheres at the macro-level and was composed of perfectly regular three-dimensional shapes (“elements”) at the atomic level. Σφαίρα is the Greek word for sphere or globe. Politics, ethics, medicine and art were to act in accordance with nature, seeking to realize this perfect, spherical, harmonious order in human existence. This basic idea largely

determined the way in which Greek (Apollonian) mathematics developed, for instance, but we also recognise it in the way in which leading Greek scientists, politicians and artists worked and acted. Thinking and acting were “affected” by Apollonian logic. Its basic phrase or philosopheme can be summarised as “Act in accordance with nature” (κατὰ φύσιν), which basically implied that one should act and think spherically, so as to foster harmony and balance. Political actors wanted to expand their “sphere of influence”, in a literal and spatial sense, working towards a final state of stability. The Roman Empire can be seen as the realisation of the spherical idea in the political domain, but the grounding Apollonian idea also largely determined the basic experience of space and time. The cosmos was a universe on a human scale, neither infinite nor immense. The Apollonian style held sway during a certain period in history, but was never undisputed. Every dominant style has to compete with antagonistic rivals: initially the Dionysian style, later the newly emerging Magian style of thinking.

The Magian style can likewise be summarised in a compact formula or philosopheme, namely: “Prepare thyself for the advent of the great transition (e.g. the coming of the Kingdom of Heaven)”. Individuals withdrew from the world to live a life of detachment, in order to optimally prepare themselves, via virtuous conduct, ascetic practices and spiritual exercises (preferably amidst equally-minded peers) for the dawning of a completely different way of being, a wholly different world: a decisive event which, however, could not be actively brought about by the individuals involved. They basically had to *wait* for it to happen, and prepare themselves. The central theological category was the idea of grace. At the political level, Magian thinking produced the so-called two kingdoms doctrine, not unrelated to the concept of a double (a natural and a spiritual) truth. Important scholarly Magian practices were numerology, astrology and alchemy. In fact, Magian mathematics *was* numerology, Magian astronomy *was* astrology, Magian science *was* alchemy.

The basic formula of the Faustian style can be summarised as “Will to Power”. In the scientific domain, this energetic style of thinking manifested itself in the concept of the experiment: a research style which was decidedly more active, violent and aggressive than the contemplative, respectful consideration of the perfect κόσμος characteristic of the Apollonian style, or the adoration of the universe as a mystery, from where signs may speak out to us (considering the movements of stars and constellations as a divine alphabet), characteristic for the Magian style. Faustian scientists aim to control natural phenomena. Their will to know equals will to power: the desire to modify, adapt and exploit. At the political level, Faustian thinking fuelled the formation of nation states; and on the ethical level we recognise it in the interminable conflict between duty and desire.

Finally, we reach the present. Now, the question will be whether, around the year 2000, we have entered a new era, a new, post-Faustian style of thinking? And if so, how to characterise its basic profile? In other words, our reconstruction of previous styles of thinking finally results in a diagnostic of the present. Ultimately, the significance of a historical retrospect resides in the conviction that

a new style of thinking has begun to dominate our world of experience. We have changed, although we may not fully realise it as yet. Compared with, for example, the 1950s or the 1960s, the conditions for cultural development have dramatically altered. The nation state gave way to globalisation, while laboratories became entangled in global data networks. For many people, in the face of the current crisis, future prospects are becoming increasingly uncertain. The final chapter is an effort in philosophical anticipation, resulting in a prognostic foresight.

§ 3. Epistemological epidemiology

The style-of-thinking concept suggests that, in the course of history, abrupt and fundamental changes can be discerned in the way in which reality is experienced, investigated and depicted, moments in time when reality suddenly manifests itself in a completely different way. Each style has its own profile, elaborated in various domains and exemplified by various cultural expressions. A style is especially recognisable in basic mental functions, e.g. in the ways in which reality is opened-up, perceived, categorised, measured, in the way scientists, artists and politicians allow reality to appear. A style of thinking begins as a local phenomenon, but may spread remarkably fast. The pattern of diffusion can be described in epidemiological terms, in the sense that individuals may act as “carriers” of the cultural epidemic, but also in the sense that a style of thinking can be latent or virulent. The (comparative) analysis of styles of thinking amounts to a scholarly practice that can best be described as epistemological epidemiology.

The emergence of a new style cannot be considered a mere effect of historical causes or influences. Rather it entails a radical rupture with the foregoing, an intellectual mutation, a quantum leap, a move away from previous forms of thought, a moment of openness and creativity, but also of despair, because the whole world suddenly seems out of joint. A new concept takes the floor to which contemporaries seem remarkably susceptible, an intuitive idea which suddenly seems remarkably convincing. Once introduced, the style begins to propagate through various routes. From a limited number of isolated hotspots, it reaches new plateaus. Initially, a style is something quite marginal, seemingly coming from elsewhere. Increasingly, however, the new intuition manages to take root in the folds and margins of the established mindset. Sooner or later, the new concept affects and is adopted by the socio-cultural elite. The spread extends in two directions: from below (as a spontaneous revolt) and from above (as a politico-cultural campaign). Although there will be fierce resistance, and sometimes even immunity, a new unanimity, a new consensus seems to evolve amongst a relatively large group of individuals. Something new and foreign suddenly becomes self-evident and is actively taken up by scientists, artists, philosophers and politicians.

Yet, the unanimity is never all-embracing. There will always be lingering discontent in the new culture, a desire for other possibilities, things that once

were, or thing that are still to come, cultivated by antagonistic authors, who perhaps are already preparing the way for a future style of thinking, as voices in the desert, or as nostalgic spirits, curators of a ruined past – or combinations (coalitions) of multiple forms of recalcitrance. What is important, however, is that, even in contradiction and resistance, the profile of the dominant thinking style is inevitably visible, so that they provide a photographic negative as it were. Each style, in other words, has its antipode, its inverse, its moment of antithetic negativity. Yet, critics unintentionally reinforce and unwittingly endorse the evidences of the ruling style, which remains their unescapable horizon.

The chronic friction or struggle between the dominant style and its recessive rivals may also become an introspective battle. Leading scientists, artists or politicians rarely identify themselves wholeheartedly with one specific style. Often it is possible to distinguish a different voice, a latent “alter ego”, in addition to the dominant (manifest) epistemological “ego” of the person in question. An epistemological unconscious may follow our intellectual activities as a shadow. Newton (whose case history will be discussed more extensively below) not only practiced modern (Faustian) physics and mathematics, but also devoted years of work to “Magian” practices such as numerology and alchemy – and he was not the only example. His case is typical rather than exceptional. In other words, the styles-of-thinking concept is not only of historical, but also of psychological (and biographical) significance. The internal conflict between styles of thinking can lead to symptoms of paralysis and “epistemological neurosis” (Zwart 2008, p. 20), but it may also, under certain circumstances, boost scientific or other forms of intellectual creativity.

How to identify a certain style or mindset? How can we analyse and characterise a style? Some provisional methodological guidelines can be formulated that will be elaborated further in the course of this book. The first methodological rule indicates that, in order to grasp the epistemic profile of a particular style, we must take a step backwards and return to the beginning, the moment of outbreak of the particular style, the decisive radical innovation, a text, event or practice that can be designated as the birth place of a style. We must retrace the original context of discovery because it is there that the new style can be found in its purest form, in *statu nascendi*, free from exploitation and contamination. A second methodological indication is that, to clarify the epistemological profile of a particular style of thinking (and to uncover its grounding idea), we must confront and compare it with other (former or later) styles (i.e. comparative epistemology). Thirdly, we need to pay attention to instances of resistance, to discontent in a particular style, because the spirit of the dominant style is present there as well. Unwittingly and unintentionally, critics likewise become infected by the basic evidences of the style they claim to attack. And a final provisional rule is that we should not limit our research to one cultural domain, but rather detect the profile of a particular style of thinking in diverse cultural manifestations, such as research practices, works of art, political

institutions and literary genres. The manifestation of a style in one domain can help to clarify its specificity in another domain, and vice versa.

§ 4. Oswald Spengler and the concept of style

As said, Oswald Spengler (1880-1936) is a prominent spokesman for the style-of-thinking concept, to which he devoted his impressive *Decline of the West (Der Untergang des Abendlandes, 1918/1923)*, a book which describes the morphology of styles of thinking similar to how Alexander von Humboldt (1845-1862) characterised the physiognomy (the *Gesamtbild*) of landscape types. In the history of the West, three epochs can be distinguished, Spengler argues, the Greek, the Arab (or Byzantine) and the Germanic period, and each epoch has its own characteristic style. While in biology “morphology” is defined as the study of the form and structure of organisms, Spengler’s ambition is to study the forms and structures (the basic profile or *Gestalt*) of cultures and civilisations as they emerge, flourish and decline in the course of history. His comprehensive analysis aims to discern consistent patterns in their rise, flowering and waning, resulting in a dialectical genealogy of worldviews. Every culture begins as a robust but small-scale phenomenon, which will inevitably reach a more extended plateau and develop into a full-scale civilization, affecting hundreds of thousands of people. In other words, every true culture tends to expand, to thrive, to urbanise, and to develop into a world culture. This means that a culture will migrate from its local context of discovery towards life on a grander scale, where great history is written and made. Ultimately, however, every style is destined to fall victim to exhaustion and decadence. The average lifespan of a style is one millennium.

The development of culture into civilization is an inevitable urge, comparable to the urge to grow in nature, Spengler argues. Apollonian thinking becomes civilization in the form of the Roman Empire. At the same time, Jesus of Nazareth already wanders along the dusty roads of a Roman province with a small number of companions to proclaim the advent of the Kingdom of Heaven, representing a different style of thinking, referred to by Spengler as Magian, a style that was experiencing its primal, budding, subliminal stage. However, when Paul addresses his letters to Christian communities in big cities, Magian thinking already began to civilise, i.e. to assume urban and global proportions. And when the Christian Church establishes itself as the “general” (catholic) faith, as the World Church of Rome, this seals a whole process. The spectacular pace in which Islam later conquers the Arabic world, according to Spengler, demonstrates that Apollonian thinking is no longer capable of putting up significant resistance against this subsequent exemplification of the Magian style.

For centuries to come, Christianity will remain Magian in character. At a decisive moment, however, in the wake of the year 1000, but notably in the 13th and 14th century, a Faustian impetus begins to affect the Christian mindset, from within as it were. The Faustian style begins to take shape in Gothic architecture,

but also in scholasticism, and this culture will gradually civilise as well. This process reaches its peak in the 19th century, in the form of the industrial revolution and the rise of the modern, technological age – the era of the machine. The civilization process materialises in the rise of world cities: Athens and Rome (representing Apollonian civilization), Alexandria and Byzantium (representing Magian civilization), and Paris, London, Berlin and New York (representing Faustian civilization). Immense metropolises reduce the rest of the landscape (including cities from previous epochs) to provincial areas. Inhabitants of Faustian metropolises become the urban working masses. Characteristic of civilisation, in addition to the rise of large urban centres, is the tendency towards imperialism, radiating from these immense centres – “Imperialismus ist reine Zivilisation”, as Spengler formulates it (1918/1923, I, p. 50). While culture was introvert, civilisation is extravert. Civilisation is driven by an irresistible drive towards expansion (“Drang zur Ausdehnung”). A civilisation tries to bring the whole world into its sphere of influence. I will now present Spengler’s compelling, but at times unsettling views in more detail.

Spengler’s panoramic vision sees history as a sequence of cultures, each of them driven by a grounding idea, emerging, propagating and dissipating like majestic waves, while in the course of time, each culture (commencing as a local phenomenon) inevitably evolves into civilisation (a global phenomenon). A culture’s grounding idea determines the possibilities of self-expression of those affected by it (I, p. 21). All cultural expressions convey one and the same principle or transformative idea, and world history is basically the actualisation (ἐνέργεια) and unfolding of a series of grounding ideas. The style of a culture reflects a way of being (“Daseinsart”, I, p. 405), erupting suddenly, announcing an unexpected transmutation. This moment of eruptive commencement can be discerned in the history of every culture, occurring without a visible cause or influence (II, p. 37). Spengler mentions, for instance, the sudden rise of Egyptian and Babylonian cultures, which he sees as completely unlike their predecessors (II, p. 40), resulting in a new style of living, and this involves a new language, a new technique of writing, and sudden population growth. Whereas archaic cultures were lost in immense natural landscapes, for Chinese, Egyptian and Babylonian cultures nature suddenly becomes a backdrop. The new style emerges as a revelation, a destiny, emanating from the primal symbol of this culture (I, p. 506). For Apollonian thinking, Spengler argues, the basic symbol is the human body (σῶμα). For Magian thinking, it is the world-cavern with its gleaming ornaments. Finally, trunk-like pillars and pointed arches are the Faustian leitmotiv, pointing in the direction of its basic symbol: infinite space. The substitution of the Ptolemaic worldview by the Copernican heliocentric system, for instance, resulted in a dramatic widening of the spatial horizon. The words that are used to refer to the prime symbols of a culture (σῶμα, πνεῦμα, force, mass, *Wille*, etc.) are pure signifiers (“Wortzeichen”), evoking a very particular meaning, and basically untranslatable.

A series of stages must be traversed by all cultures, in an ordered sequence (I, p. 3). First of all, there is the small-scale beginning, as we have seen, with its purity of style (I, p. 267). Then, there is the moment of joyous booming (“Aufschwung”), when the basic form is skilfully mastered. Gradually, we witness a standardisation of form types. The civilisation stage consists in conscious megapolitan planning. Contradictions inevitably arise, giving rise to hostility and resistance. And finally, there is an episode of self-destruction. These sequential stages basically follow a dramatic curve (Freytag 1863; Zwart 2017a, p. 230): from exposition (the sudden emergence of a basic form or symbol), via a rise of dramatic tension, we finally witness disruption, downfall and denouement. A common idea permeates all cultural domains: politics, mathematics, ornamentation, philosophy, architecture, drama, craftsmanship (I, p. 7). Thus, there is an affinity between the Greek city-state and Euclidean geometry, between differential calculus and absolutism, between contrapuntal music and early capitalism.

There is no central privileged position: all domains are permeated by the same style, the same program, the same λόγος, whether it is art, religion or science, finance, book-keeping or the technology of heating. One single idea transforms the world-view of anyone affected by it. Civilisation is the fulfilment or finale of a culture, revealing its inevitable destiny. Civilisations entail a transvaluation of all values (I, p. 451), affecting and eliminating all rival forms. Every civilisation remoulds the forms of previous or marginalised cultures, with the help of technology, politics and industry. Civilisation puts an end to rural village life, resulting in metropolitan nomadism. In the end, however, the process of civilisation entails cultural self-destruction through megapolitan decadence, self-contempt and nihilism.

This transition from culture to civilisation also explains what is happening today, Spengler argues. Take science, for instance, where small-scale experimental culture gave way to science as a global enterprise. In the era of Faustian civilisation, scientists become factory workers (I, p. 457), carrying out collective scientific projects, while the urban masses become increasingly sceptical and suspicious about science. On the positive side, however, Spengler notices how, in late Faustian civilisation, after decades of hyper-specialisation, research fields are now rapidly converging. This process of convergence remained unnoticed for quite some time, Spengler argues, because most philosophers are literati who no longer familiarise themselves with the actual progress and problems of the natural sciences. In the 19th century, physics and chemistry were alien to one another, but in the 20th century, they can no longer be treated individually, as is evident in fields like spectral analysis, radioactivity and thermal radiation (I, p. 553).¹ The chemical elements evaporate into

¹ “Die einzelne Wissenschaften ... nähern sich mit wachsender Geschwindigkeit. Wir gehen einer vollkommenen Identität und Verschmelzung entgegen... Man hat diese Konvergenz nicht bemerkt, weil seit Kant und eigentlich schon seit Leibniz kein Gelehrter mehr die Problematik aller exakten Wissenschaften beherrschte. Noch vor

mathematical variables and complex relationships, while physiology is becoming indistinguishable from organic chemistry. Civilisation entails a shift from metaphysics to technology, supported by millionaires and wealthy funders, but mistrusted by the masses, and this is also visible in research, where states and companies finance large-scale research enterprises, notwithstanding widespread public discontent.

This difference (between culture and civilisation) is also the difference between the Greek palaestra and the Roman circus, Spengler argues. While in the palaestra citizens themselves were the competitors, in the Roman circus the urban masses became a mass audience. Something similar applies to the art market, where artworks nowadays are no longer considered as ends in themselves, produced by tormented geniuses, but as products for the market. Faustian art has already fulfilled its mission, Spengler argues. After Wagner the composer, Baudelaire the poet and Van Gogh the painter, we no longer see artists with an inescapable vocation. Music, poetry and art have ceased to be spiritual necessities (I, p. 379). They become products of an art industry, where art is produced to meet the demands of an insatiable global market.

It is no coincidence, Spengler argues, that Marx's *Critique of Political Economy* appeared in the same year as Darwin's *Origin of Species* (in 1859). Both documents articulate one and the same Faustian principle, the Will to Power. Whilst Magian desire was to *know* the future, Faustian desire is to *shape* the future. Faustian civilisation claims to be tolerant, but on closer inspection it is rigorously *intolerant*, overtly hostile towards all traditional cultures, marking them as provincial, outdated and doomed.

The first wave of culture described by Spengler unfolds during the so-called *Achsenzeit*, already mentioned above, five centuries B.C. Unfortunately, Spengler does not have much to say about what came before: archaic culture, although he does mention that archaic cultural forms (art, dance, music, poetry) were meant to adjure natural forces or deities ("*Beschwörung*"). Of the songs and dances of archaic cultures, hardly anything remains, however, and the little that remains concerns mostly the ornamental side. He does have something to say, however, about totem and taboo. Although these two words were derived from completely different parts of the globe (the term totem was adopted from the Ojibwa / Chippewa people of North America, while the term taboo came from Tonga and the Fiji Islands), they become interconnected. While totem refers to lineage, taboo refers to prohibitions. According to Spengler, these two dimensions of archaic culture also recur in later epochs. They are connected with being and thinking, with politics and secret cults, with agora and acropolis, with villa and shrine, with castle and cathedral (II, p. 137). After Columbus and Cook, colonialism unleashed unequal collisions between archaic cultures and Faustian

hundert Jahren waren Physik und Chemie einander fremd; heute sind sie einzeln nicht mehr zu behandeln. Man denk an die Gebiet der Spektralanalyse, Radioaktivität und Wärmestrahlung" (I, p. 553).

civilisation, between shamanism and Faustian industry (e.g. Native American Indians in their resistance against the United States).

Spengler has more to say about Egyptian culture, which he sees as a sublime precursor of Apollonian thinking, with its huge silent symbols. A pyramid is a huge, geometrical enclosure of a secret path. And indeed, according to Spengler, the basic Egyptian symbol is the symbol of the way. Egyptian existence is that of travellers travelling in one direction: towards death, and the sacred way leads through pillared rooms into the chamber of the dead, the processional march of the priests. Egyptian buildings are not temples but paths, enclosed by giant masonry.

Apollonian, Magian and Faustian culture are the key protagonists of Spengler's book. Apollonian culture as a concept was familiarised, although not coined, by Friedrich Nietzsche, as counterpart of its Dionysian rival. Although Spengler is clearly influenced by Nietzsche, his attitude towards the latter is fairly ambivalent. He sees Nietzsche as a romantic, exceptionally weak in mathematics (I, p. 472), who dwelled in a world of books and "did not dare to look reality in the face" (I, p. 48). Nietzsche adopted the Apollonian-Dionysian duality from Richard Wagner, a man of action, impact and boundless creativity, whom Spengler greatly admired. Wagner's music addresses the grand challenges of Faustian civilisation, Spengler argues. The *Ring des Nibelungen* is about capitalism, Siegfried is a young worker, Fafnir a capitalist, and Brunhilde an emancipated woman (I, p. 480). It is no coincidence of course that Wagner's contemporary Friedrich Engels was likewise interested in, and likewise wrote about, Siegfried and the Nibelungen-saga (Engels 1840/1962). Wagner explored the Apollonian-Dionysian conflict as a historical mirror to probe the Faustian present. Whereas Dionysian culture entailed intoxication (I, p. 246), Apollonian culture fostered temperance and *κάθαρσις*. And while Augustus represented the transition from Apollonian culture to Apollonian civilisation, Emperor Trajan (during whose reign the Pantheon was built) represented the turning point from Apollonian to Magian civilisation (I, p. 527). For Spengler, the Pantheon was not only a perfect geometrical realisation of the Apollonian idea, but also the first Magian cavern, the earliest of all Mosque (I, 274). The master-masons of the Pantheon were in fact Syrians, Spengler emphasises, coming from the East.

Magian thinking arose in the time of Augustus, between Nile and Tigris, Black sea and South Arabia, resulting in typically Magian cultural activities, such as algebra, astrology and alchemy. Signature Magian items are mosaics and arabesques, caliphates and mosques, sacraments and scriptures. Magian thinking entails a number of key ideas, such as the millennial time-span which evolves from the creation of the world up to the advent of the saviour, so that calendars and horoscopes (determining the question *when*) are important Magian devices. Magian space is numinous and spiritual, and a key symbol is the Magian copula, creating a cavernous spatial experience inside. Actually, the Magian church is a convergence of two forms, combining an Eastern copula with a Western basilica, giving rise to a domed basilica (I, p. 282). The Magian dome is ornamented with

sparkling mosaics and arabesques, drowning the cavern in a seductive fairy-tale gloom. Another key Magian symbol is the enclosed magical garden. There is only one Magian God, so that Magian religiosity entails a duality, a profound tension between light and darkness. Moorish culture in Spain represented the apex of Magian civilisation, Spengler argues.

The Magian-Arabian wave emerged during the first millennium and adopted the Greek language as its lingua franca. From Armenia to Arabia, from Persia to Alexandria, as Spengler phrases it, a uniformity of artistic expression could be discerned across religious borders, reflecting a homogenous depth experience: the cavernlike sense of space (“Höhlengefühl”). Although Magian architecture employed Apollonian means (e.g. columns), it did so to express something completely antagonistic. The interior is now far more important than the exterior and the copula encompasses everything. Columns have moved towards the inside, so that the Magian church is an inversion (“Umkehrung”, p. 233) of the Apollonian temple. Apparently, around the time of Christ’s birth, a new sense of space emerged, which also expressed itself in the domed chambers of Caracalla’s baths. In the Magian world-cavern (“Welthöhle”), golden backdrops created an unearthly gleam. Magian thinking proliferates quite suddenly from East to West, seeing history as a drama of redemption. It is the world of alchemy and of thousand and one nights. In the copula domes of Byzantium and Ravenna, the Magian experience achieved its purest expression, while Islamic vehemence carried the development to its end, turning Hagia Sophia into a Mosque. Similar to the cults of Isis, Mithras and gnosis, the philosophy of Plotinus and other Neo-Platonists were Magian. Plato himself was already sensitive to ideas coming from the Magian East, as is noticeable in the Magian atmosphere of the simile of the cave, inhabited by Magian slaves, fascinated and spellbound by what they see and hear inside.

The Romanesque culture of the early medieval period was a mixture of Magian and Faustian elements, Spengler argues. A battle was raging between established Magian motifs and unconsciously active new ones. The Carolingian Aachen Chapel, for instance, is no longer a Mosque, but not yet a cathedral either (II, p. 102). The great city of Byzantium exemplified the transition from Apollonian to Magian (II, p. 104), while the Crusades were Faustian offensives against their Magian predecessor. In medieval France, the battle between Magian and Faustian principles culminated in the Grail saga, and in the war against Catharism. Around 1000, Italy was still under the sway of the Byzantine taste in the East and the Moorish taste in the South. Yet, the golden backdrop would inevitably give way to perspective: the artistic technique which expressed the budding Faustian experience of infinite space. As a result, the temporal horizon dramatically broadened (II, p. 32). Joachim of Floris (c. 1145-1201) replaces Magian dualism with the concept of the three world eras. The polarised world of John and Paul (with the Apocalypse as the great negation) gives way to the idea of a third epoch: the negation of the negation. Joachim is the first thinker of a Hegelian stamp who shattered the dualistic worldview of Augustine and

introduced a new style of thinking, seeing medieval Christianity as a third term (the age of the Holy Ghost), superseding the Age of the Father and of the Son (represented by the Old and the New Testament).

There is no history of science as such or of mathematics as such, Spengler argues, and we can only meaningfully speak about the histories of Apollonian, Magian and Faustian mathematics (I, p. 60). Doric temples, Magian domes and Gothic cathedrals are mathematics in stone: they are basic forms, shaping a world-order. The Faustian cathedral is a forest (“das Wälderhafte der Dome”, I, 512), a view which he shares with Hegel and Wagner. Organ music gives voice to yearning for the forest, and visiting a cathedral is both a religious and a mathematical experience. While a temple embodies Apollonian geometry, and a copula Magian mathematics, Nicolas Cusanus (engaged in Catholic diplomacy and one of the most influential personalities of his time) introduced two key principles of Faustian mathematics: the infinitely large and the infinitesimally small. Faustian mathematics studies things not as they are, but as they become and behave, with utmost precision, down to the thousandths of a second.

The key principle of Faustian literature is the confession. All great Faustian artworks (the work of Dante, Goethe’s *Faust*, Hamlet, Tristan, Parsifal, etc.) are elaborate confessions. Goethe’s works are fragments of one single confession (I, p. 14, p. 173). And while every Rembrandt portrait is a biography, a Rembrandt self-portrait is a confession (I, p. 339). Thus, we notice a sequence: from nude statue (Apollonian), via enigmatic icon (Magian) to Faustian portrait. This is also reflected in Faustian grammar, Spengler argues, where the Apollonian *sum* gives way to the *I am*. The Faustian spirit remoulds (“umprägen”) its own grammatical material. The coming of the “I” (e.g. *I have done* in lieu of *feci*) inevitably results in a dynamic instead of a static (Apollonian) syntax, preparing the ground for the genre of the confession (I, p. 338). The grammatical “I” is a portrait in itself, Spengler claims.

There is an obvious connection between Faustian music and infinite space, Spengler argues, as is exemplified by the organ fugues of Bach, the nocturnal sonatas of Beethoven and the infinitesimal tone-world of Tristan. Indeed, for Spengler, Faustian art culminates in Wagner, whose art works entail a musical bombardment, while he sees ancient Pergamon, with its towering altar and gigantomachia frieze, as the Apollonian counterpart of Faustian Bayreuth (I, p. 376). Wagner’s *Ring* is in the realm of music what the American skyscraper is in the realm of architecture. Wagner had to go to the limits, exploiting and spending his full energy and talent on his music. His motifs emerge from the deepest depths, are briefly touched by a flash of sunlight, and suddenly coming quite close, to vanish again in a distance of strings: a mixture of brutality and refinement. But we notice a similar space experience in the metropolitan poetry of Baudelaire, with its endless streets and avenues, and its synaesthesia of sounds and colours. While the key symbol of Apollonian art was the nude statue, Faustian art is exemplified by soaring cathedrals, in combination with the theology of dogmatism and the diplomacy of Absolutism. Faustian music is steeped in the

deep midnight broodings of Faust's study, and one and the same atmosphere is discernible in Rembrandt's etches, Beethoven's tone colours and Wagner's total works of art. Parsifal is a cathedral of sounds and voices. Everything Faustian is pervaded with the adamant will to overcome all resistance. Its counterpoint is the pastoral sentimentalism of shepherdess operas, Fragonard's lush garden paintings and porcelain.

Spengler devotes much attention to the "problem" of the Renaissance. On the one hand, the Renaissance seems a revolt against Faustian forest-music, a return of Apollonian temperance, endorsed by a select handful of elitist scholars and humanists. The Renaissance is anti-Gothic, but not genuinely Apollonian, however. The apparent Apollonian revival is an illusion, as is indicated by the fact that the Renaissance sense of space is dominated by the perspective. As a counter-movement, the Renaissance is vehemently anti-Gothic, but on closer inspection it is a contradiction in itself, for in the end the Faustian will prevails, and the Renaissance gives way to Mannerism and the Baroque, with its swelling, voluminous, powerful, muscular, restless, wrestling male and female bodies: counter-Renaissance *pur sang*.

Spengler sees the Baroque as a continuation of the Gothic / Faustian principle, having become all the more powerful and explosive in its struggle against Renaissance contempt. It is an outbreak of discordance ("Zwiespalt"), comparable only to the Dionysian revival against the Apollonian world-experience in ancient Greece. The Rabelaisian body celebrates the return of a Dionysian and medieval festive body. In Greece, this had resulted in the body-squandering orgasms of Dionysus cults. Renaissance art proved a temporary mask, in accordance with the taste of the elite, a deceptive negation. Now, the swelling, obtrusive body was brought in again, consciously and deliberately, against the flow, but conveying the primal strength ("Urgewalt") of its Faustian depths. According to Spengler, the Renaissance is an illusory Apollonian intermezzo, emphatically anti-Gothic, but in a superficial manner and oblivious of its own true nature. The Faustian Real resurges in the Baroque, with its disproportionately large bodies. The Renaissance was a protest ("Auflehnung", I, p. 350) against the Faustian West, but unconsciously the Faustian undercurrent was still very much alive ("der starke Tiefenstrom faustischen Kunstwollens, im Unbewussten der großen Maler", I, p. 350). In reality, the Gothic tradition was never really interrupted. Swelling bodies conveyed a similar message as Jesuit propaganda, namely the ethos of the Faustian Will to power, through struggle, impact and proliferation, as expressed by the Faustian state, by Faustian industry and technology (I, p. 407).

While Apollonian physics is statics, Magian physics is alchemy, with its mysterious substances, such as philosopher's mercury, enabling a transmutation, – the completion of the great work. Secret procedures are performed in nightly cavernous rooms. Faustian physics involves both dynamics and distance. While Apollonian objects are conceived as form and matter, Magian objects are substances endowed with (visible or secret) attributes, but Faustian bodies are

grasped in terms of force and mass. Faustian physics thinks in terms of “force field” and “Angriffspunkt” (“point of engagement”, I, p. 494). While Apollonian science is quiet contemplation, Magian science involves a moment of grace, the transmission of secret knowledge, but Faustian science is active, experimental science, starting from a working hypothesis. Apollonian physics sees atoms as miniature plastic forms, but Faustian physics sees atoms as vibrating and radiating wave-particles.

The Apollonian cause is the *causa finalis*: nature striving towards a final situation of rest and balance. As to the Magian understanding of cause: the Magian sage in his cavern knows only one cause, God the Almighty (II, p. 293) and on this *a priori* conviction, all alchemical techniques are based. Faustian physics, however, sees nature as determined by causal relationships, an idea quite incompatible with the ancient idea of ἀνάγκη. While Magian formulae allow specially gifted individuals to perform miracles, the formulae of Faustian science provide mastery over nature (“Herrschaft”, I, p. 507). The physics of Faustian civilisation is basically a system of signifiers (“Kennzeichen”, I, p. 488, p. 535), allowing scientists and engineers to operate nature as if it were a machine. The Faustian effort to control nature with the help of signifiers (“eine Zeichensprache, der nichts anschauliches mehr anhaftet”, I, p. 544) remains an interminable process, however. Newton himself, for instance, was quite uncomfortable with the (Magian) idea of gravitation as action at a distance, and experienced profound “Unbehagen” while articulating it (I, p. 539). He was seized by this idea, and aspired to master it with the help of his famous formula. And although Julius Mayer’s sudden insight concerning the conservation of energy struck him like a numinous, paralysing religious experience (of the Magian type), this idea inevitably evolved into a rigid concept, cloth in scientific nomenclature.

Ethics likewise reflects the style of a particular culture. Apollonian ethics is care for the Self, resulting in ἀταραξία and ἀπάθεια, and the ideal Apollonian master is “willenlos” (I, p. 399). The ideal of Stoicism is statuesque self-management (I, p. 459), a situation of balance, a statuesque pose. The Apollonian “will” is merely inclination. In sharp contrast to this, Magian ethics urges us to *lose* ourselves, to *forsake* our own Self (τὴν ψυχὴν ἑαυτοῦ, Luke 14:26). While Apollonian ethics strives for self-mastery, Magian conceptions build on the distinction between soul (ψυχή) and spirit (πνεῦμα). There are many individual souls, but the spirit (πνεῦμα) is one and the same. All Magian believers have a soul, but they *participate* in the spirit. Thus, besides the individual soul as the form of the body, there is a cosmic soul or spirit, which we encounter in the compelling gaze of staring icons, in the big staring eyes of Magian portrayals of Jesus, the Virgin and the Apostles. According to Spengler, Spinoza was a late representative of Magian thinking, a stranger to the Faustian style (I, p. 395), elaborating a world-view with only one substance (God), while thinking and extension were regarded as God’s attributes.

Faustian morality is the morality of the ego striving upwards, facing multiple conflicts between reason and will. The Faustian “I” towers up,

mimicking the verticality of high buildings, embodying the Faustian ethic of *excelsior* (I, p. 398). While Apollonian thinking saw the human individual primarily as a statuesque body (σῶμα), Magian individuals saw themselves as part of a pneumatic, spiritual “We”. For Magian thinkers, the Faustian conception of individuals as actively thinking egos would have been something incomprehensible. In a cavernous, fairy-tale ambiance, protected by amulets and talismans, Magian individuals were dreaming about mysterious lands, precious gems, treasure coves, God’s crystal palace, imprisoned apostate stars and the philosopher’s stone. The basic attitude was one of waiting, and the key question of the Magian cavern-world was: “when?”. Therefore, astrology (the art of determining this *when*) replaced the oracle (basically an advice concerning the present: how to retrieve a position of rest?). For Magian thinking, all stands written in the stars. The Apollonian world is a world at rest, consisting of bodily things (as mergers of matter and form). The Magian world is a cavern, where light dispels darkness. In sharp contrast to this, the Faustian world is infinite space, an infinite theatre of energy, force and mass, and the Faustian artwork takes the spectator into infinite space.

There are three Aristotles, Spengler argues. The Apollonian Aristotle is the Aristotle who, in *Ethics* (1926/1982), argues that virtue equals temperance: the mean between extremes. The Magian (Arabian) Aristotle is the Aristotle who, in *De Anima* (1936/1986), hints at the conception of a world-soul (κόσμου ψυχή), while the Faustian (Gothic) Aristotle is the Aristotle of *Physics* (1958/1982), who developed a theory of impetus. These three Aristotles are fundamentally different (II, p. 67). Likewise, there are three Jesuses. The original Jesus was a Provincial, anti-Apollonian Jesus, a contemporary of the ancient cynics, an itinerant teacher whose sayings addressed the provincial lower classes of fishermen and day labourers. The Magian Jesus is the Jesus of the Apocalypse, seated on His eschatological throne during Judgement Day. And the Faustian Jesus is the Jesus of Jesuit exercises, of dogma’s and papal infallibility. Magian thinkers such as Paul and Augustine, Spengler argues, would reject all contemporary Christian theology as either incomprehensible or erroneous (II, p. 68). Faustian Enlightenment is anything but tolerant, for on closer inspection Faustian morality claims tolerance only for itself. Thus, during the Faustian era, the peaceful morality of Jesus (I, p. 441) was re-casted into a moral imperative, imposing itself upon everyone. While Christian morality initially directed itself only to those who wanted to accept this gift of grace (so that Magian preachers were like Magian physicians, offering their spiritual arcana to the willing), Faustian morality is like enforced vaccination. We may likewise distinguish three forms of atheism, Spengler argues: Apollonian, Magian and Faustian (I, p. 530). While Apollonian atheism is joyous and witty, Magian atheism is iconoclastic, and Faustian atheism is dogmatic and intolerant.

For Spengler, the early history of Christianity reflects the transition of Magian (i.e. anti-Apollonian) culture to Magian civilisation. Jesus himself addressed a small-scale provincial audience of villagers and itinerant workers,

but the bigger world of Apollonian civilisation filled him with contempt. The spirit of megapolitan cities was completely alien to him, this preacher from Palestine, and the Apocalyptic idea alone was real to him. The fishermen from Galilee lived far removed from Hellenism, Emperors, circuses and urban noise. Yet, these two incompatible worlds suddenly collide in one of the most compelling Biblical scenes: Jesus before Pilate. It is a clash between Apocalyptic (i.e. Magian) truth and Apollonian reality. Both worlds are profoundly suspicious and hostile to each other. Jesus' statement that his Kingdom is not of *this* (Apollonian) world means that we have to make a choice: it is Apollonian politics or Magian religion, the one or the other. Such a phrase needs no glosses, Spengler argues. For Magian believers, worldly achievements are without lasting value.

Two Jesuses can be encountered in the New Testament. On the one hand the ambulant preacher, equipped with sayings and proverbs, especially addressing the lower, powerless classes, advising them on how to survive Apollonian tyranny and conveying unreserved contempt for Apollonian architecture and politics (One cannot serve two master; Whenever someone harasses you, turn your other cheek towards him; Give unto Caesar what is Caesar's; Be patient, only the salvation of the soul is what really matters; Give no heed to riches or poverty; Do not be anxious about tomorrow; etc.). On the other hand, we witness the Magian Jesus, proclaiming the dawn of the new, post-Apollonian age, the advent of heavenly envoys, the last judgement, a new heaven, a new Jerusalem, betokening a world-change: the end of the present Aeon and the ascension of the redeemed Redeemer. Thus, on the one hand, we read about *his teachings*, on the other hand, we read tidings *of Him*. The itinerant anti-Apollonian teacher becomes the Arisen: a Magian, Apocalyptic figure. The apostles themselves were simple folk frequenting the Temple, but John and Paul transformed the tale of Jesus into a Magian drama, and the whole world was ready to respond to their apocalyptic message.

As Spengler phrases it, a strange excitement ran through the Aramaean countryside (comparable to what the Germanic world experienced around 1000): the awakening of the Magian soul. A moment of arousal, implying that existing reality suddenly lost its import. While Jesus had wandered from village to village, Paul brought the message to the cities of the West, to Corinth and Rome. While the synoptic gospels are predominantly about the anti-Apollonian Jesus (Jesus the Cynic, if you like), the gospel of John and the epistles of Paul are predominantly about the Magian Jesus, breathing the atmosphere of the world-cavern. The Gospel of John suddenly introduces the trinity concept, moreover, revealing that Jesus (λόγος) is only the second envoy, not the final revelation, for He is to be followed by the Comforter: an astounding Magian doctrine, proclaimed by Jesus himself, the final motif of this enigmatic book. What is unveiled here, quite abruptly, is the Magian faith concerning the coming of a new aeon, symbolised by the eye and the letter, giving rise to mysticism and scholasticism and proclaiming the return of the soul to God. This Magian vision is further

developed, through the systematic transvaluation of the texts of Plato and Aristotle, by Plotinus, Porphyry and other Magian thinkers.

With the phrase “Give unto Caesar what is Caesar’s”, Jesus distances himself from the arch symbol of Apollonian economy: the coin (II, p. 610), a beautiful, spherical body, a merger of matter (gold, silver, nickel) and form (the imprint: a symbol, a stamp). While rural economy was basically barter, the Apollonian city was a money market, where life evolved under high tension. In Apollonian cities, slaves were likewise bodies treated as capital. When Jesus announces the destruction of urban architecture (Mark 13), this event will not primarily be caused by active demolition. The envisioned fall of Apollonian cities was prepared by abandonment, depopulation and self-destruction. The archetypal Magian symbol in the domain of finance and economics is the treasure, preferable consisting of precious stones, and preferably hidden in a secret cave, conveying a static idea of wealth, completely antithetical to the Faustian (dynamical) style of money-making, which is based on credit, investments and exponential growth. The Faustian relationship vis-à-vis gold is articulated by Ibsen’s Übermensch John Gabriel Borkman, tormented by the sound of gold hidden in the mountains, idly lying in wait for a goldrush: a Faustian phenomenon *pur sang*, thematised by both Wagner and Marx. The Faustian principle entails a transition from a static to a dynamic (expansive) economy, exemplified by the Faustian firm.

While Apollonian wealth was associated with contemplation, and Magian wealth with magical tricks (allowing poor provincials to become exceptionally rich urbanites overnight), Faustian wealth is closely related with technological inventions, with machines, with intercontinental travel and an exponential increase of production. Faustian money is not a coin, but a function, an upward curve. Likewise, Faustian steamers are mobile cities, travelling across oceans (II, p. 630), *mobilis in mobile* (I, p. 213). The first Faustian machines were already envisioned by late-medieval Gothic monks in their monastic cells (similar to Faust’s study in *Faust I*), but Faustian civilisation eventually entails a rigorous transformation of the world (as in *Faust II*: I, p. 557), giving rise to three key Faustian figures: the entrepreneur, the factory worker and the engineer. While the entrepreneur is the owner, and the worker the servant, the engineer is the “priest” of the machine. But the true “Herrin” (II, p. 634) of Faustian civilisation is the machine itself.

Nowadays, machines are becoming increasingly less human, however, increasingly ascetic and esoteric, adorning the earth in a web of interactions (II, p. 630), giving rise to global networks of high finance. According to Spengler, the Faustian metropolis is inherently irreligious (I, p. 531). An interesting characteristic of civilisation, therefore, – and this includes Faustian civilisation – is what Spengler refers to as “second religiousness” (“zweite Religiosität”, II 382). After Enlightenment, rationalism and materialism, religiousness unexpectedly resurges once more (e.g. Swedenborg’s rational mysticism). This

explains why Faustian civilisation is not only the era of industrialised warfare, but also of Lourdes, Fatima and immaculate conception.

The profile of these three cultural styles may also be discerned in the history of writing. Apollonian culture tended not to pay much attention to written documents, favouring spoken language over written materials. The handwritings of philosophers such as Plato and Aristotle were not considered a relic. This stood in sharp contrast with the veneration of sacred script (as the word of God) in Magian culture. In canonical documents, Magian scholars were searching for secret indications and revelations, e.g. the cabbalistic obsession with letters and numbers. For Magian thinkers, the Faustian egocentric concept of intellectual property and copyright would have been absurd, because it is the spirit who elects its authors (II, p. 303), while inspiration was seen as a gift of grace. At first glance, this veneration for ancient script was also adopted by Faustian culture, and a gothic illuminated book of gospels looked like a little cathedral. A typical Faustian invention, however, was book printing, Spengler argues. He sees a definite connection between gunpowder and printing, moreover, between printed books and guns, and the Faustian printing press resulted in a bombardment of readers by intellectual artillery. During the 19th and 20th century, an intimate relationship evolved between warfare and the press. Faustian civilisation gives rise to a third language type, besides the scholastic and courtly idioms of monastery and castle, namely the language of the urban bourgeoisie: utilitarian, megapolitan, intelligent, practical and precise, culminating in stenography as a writing technique employed in offices and companies.

Although Spengler notably focusses on Apollonian, Magian and Faustian culture, he aims to develop a global rather than a Euro-centric view of history, encompassing all continents. As to Chinese culture, for instance, Spengler argues that its basic symbol is the way, but now conceived as Tao. The Chinese way wanders through the world, and its space experience is reflected in Chinese architecture, which is basically garden architecture, with hills, canals, ponds, stones, roofs, gates and bridges in various positions. The world is a garden, but a Chinese garden, e.g. a palace garden, a forbidden garden, a park-scape where garden design, biology, psychology, sculpture and architecture come together. This is also noticeable in Chinese painting, with its attention to ornament and detail. The Russian symbol is different again, Spengler argues: the limitless plain, from which a wooden church with multiple domes suddenly arises. Spengler is also fascinated by Aztec civilisation, with its highways and multi-lingual population. The Aztec city of Tenochtitlan was comparable to Augustinian Rome, he argues. Yet the development of Aztec civilisation was brutally and deplorably disrupted by Faustian expansionism.

It is the task of philosophy to articulate the principle of a particular culture in a concise and comprehensive manner, but this does not mean that philosophy is always up to its task. Notably during civilisation, philosophy tends to regress into an academic specialty. By philosophy, Spengler means “effective philosophy”, not academic trifling. At its highest, philosophy may absorb the

entire content of an epoch, Spengler argues, realising it within itself and then passing it over to be developed further: a role played by Hegel for instance. Preferably, philosophers should not be university professors, however. Rather, they should be politicians, managers, organisers, like Bonaventura, Cusanus or Leibniz, individuals with a real standing in actual life, intervening effectively in higher politics, or advancing the development of technology with their compelling ideas. Spengler considers it impossible to be a genuine philosopher without a solid awareness of what is happening in research areas such as mathematics, physics and governance science. We must not confuse philosophy with lecture-room jargon. For Spengler, notably Nietzsche failed as a philosopher because he was too much given to romantic “Schwärmerei” (I, p. 45, p. 444, p. 446), withdrawing into his private world of words and images: too much of a Romantic to face the real-life challenges of metropolitan existence. Nietzsche was exceptionally weak in mathematics (I, p. 472), while given to dramatization and absorbed in inner experience, so that his aphorisms failed to achieve what he himself referred to as “der großen Stil des Denkens” (I, p. 472). Even in his own field, philology, he only knew the elite ancient world of bookish existence, and despised and feared the real practical world (I, p. 32), both in antiquity and in his own epoch. The real Rome, the city of masons and engineers, was beyond his comprehension. This compared unfavourably with the impact of precisely those Christian thinkers “grand style” (“Christen großen Stils”) whom he despised so much, but who were actually far superior to him, such as Luther, Loyola, Teresa of Ávila or Pascal. For Spengler, even George Bernard Shaw was a more important philosopher than Nietzsche, because he realised that the Faustian Übermensch was exemplified by multimillionaires and industrial tycoons (I, p. 480), men of action with a global impact, whilst Nietzsche himself still associated the will to power with Renaissance daggers and poison.

Philosophy begins as metaphysics, Spengler argues (I, p. 471). Subsequently, as culture evolves into civilisation, philosophy becomes increasingly urban and self-critical, until it finally reaches its ethical period, in which megapolitan existence become problematic for itself, while thinking becomes a profession (I, p. 474). We notice a similar evolution in drama: from staging profound insights via episodes of self-criticism, diatribes and propaganda (p. 463) towards mere moralising debate. A similar development affects gender relationships. While Dionysian women were dangerous, self-sufficient nomads, Apollonian women were matrons forced into passivity, sitting in front of their looms, waiting for their husbands to return. The Magian woman is a powerful mother, who reigns the splendid cavern-world via her sons. Finally, during Faustian civilisation, Spengler argues, the battle of the sexes eventually gives the floor to the emancipated woman of Ibsen’s dramas, to American women and Parisiennes: professional women, metropolitan nomads who fully belong to themselves again.

Let this suffice as a summary of Spengler’s views. Although Spengler counts as a prominent spokesman, the styles-of-thinking concept is not the work

of one particular author. Various thinkers – e.g. Carl Gustav Jung, Gaston Bachelard, Jan Hendrik van den Berg, Michel Foucault, Peter Sloterdijk – contributed to its elaboration, and the latter actually based his *Sphären*-project explicitly on Spengler (Sloterdijk 1998; 1999; 2004). There are important predecessors, moreover, such as Kant, Hegel and Husserl. We are dealing with a tradition, albeit without name; a school of thought, without any formal status. Thus, this study is not meant as a commentary on the work of one particular author. Following in the footsteps of this tradition, my aim is rather to contribute to the development of the style-of-thinking concept as such.

§ 5. Kant's introduction

One of the key precursors of the styles-of-thinking concept is Immanuel Kant (1724 - 1804). In the foreword of the second edition of *Critique of Pure Reason* (1781/1975), published in 1787, he discusses two historical turning points, where decisive insights emerged that fundamentally changed the established way of thinking (*Denkart*), enabling completely new forms of intellectual inquiry. The first “revolution” came about five centuries BC in ancient Greece, Kant argues, making Greek (Euclidean) mathematics possible. Traditional (artisanal) mathematics consisted in applying sets of rules whose validity had been proven in practice. Greek mathematicians introduced the concept of rigorous mathematical demonstration. This idea emerged more or less simultaneously at different locations, independently, and was introduced by Thales in the East and by Pythagoras in the West. Thales was able to *prove* that the angle of a triangle defined by a semi-circle is a right angle. This insight was not dependent on empirical perception or practical experience, and the right angle was not approximately, but *exactly* 90°. Carpenters, surveyors and architects had been aware of Pythagoras's theorem, of course, but as a rule of thumb. Now, this theorem becomes an element in a whole edifice. An abstract formula is *a priori* valid, independent of empirical confirmation. A relationship between lines (3: 4: 5) is converted into a relationship between surfaces ($3^2 + 4^2 = 5^2$), a mathematical operation undertaken by Apollonian reason. It exemplifies a change in style of thinking, an epistemological rupture between practical experience and Apollonian geometry.

At first, this intellectual practice remained unwritten. Masters and students devoted themselves to mathematical exercises verbally and interactively, playing (as it were) with sticks and pebbles in the sand. In the context of these academic intellectual practices, a new science developed. When Euclid composed his famous handbook entitled *Στοιχεῖα* (“Elements”, circa 300 BC) it was a systematic summary of the results of the intellectual work of generations. How should we envision the beginning of this new mathematics? How did Greek mathematicians at a certain point discover this royal road leading to true (i.e. Apollonian) knowledge? According to Kant, we cannot answer this question with

certainty because this chapter from history is too sparsely documented. Maybe, “someone” (someone like Thales or Pythagoras) experienced a sudden, decisive illumination, Kant suggests. Suddenly, someone had an enlightening experience (“ging ein Licht auf”, p. 22), and a whole world of possibilities “lighted up”. Where predecessors and contemporaries were still groping in darkness (Kant here uses the phrase “bloßes Herumtappen”), a great mind was apparently able to take the first decisive step. And in this first step, the whole of Greek mathematics was already implied and outlined. Everything else, all the thirteen books of Euclidean mathematics, was basically elaboration – *more geometrico*. The one decisive step was the insight that we should not derive mathematical propositions from practical experience, but that we should rather build on an a priori understanding of what a line, a surface, a triangle or a circle is. Humans do not dwell in an empirical environment alone. Human cognition adds a whole dimension of intelligibility to our world of practical experience. And it is here that mathematical reasoning proceeds and feels at home.

Kant locates a second moment of revelation at the beginning of modernity, represented by researchers such as Galileo (mechanics), Torricelli (statics) and Stahl (chemistry). They also were suddenly enlightened, Kant argues. They also fell under the sway of a fundamental (and fundamentally new) insight: the insight that science, despite its empirical moment, must be regarded as an *experimental*, but not (strictly speaking) as an *empirical* endeavour. Deduction is at least as important as induction. The decisive insight of the new style of thinking is the idea of conducting an experiment: putting your ideas to the test. The researchers in question understand, according to Kant, that human reason is actively present in empirical objectivity, that reason encounters itself in its concepts, models, experimental designs, and so on. Experimental researchers analyse the outcomes of a *rational* practice of intervention.

This was different in antiquity. Greek scientists thought and acted *κατὰ φύσιν*, they adjusted themselves to nature. Their Apollonian theories were expected to reflect the harmonic structure of the cosmos. Now, a dramatic turn occurs. Human thinking is no longer oriented towards nature, but forces nature to manifest itself in accordance with a format that is determined by the investigator. Experimentation means *active* perception, preceded by intervention, setting the conditions, defining the scene. That, according to Kant, is the basic idea, the basic, quasi-self-evident conviction, the fundamental *a priori* of the new (Faustian) style. Instead of observing nature in a passive manner, humans now force nature, in the context of an experiment, to answer our questions. The natural scientist is no longer a student who patiently follows nature’s moves, listening to what nature may offer on her own accord, but rather a judge who forces nature to respond. This is the basic revolution taking place during the dawn of modernity, and thanks to this crucial insight, centuries of groping around finally give way to real (Faustian) science, so that the royal road to true knowledge is opened up. In this understanding, in this disruptive beginning, everything else is already decided and anticipated. All the rest is merely working through. Scientific

observation is guided by a grounding idea which determines how objectivity is constituted and how observations are made. In *Critique of Pure Reason*, however, the process of knowledge production is still conceived as something abstract and pure, independent of actuality and historicity. This dramatically changes in the work of Georg Wilhelm Friedrich Hegel (1770-1831) who envisions the development and self-edification of consciousness in the course of history.

§ 6. Hegelian dialectics

Hegel sees the history of consciousness as a succession of stages (1807/1970). Every stage has a style and profile of its own. These stages do not see themselves as mere moments or episodes, of course. Rather, they tend to see themselves as final, and that is a good thing, because a style of thinking has to take itself very seriously in order to develop its strengths to the full. It is the philosopher who discerns dialectical patterns emerging in the history of thought and who recognises that every stage is a moment (both necessary and temporary) in a grand dialectical unfolding. The spirit patiently works through all these modes and episodes of thinking: an immense intellectual achievement. Looking back on history, we only tend to notice brief summaries of the abundant cultural richness which these styles of thinking managed to produce.

Currently, we are witnessing another moment of transition, the coming into existence of a new era (Hegel 1807/1970, p. 18). The spirit is abandoning the world it had hitherto inhabited and is preparing the ground for a real transformation, a qualitative leap. The symptoms and forebodings of this widespread upheaval are omnipresent. A new daybreak is about to illuminate the features of a renewed world. Initially, new ways of thinking arrive on the scene in a fragile and unfinished form. While the wealth of previous experience is still present, the appearance of the new style seems unarticulated and unimpressive. It still lacks general intelligibility and seems an *esoteric* practice, in which only a limited number of individuals are actively involved (1807/1970, p. 19). It remains a carefully guarded, sectarian possession, as only the grounding concept has emerged, which still needs to be elaborated. Only a limited number of adepts are captured by it, literally, for, as Hegel emphasises, in the term concept (*Begriff*), the verb *greifen* (to capture) resonates. This concept sets them apart from others, from the rest of humanity, as a sect, cultivating inwardness. In the early stage, the new idea is extremely vulnerable. It lacks precision and its possibilities have not been fully realised. Yet, in due course, the novum, the new concept will become increasingly exoteric: accessible and convincing to everyone, affecting everybody, more or less (p. 20), unfolding into a highway of thinking, readily available for everyone to use. The new concept will also provide guidance to scientific research, which will henceforward be conducted in a completely new manner, on the basis of this new grounding idea.

Thus, Hegel is a crucial protagonist of the style-of-thinking concept. Research practices are guided by an allegedly self-evident conviction. This conviction or grounding concept has to be developed into a self-conscious idea, giving rise to an elaborated system of thinking, based on a pervasive truth and on a logic of its own. As long as a certain style of thinking, a certain mode of explaining maintains its dominant position, consciousness is primarily involved in a conversation with itself as it were (thinking as *Selbstbefriedigung*, a *Selbstgespräch mit sich*, 1807/1970, p. 134). The system clings to its guiding idea, fearing the new truth that already announces itself on the horizon, in the folds and margins of mainstream discourse, but as negativity, as a destructive intellectual epidemic, whose positive moment still has to be developed. Eventually, the persuasive force of the new idea will overcome most of the resistance, and the new spirit will expand into a productive force. Initially critical and negative, it will assume responsibility for the whole world and will learn how to realise and maintain itself, taking possession of the socio-cultural landscape. Then, the grounding idea has succeeded in realising itself, feeling securely at home in reality. The grounding idea has upgraded the socio-cultural ambiance. In actual reality, the new rationality is firmly at work (1807/1970, p. 179). A basic congruence has been established between being and thinking.

Tensions and conflicts will continue to erupt, of course, but at this stage they are often due to a lack of self-understanding and self-reflection. Enlightenment, for instance, attacks religion as a form of superstition and self-deception, as something utterly irrational, thereby making two fatal mistakes. First of all, it obfuscates that religion is actually an intellectual practice, involving immense amounts of intellectual labour. Infected by the same inquisitive spirit, modern religious institutions are investing increasing amounts of time and resources in research. Moreover, Enlightenment itself is not a purely rational endeavour either, far from it. Enlightenment is fuelled by a grounding idea: the Faustian Will to power. Enlightenment itself is a religion more or less, an ideology of you like, bent on eliminating its ideological rivals, so that appeals to “rationality” and “criticism” function as powerful instruments of exclusion, as instances of violence, meant to silence rival voices. It is the vocation of philosophy to discern the grounding idea at work in such a struggle.

The transition Hegel is referring to, is the transformation and expansion of Faustian thinking from an esoteric practice (conducted in monasteries, workshops, private laboratories, etc.) into a global principle of change, a force on the global scale of world civilisation. Once the resistance of the final remnants of the Magian mindset has been broken, the new style reveals its true form. Now it becomes clear that, for Faustian thinking, the world has only instrumental value, and should be exploited by “autonomous” individuals. Humans themselves likewise fall prey to exploitation and the Will to power: Faustian individuals use others and are themselves exploited by others (“1807/1970, p. 415).

In the course of his oeuvre, Hegel describes a series of styles. First of all, archaic thinking. By means of certain words and gestures, shamans try to implore the inscrutable powers of nature and to move them to pliability, hypnotising nature as it were (Hegel 1969). It is a powerlessness form of power over nature. Cults corresponding to this form of religious experience usually result in collective states of stupor or frenzy.

But then the spirit awakens. In ancient Egypt, according to Hegel (1969), the mind becomes an architect. Egyptian architecture produces immense crystals: geometrical structures consisting of straight lines and smooth surfaces, such as pyramids and obelisks. A lifeless architecture, whose buildings are not built for the living.

Ancient Greek religion is the religion of beauty (Hegel 1969). At a certain point, Dionysian frenzy gives way to the god of the philosophers: the god of the heavenly spheres. The spherical god of Parmenides and Plato suddenly takes the floor. Apollonian religious experience expresses itself in spherical geometric thinking: a pre-eminently scientific style of thinking, based on ancient Greek geometry. And when Plato, in his dialogue *Politeia* (1930/1999), outlines the contours of an “ideal” state, he actually captures the grounding idea of Apollonian thinking: the geometrical spirit of his era.

Faustian thinking is extensively discussed in Hegel’s oeuvre. Faust himself is the self-conscious, scientific individual who distances himself from established knowledge (1807/1970, p. 270). Goethe’s *Faust*, according to Hegel, stages the conflict between an ambitious but disappointed scholar on the one hand and accepted knowledge on the other, between discontent in established discourse and “die Lebendigkeit des Weltlebens”. In Faust’s view, existing discourse falls short because it does not grant us any real power, but rather confines us to the scriptorium, the library. It is an impotent form of knowing and Faust desperately wants “hinaus”. He desires to conquer the world, as an *ersatz* for traditional scholarship (i.e. Magian book reading and Apollonian contemplation). Hegel analyses the birth of Faustian thinking in the dialectic of Master and Servant, which will be discussed below, in the chapter devoted to Faustian thinking.

Hegel (1970) distinguishes three types of textual historical sources. First of all, sources written by authors who share the spirit of the time in which the events took place. Secondly, sources composed by learned scholars to whom this no longer applies. Now, there is a contrast between the *zeitgeist* of the historians themselves and the spirit of the times recorded by them. Past events are now often criticised from a normative or political perspective. Their ideals and values are negated. The third form of history, however, is the philosophical one. Although historical philosophers are considering epochs whose spirit they no longer share, they nonetheless aim to capture the *idea* at work in the recorded events. A basic logic can be discerned, a basic “energy” of history, and the aim of philosophy is to come to terms with it. Although the logic thus disclosed represents a different stage in the history of reason, we can still recognise the inherent consistency of

its grounding idea. But this requires a lot of work. We have to traverse a whole historical field in order to determine the guiding idea that allows us to contextualise events.

According to Hegel, world history moves in one direction: from East to West (1970, p. 134), following the sun's trajectory as it were, meandering and bifurcating like a grand river of ideas. The history of thinking began in the East, in China and India, following complicated pathways through Persia and Mesopotamia, Egypt and the Middle East, and spreading into Greece and Italy, from where medieval Europa was reached. During the Faustian era, the centre of gravity shifted towards North-Western Europe, migrating from there to the United States.² Whereas the Dionysian principle originated in the East, as Euripides' *Bacchae* explicitly indicates, Apollonian thinking arose in ancient Greece. The subsequent style of thinking, equalling what Spengler refers to as Magian thinking, was at home in the Roman empire and in Byzantine and Islamic civilisations, while Faustian culture reflects a Germanic mindset. Although Hegel does not use Spengler's labels (Dionysian, Apollonian, Magian, Faustian), their profiles are easily recognisable in Hegel's characterisations.

To characterise the Dionysian ("oriental") mindset, Hegel often uses the word "Täumel" (furor, μανία, frenzy). The cults of the great oriental goddesses (Astarte, Kybele, Diana of Ephesus) adhere to the principle of losing oneself, of being transported into sensual, sexual (Dionysian) frenzy (p. 238). In Greece, Hegel argues, this principle incarnated in the bigender deity Dionysus, accompanied by a train of female devotees. Euripides' *Bacchae* provides an exemplification of this principle κατ' ἐξοχήν, although we may also recognize it in Richard Wagner's *Parsifal* (the Kundry persona) and in Richard Strauss' *Salome*. Frenzy in the aesthetic and religious domain is connected with despotism in the political domain.

The Apollonian ("Greek") concept of harmony and stability established itself in collision with Dionysian disruption coming in from the East, Hegel argues. In imperial Rome, the Pantheon (1970, p. 139) represented a moment of transition, as a polytheistic assembly hall was transformed into a monotheistic dome, thereby representing the dawn of what Spengler refers to as the Magian era. This transition, the eruption of Magian thinking, occurred precisely when ancient (Apollonian) civilisation reached its apex and the Roman world became an Empire. From now on, Hegel argues (concurrent with the principle of Magian thinking outlined above), a divide was introduced between the worldly and the spiritual, between mundane reality and the Kingdom of God. Yet, when Julius Caesar decided to turn his attention the North-Western Europe, he was already looking ahead to a future epoch, grounding the theatre where Germanic (Faustian)

² Here again, we notice a movement from East to West, from East Coast to West Coast, one might add. And in the course of the 21st century, China is likely to become the next station of thinking, so that history has moved full circle. But this will be addressed more fully in the final chapter.

culture was to evolve: in regions which were destined to become the centre of world history from the “high” Middle Ages onwards (p. 379).

Besides the (westward) direction of cultural proliferation, what is also important is the manner in which cultures spread. The spread of a particular style of thinking is not a gradual, continuous process, but rather something which unfolds in a wave-like manner, Hegel argues. The term Renaissance for instance literally refers to a resurgence of Apollonian thinking which, according to Hegel, is intimately linked with the rediscovery of Plato in Western Europe, in the wake of the Fall of Byzantium. Hegel also emphasises the importance of repetition (p. 380). Through repetition, something which at first may seem an accidental deviance (triggering resistance), is destined to become increasingly plausible and real. Step by step, by insisting on it, time and again, a new idea is bound to become something inevitable, something which becomes confirmed by subsequent events (p. 380). Like Rome and Paris, a style of thinking is not produced in a single day, and eventually, scepticism and negativity will be overcome by affirmation and adoption.

According to Hegel (1970), the spread of what Spengler refers to as Magian thinking entails a particular dialectics of its own. The initial starting point (the first moment) is a paradisiacal situation, when all the world is a park. The disruptive event, the fall from grace, however, is an inevitable turn. An irreconcilable rupture now unfolds between the mundane and the divine. Sacred, enchanted, mysterious spaces are created (e.g. domes, magical gardens, hermitages) where the divine can already be experienced and enjoyed under earthly conditions.

A different dynamic applies to the spread of what Spengler refers to as Faustian culture. Now, the guiding spirit of history is forced to determine its own conditions, Hegel argues, and to actively transform its environment. Enchantment is replaced by labour, and divine rapture by a state of reason and justice. The (initially “Magian”) concept of the fall becomes incorporated in a Faustian dialectic, where it assumes a *positive* function. The fall from grace necessitates activity and labour, thereby unleashing history as a long-lasting effort of the spirit towards self-edification (p. 389). The spirit *needs* negativity and resistance to engage in this process of self-production.

Visiting a cathedral in a philosophical manner (*via κατάσκοπειν*) implies that we see this immense artwork (this total work of art) as a concrete affirmative *answer* to a challenging conflict. A cathedral exemplifies the dialectical concept of ἐνέργεια (realisation, actualisation) on a rather high level of complexity and elevation. The original idea is realised in such a way that chronic resistance (e.g. the principle of gravity) is overcome via relentless activity. The natural, cyclical flow of thing is interrupted by an upward trend. The cathedral negates the (decidedly “Magian”) idea that there is nothing new under the sun.

Hegel’s philosophy of history presents a comprehensive portrayal of what Spengler refers to as the transition from Magian to Faustian thinking. With remarkable frankness (*παρρησία*, p. 395), Hegel tells us, Jesus preached his

message of withdrawal from all worldly ties, looking upon existing reality and its laws, rules and values with utter indifference. The validity of the worldly (“Apollonian”) principle was nullified. In his revolutionary speeches, Jesus summons his audience to follow him in his abrupt transvaluation of all values. From now on, the spirit withdraws from the mundane world and can only be encountered within the Christian community, the Christian church. Here, the Kingdom of God maintains itself in a counter-world. In Islam, Hegel tells us, the devotion to the One entails an even more radical negation of all otherness. Although the true faith adorns itself in beauty and knowledge, all other forms of beauty and knowledge are relentlessly eliminated.

Finally, we recognise what Spengler refers to as the Faustian principle in Hegel’s portrayal of the actual *realisation* of Christianity, i.e. the enormous task of creating a Christian *world*, thereby sublating the divide between the spiritual and the mundane. This requires a different (Faustian) attitude, for which, according to Hegel, the Germanic people of the North were destined to become the carriers. On the individual level, it entails a fierce internal struggle (“Kampf mit sich selbst”) between duty and desire, between reason and passion. For Hegel, the Crusades may count as the decisive turning point between Magian and Faustian thinking (“Punkt der Umkehrung”). From now on, the West shifts its focus of attention and begins to invest its (Faustian) energy in the occidental realm. In Southern France, the campaign against Catharism, with its fanatical (“schwärmerisch”) ideas of purity, led by Saint Dominic and his order of Dominicans, was actually a struggle of Faustian Christianity against a tenacious reviving version of Magian Christianity.

Faustian scientific activity started in theology, resulting in the elaborate theoretical edifices of scholasticism. Here again, mendicant orders played a decisive role as “spiritual armies”. Faustian thinking became the dominant principle in architecture (cathedrals), in theology (scholasticism), but also in politics, resulting in the drive towards the establishment of nation states. Hegel especially mentions “Machiavelli’s celebrated work *The Prince*” in this respect. Although it has often been thrown aside in contempt, Hegel argues, a profound consciousness of the necessity of the formation of modern states is at work here, and the author establishes the principles on which a state can be founded, given the circumstances of the times. The means which he proposes are the only efficient ones, and perfectly justifiable, as the feudal nobility, whose power was to be subdued, could not be handled in any other way. No progress in politics without relentless struggle.

According to the Faustian principle, humanity should not be *freed from* labour and servitude (“*aus der Knechtschaft*”), but rather *through* labour and servitude (“*durch die Knechtschaft*”). Discipline can have a liberating, emancipatory impact. It is an indispensable moment in the process of self-edification of the Servant struggling against the Master.

An important step in intellectual history was the discovery of the printing press as the “desideratum of the age”. Intellectual needs and technological

innovation mutually stimulate one another, Hegel argues. Rather than seeing technology as either cause or effect, Hegel's philosophy of technology emphasises a dynamic of *entgegenkommen* between the intellectual and the technical (1970, p. 490). The intellectual and the technological are mutually affirmative and responsive to one another: technical applications make their appearance when their urgency is experienced ("das Technische findet sich ein, wenn das Bedürfnis vorhanden ist", p. 491). And now, the Faustian break of day ("Morgenröte") firmly announces itself. From this moment onward, Hegel argues, history has no other work to do than to actively build its principle into the world. Faustian thinking is destined to realise itself. Labour is no longer looked down upon with contempt, but is valued in an affirmative manner. Magic and contemplation (i.e. Magian thinking) give way to a new mode of thinking, which is active and explanatory (i.e. Faustian thinking, p. 522), giving rise to science as a system of causal laws. In the practical realm, *duty* and the *will* are now the crucial concepts and in politics, the French revolution was a Faustian event par excellence, as reality became drastically transformed and governed by rational thought (p. 529).

In short, in their understanding of history, Hegel and Spengler basically convey one and the same idea, as the two most important spokespersons of the style-of-thinking concept. But others have added to it as well. In the next section, the contributions of others authors will be discussed, starting with Nietzsche.

§ 7. Other elaborations: Nietzsche, Husserl, Foucault and the sociological turn

Friedrich Nietzsche (1844–1900) was already mentioned as an important precursor who, in *Beyond Good and Evil* (1980, KSA5, § 23) presented his own thinking as a "morphology" of the Will to Power. In *The Birth of Tragedy*, his first philosophical publication, written when he was still active as a philology professor, he distinguishes the Apollonian and the Dionysian style, concepts which he borrowed from Richard Wagner. The latter introduces them in his book *Art and Revolution* (1849, p. 10), but this conceptual pair also constituted a key topic in the discussions which evolved between the composer and the philosopher during the years of their collaboration (Magee 2000, p. 296; Zwart 2012). The Apollonian style aspires harmony, right measure, self-control and proportionality. The Dionysian counterpart, however, is characterized by a desire for transgression and ecstasy, for turbulence and excess. The Apollonian style is bent on individualisation, while the individual is bound to perish in Dionysian furor. However, as Nietzsche himself points out, these two concepts actually belong together; they reflect and complement each other – like ego and alter ego, like the right-handed and left-handed aspect of Greek culture. It was precisely in the chronic struggle with the Dionysian antagonist that the Apollonian style developed its profile. The Dionysian mentality is like the dark, diffuse

background against which the clear, Apollonian style stands out. The concept of the Dionysian becomes meaningful as the contesting, subverting “other” of the beautiful Apollonian hegemony. For Nietzsche, however, this struggle primarily pertains to the field of art. It is a chronic duality between two natural forces, manifesting themselves in two basic forms of art, namely (Apollonian) sculpture and (Dionysian) music (§ 1, p. 22).

Although Nietzsche’s distinction as such is highly valuable,³ his elaboration and interpretation of Wagner’s concept is nonetheless at odds with the style-of-thinking concept for various reasons. In the first place, Nietzsche focusses on one domain, namely art (contrasting sculpture with music) and seems to regard Greek culture *either* from the perspective of Apollonian sculpture *or* from the perspective of Dionysian music. But a style of thinking manifests itself in *all* domains, as we have seen. According to Nietzsche, sculpture is essentially Apollonian, while music is essentially Dionysian, but a styles-of-thinking approach rather suggests the very opposite, namely that there are Apollonian and Dionysian forms of sculpture, and Apollonian and Dionysian types of music. Pythagorean music, for example, with its desire to mimic the harmony of the spheres, was decidedly Apollonian, while Wagner’s total works of art stand out as sublime exemplifications and concretisations of the struggle between both principles, enacted under Faustian socio-cultural conditions. A similar struggle between the Apollonian and the Dionysian principle can also be found in Greek politics, as well as in Greek physics, for example in the form of the struggle between the spherical (Apollonian) universe of Plato and Aristotle (the academics) and the (Dionysian) universe of the atomists. Moreover, from a styles-of-thinking perspective, we are not dealing with an “eternal” struggle, as Nietzsche phrases it, but with phenomena which pervade a particular culture during a certain period (ancient Greece). Modern (Faustian) art, for instance, can no longer be conceived in terms of a struggle between Apollonian and Dionysian forces. Whoever extrapolates a Greek problem to modern (Faustian) conditions, disavows the importance and disruptive significance of the Faustian principle, of which we will come to speak.

Perhaps Nietzsche, as a philologist, was too engaged with the world (more exactly: the *words*) of the ancient Greeks, paying too little attention to his own world and time. Significant in this respect is his own introduction to *The Birth of Tragedy* entitled “Attempt at self-criticism” (*Versuch einer Selbstkritik*) where he explains how the genesis of this book coincided with the Franco-German war. While the Faustian principle was demonstrating its disruptive dominance, Nietzsche was wandering in the Alps, pondering over aesthetic problems in ancient Greece.⁴ He was briefly involved in the events, as a troubled

³ For Spengler, there is something comical in the figure of the timid, spectacled, bourgeois professor of philology, scion of a lineage of pastors, praising Dionysian frenzy.

⁴ “Während die Donner der Schlacht von Wörth über Europa weggingen, saß der Grübler und Rätsselfreund, dem die Vaterschaft dieses Buches zuteil ward, irgendwo in

medical orderly, but proved unable to live up to this brief exposure to Faustian reality. Nevertheless, his way of reading, paying attention to phenomena of struggle and birth, and to the productivity of struggle, contain valuable contributions to the development of the styles-of-thinking concept. We will reconsider Nietzsche's *Birth of Tragedy* below (§ 9), focusing on his understanding of Euripides.

Another important contributor to the styles-of-thinking concept is Edmund Husserl (1859 - 1938). In 1935 he argued, in a famous lecture, that the European sciences (physics first and foremost) were facing a crisis, a statement that at first invokes amazement because, during the first decades of the 20th century, physics had actually been extremely successful. Relativity theory and quantum physics had been trailblazing, imaginative developments. Husserl's crisis does not concern the achievements of science as such, however, but their meaning for human existence. Notably during the Renaissance and the Enlightenment, he argues, science had developed a pronounced moral profile. Science had contributed to the humanization of human existence. But now science had become neutral: applicable for both positive and negative purposes. In order to understand the full scope of this crisis, Husserl argued, we must return to the beginning, and he located the beginning of modern (Faustian) thinking in the work of Galileo. In this way we can grasp the basic, quasi-self-evident conviction, the "Selbstverständlichkeit" that motivated modern science and grounded a style of thought. This grounding conviction (seemingly self-evident) has become something obvious to us, but it was a remarkable and alarming insight when Galileo articulated it for the first time. We must rediscover its original strangeness as it were.

Husserl is not speaking about Galileo as a historical figure, however, as Husserl is not interested in concrete historical or biographical details. Galileo for him is an icon, a prototype, an advocate of a particular style of thinking, an inaugurator of this style. The basic idea introduced by Galileo is that we gain access to the world via mathematics. However, his mathematics had undergone a profound development. Traditional practices of measurement and calculation had always been adjusted towards the natural environment. Galileo's mathematics, however, had become detached from its original world-orientation, its "Bodenständigkeit". Pure mathematics was the result of a lengthy process of abstraction, giving rise to an axiomatic system that was subsequently applied to concrete phenomena. This allegedly "pure" science was driven by the will to dominate the earth. Applications of the new principle enabled a powerful mathematical grasp on things. Galileo forced reality to speak this new mathematical language.

To understand the current situation, conceived as a crisis, i.e. as a decisive moment, a *turn*, we must *return* to the beginning, Husserl argues, the original

einem Winkel der Alpen, sehr vergrübelt und verrätselt, folglich sehr bekümmert und unbekümmert zugleich, und schrieb seine Gedanken über die Griechen nieder" (1980, KSA 1, § 1, p. 9).

articulation of the basic conviction that inspired this style of thinking which, via the efforts of Galileo and others, managed to become the dominant style, the very style which Spengler characterised as “Faustian”. Via this step backwards, we can come to terms again with the primal conviction, in its original form, and we re-experience its boldness. Moreover, we will become sensitive to the violence entailed in this powerful, Faustian form of mathematics.

Another important contributor to the styles-of-thinking concept has been Michel Foucault (1926-1984). It may seem remarkable to move from Husserl to Foucault so easily, given the fact that Foucault, notably during the 1960s, emphatically rejected Husserl’s work. His *Words and Things* (1966) was actually meant as a polemic against Husserl. Yet, the styles-of-thinking concept remains a common ground they share, beyond their differences, although Foucault represents a completely different take. According to him, the history of thinking can be described in two ways: in the traditional manner, as the history of great authors (e.g. master thinkers and their epigones), but also along the lines of the archaeological method, namely as the history of anonymous discursive formations. In the latter case, the author’s status barely counts, and this already points to a difference with Husserl, who focusses on *one* particular individual, namely Galileo. For Foucault, however, Galileo’s voice was one among many, and all contemporary voices count as exemplifications of a particular style. Beyond the many disputes concerning specific issues arising among voices of a particular epoch, there is a common vocabulary, a common language.

Foucault is interested in discourse, rather than authors. Not he or she speaks, but *it* speaks (“es spricht”, “ça parle”), in the sense that we *are* spoken, and that discursive styles proliferate *via us*. This is how Foucault (1969) intends to describe history, by signalling the emergence and disappearance of discursive regularities and by analysing the discourse of a particular period with the help of remarkable changes in the ways in which reality is described, analysed and categorised. For an archaeologist, all potsherds or coins discovered in a particular layer are in principle equally interesting, and Foucault likewise assumes that in all texts or textual fragments belonging to a certain discursive formation, the same set of regularities (the same discursive style) can be discerned. *Within* a certain layer, all texts seem similar, while there are striking differences *between* the layers. That is: in the archives of knowledge, the archaeologist discerns stratifications. Within layers there is spontaneous unanimity, between layers abrupt discontinuities abound. There are ruptures in style, while the lingua franca of a cultural ecosystem may suddenly be eliminated.

Archaeology is a methodological ideal which Foucault not always fully realises in his studies (Zwart 1995). He often makes concessions in the sense that he does seem to pay special attention to prominent thinkers such as Socrates, Descartes, Bentham and Freud. Some textual fragments are more equal (more typical) than others, as it were. Thus, Foucault discovered a relatively unknown text from Jeremy Bentham about an architectural structure called the Panopticon, meant to facilitate surveillance in various social practices (in penitentiary and

educational institutions, in psychiatric hospitals, in factories and so on). Subsequently, in a broad array of sources, well known and less well known, he discovers this same panoptic idea, as a very fundamental way of organising and monitoring the social realm. We may notice a basic congruence between the style-of-thinking approach and Foucault's discursive archaeology. A particular event or document may serve as a moment of commencement, deserving special attention. Prominent authors are not seen as geniuses, but as seismographers of their era. In their texts, significant changes often become visible for the first time and are articulated in a clear and concise manner (*clair et distinct* as it were).

Besides philosophers, sociologists have also contributed to the styles-of-thinking concept. Ludwig Fleck (1896-1961) has had an important role in propagating the concept of thinking style, especially among sociologists and historians of science. The publication in which he introduces the notion is a study dedicated to syphilis and the Wasserman test (1935/1979). All concepts in vogue during a certain period, according to Fleck, reflect the same style. A particular theory can only survive in a particular cultural environment if it is fashioned in accordance with this style. Style is a certain tendency or willingness to perceive the world in a certain way, a receptiveness to thoughts and concepts that are responsive to the prevailing style. Style is a collective phenomenon that depends on social reinforcement. Fleck's study has decisively influenced Thomas Kuhn (1962), whose famous publication contributed to Fleck's rediscovery, although Kuhn does not speak about style, but uses the term paradigm instead.

Although this line of research is certainly inspiring, the philosophical concept adopted in this monograph differs from the ideas of Fleck and Kuhn in a number of ways. The difference is first of all a matter of scale in the sense that the overarching Faustian style (for example) gives rise to a whole series of "paradigms" (styles in the sociological sense). Also, while Fleck and Kuhn focus on scientific research, the styles-of-thinking concept is considerably broader, as we have seen, involving *all* domains of culture. Finally, Fleck and Kuhn argue that almost if not all aspects of language and thinking should comply with the reigning paradigm. Our understanding of style is less restrictive. Even when the dominant style reaches its climax there is resistance, while elements of abandoned styles may temporarily resurge (as the return of the repressed) at a later time, under radically changed conditions.

Historian Alistair Crombie (1915-1996) also deserves to be mentioned in this respect, because he distinguishes six styles of thinking in the history of European science. Besides *postulation* (Greek Apollonian mathematics) and *experimentation* (Spengler's Faustian style), he also distinguishes *hypothetical modelling*, *taxonomy*, *probabilistic and statistical analysis* and *historical derivation*. This approach was taken up by authors such as Ian Hacking (1982/2002; 1992) and Chunglin Kwa (2011). Starting point is the idea that various scientific ways of knowing have emerged and stabilised in the course of history, entailing particular methods, types of objects and criteria of truth (Sciortino 2017). The focus is on methods and techniques of scientific enquiry,

however, rather than on grounding ontologies, and on science and technology, rather than on the human lifeworld in the wider sense. Hacking (1992) lists a series of different uses of the term “style” in connection with science, ranging from fairly personal to increasingly general uses, such as the “Galilean” style, the “Newtonian” style, the style of a particular laboratory, the style of a social network, or thought collective, up to the style of a discursive formation (e.g. Foucault) or style in the Spenglerian sense. According to the “Spenglerian” approach, adopted in this study, a style of thinking is a fundamental and enduring way of being-in-the-world, allowing reality to emerge in a certain manner, not only discernible in research practices, but in all other realms of culture (art, politics, religion, sexuality, etc.) as well. Thus, whereas the Spenglerian concept is decidedly more comprehensive, we should acknowledge similarities as well, for instance when it comes to emphasising continuity between medieval experimentalism and modern experimental science (Crombie 1952/1959; Crombie 1953).

§ 8. Methodology: discerning styles of thinking

The ambition of the styles-of-thinking approach is to understand a particular epoch *from within*, to enter the tableau as it were, as an effort in retrieval. We need a point of access, e.g. an art work or a building, and in addition we need a guide, e.g. an author. Primary sources are produced by authors who were contemporaries, still sharing the same spirit and adhering to the same style of thinking, participating in the same cultural ambience. In most sources, however, there is a tension between the world of the subject (the author) and the world in which the recorded events took place, as Hegel already pointed out (above).

What exactly is it that we aim to recover? A particular mood, a particular experience? Yes, but ultimately, our aim is to discern the epoch’s guiding idea, its *philosopheme*, its grounding conviction: an a priori insight which develops into a full-fledged style. First, there is an initial moment when this guiding conviction is articulated in its original form, often in a secluded location (e.g. Plato’s garden, or the apostle’s cenacle). Subsequently, the philosopheme begins to spread, begins to realise itself, facing opposition, conflict and resistance. Its validity is challenged and questioned. Via this moment of negativity, however, the grounding idea will gain in precision, discreteness and strength. Finally, the basic conviction realises itself in a tangible, affirmative manner, giving rise to cities and landscapes, buildings and practices, artworks and experiments, institutions and schools, enabling and encouraging individuals to speak and act. The style of thinking is the “energy” of an epoch in the Aristotelian sense of ἐνέργεια, the idea that is *actually at work*, as an effective and activating source of inspiration. Its basic logic reveals itself in a drastic reorganisation of the socio-cultural environment. It is the spirit (νοῦς) which governs the world during a particular period and by which this world is *made*, to some extent. The world

becomes a theatre where the guiding principle is self-consciously enacted, and where it proliferates to verify its validity (its truth). Experiences of mismatch, insufficiency or frustration cannot refute the guiding principle as such. Rather they function as indications that some obstacles still have to be removed, that more effort is still required. The guiding, creative and affirmative principle will never be fully realised, however. Resistance will never completely subside. Even during periods of maximal dominance, other recessive (rival) principles remain active, as countervailing powers, visible in instances of recoil.

Initially, the idea is allegedly pure, but also disconnected. It has to be adopted, both individually and collectively, to realise itself through human action, giving rise to contradictory experiences of success and failure. Yet, precisely when resistance seems eliminated and the final moment of full realisation seems at hand, a new, equally bold and disconcerting idea already announces itself.

The guiding idea, the spirit of the time, realises itself in particular practices, in specific events (such as political decisions or scientific discoveries) or in specific works of art. For us, they provide exemplifications of the guiding idea, points of access to explore the spirit of a particular epoch, allowing us to enter a particular ambiance and to explore it from within.

A drama may play this function (Euripides' *Maenads* as a window into the Dionysian world) or a building (the Pantheon as a window into Apollonian existence). Eventually, the guiding principle creates, governs and organises a whole world. To understand a particular epoch means to grasp its guiding organising thought. This guiding thought (initially quite abstract and diffuse) needs externality, resistance even, to realise itself, and to become increasingly discrete. In the confrontation with other ideas, it becomes clear that, although the principle may *seem* self-evident, a *particular* worldview is actually entailed in it. It overcomes resistance and acquires concreteness by incorporating and materialising itself into a work, be it a building, an institution or an artwork. The principle is affirmative and productive, but struggle is needed to realise and express it. The ultimate expression of a guiding idea is a civilisation, a world order. But even a civilisation is still in need of concrete exemplifications to become tangible and readable. Concrete exemplifications also materialise the tension between the realisation and its guiding ideal. They exemplify the idea, but never fully or completely.

Thus, the guiding idea is an active, energetic principle, evolving into a style of thinking, realising itself via individual and collective activities of concrete human beings. Their activities contribute, directly or indirectly, to the realisation of the idea. Dialectically speaking, whereas the guiding idea initially emerges as an abstract principle, hard work is required to develop it further and to overcome resistance, allowing the idea to fully realise itself. Even if individuals focus on their personal interests and needs, they may nonetheless contribute to the realisation of the guiding principle. There is a spontaneous adherence, a collective conversion and convergence if you like. The principle encourages and

enables human beings to act in a certain manner. We never write or act in a socio-cultural vacuum.

Whereas daily experience tends to foreground differences of opinion, we underestimate the basic unanimity at work in daily practice and discourse. We fail to realise that we are actually and collectively under the sway of an *a priori* view, although some may be more content with it than others. Rather than being confirmed by experience, this idea, this ideology makes it possible for us to gain experience at all. The basic objective of a styles-of-thinking approach is to recognise and capture the guiding idea of a particular epoch, including our own. The aim is to see how a particular ideology is *always already* at work, also in our own era: the shared ambiance that is noticeable and audible in books and movies, behaviours and buildings, conferences and conversations, determining the way in which our deliberations are enacted, our questions and answers are phrased.

To recognise this, we must follow the discourse of a particular epoch *as literally as possible* and from an oblique perspective (Zwart 2017b), focussing on the *how*, the phrasings, the shared discursive style. Humans are wired to think in a certain manner. Should we interpret distant events and utterances in terms of our own style of thinking (e.g. judging history from the point of view of, say, neo-liberalism), we fail to recognise the collisions that are unfolding, the gigantomachia that is raging: the struggles evolving at a fundamental level, not between political programs or specific artistic ideals, but between incompatible styles. In every initiative or enterprise, a particular style of thinking is always already at work.

In order to recognise this, we need to develop an oblique perspective (*intentio obliqua*), enabling us to acquire a comprehensive view. When studying historical figures, we are not so much interested in *what* they do or *what* they believe, but rather in *how* they act and *how* they believe. The Greek term for this is *κατάσκοπεῖν*, adopting a side-ways position, a view from within as it were, in order to study a particular practice, subculture or scene. Being there, so to speak, albeit as an outsider. Our intention is to study a particular artwork or discourse or institute in such a way that we are reviewing the *style of thinking* at work in it, exemplified by it.

When Pentheus follows Dionysus to investigate the Maenads, this is what he intends to do: *κατάσκοπον μαινάδων* (979). But the case of Pentheus also shows that there are risks involved. Self-analysis is an important prerequisite. We have to know ourselves (we have to probe our own style of thinking) in order to be able to appreciate the styles of thinking we encounter, while by studying other styles we deepen our self-understanding. Pentheus fell victim to his endeavour because he failed to recognise that the conflict between two styles of thinking (Dionysian versus Apollonian) was *also an internal struggle*, raging in his own psyche. By framing the Dionysian as other, he failed to come to terms with his own desire, proving more susceptible to Dionysian thinking than he was willing to acknowledge, – but this will be explained in more detail in the next section.

To summarize: in the course of its history, a grounding idea gives rise to a style and is adopted as a guiding principle: tested, elaborated, affirmed and verified, until it is abandoned and deserted, giving the floor to a novel idea, so that a wave-cycle starts again. Although there are periods of astonishing bloom and apparent supremacy, previous styles of thinking may manifest themselves temporarily again, as a return of the repressed, as *intermezzo*, in opposition to the new, offensive style, as “Renaissance”. And yet, this recurrence will always be tainted with what it aims to oppose. What is high noon from the perspective of Apollonian thinking, moreover, appears as dead of night from a Magian perspective. The transition from the Magian to the Faustian style occurred shortly after the year thousand, which explains why the term “Middle Ages” is emphatically absent in Spengler’s vocabulary. He sees this label as profoundly mistaken. As if, during this extended period of time, nothing of significance happened. What is known as the Middle Ages, covers two completely different periods, namely the Magian epoch (the “early” Middle Ages) and the Faustian period (the “high” Middle Ages).

Spengler aims to develop a global framework which also includes Chinese, Indian and Mexican cultures. This study has a more limited scope, focussing primarily on Dionysian, Apollonian, Magian and Faustian ideas, not because other styles are less important, but because of my scholarly limitations, for these are the cultures which I am able to experience “from within” to some extent. If Hegel is right, however, that the course of world history moves Westward, China is likely to become the next station after Silicon Valley, so that history has moved full circle. In *Chapter 6*, I will try to amend my Eurocentric bias somewhat and broaden the scope into a more global view.

How to explore a style of thinking, notably an extinguished one? How to enter a lost world of thoughts? History moves from past to present, but as scholars we move in the opposite direction, *vade retro*, from present to past, starting with the remnants, so as to reach out to the idea which once inspired their construction. We begin as illiterates. For those who aim to gain access to Dionysian, Apollonian and Magian thinking, notably the primary sources, some basic knowledge of Greek and Latin is a must. If we start with an intuitive preconception, it will usually prove misguided. Misguided preconceptions must be sublated via a thorough confrontation, forcing us to explore alternative possibilities or even to reject our initial view. Via such experiences, we may reach a more comprehensive understanding: validated and verified. Flashes of insight, acquired along the way, become incorporated into a coherent view.

When we are studying a particular style of thinking, we are at the same time studying our own style of thinking, deepening our own self-understanding. Gradually it dawns on us that what initially seems foreign and other, may actually be part of our cultural memory. Should this not be the case, we would be overtly unable to enter these distant worlds. In order to meaningfully confront Dionysian, Apollonian, Magian or Faustian thinking, we must to some extent *become* Dionysian, Apollonian, Magian and Faustian ourselves. We must recognise

ourselves in the Dionysian, Apollonian, Magian or Faustian mindset. As Hegel once phrases it: “Nur der Geist erkennt den Geist” (1970, p. 394). Only insofar as we are able to *experience* the conflict and incompatibility of the Dionysian and the Apollonian principle, we are able to appreciate Euripides’ *Bacchae*, and only insofar as we are able to *experience* the conflict and incompatibility of the Apollonian and the Magian principle, we are able to understand the spirit that gave rise to the Pantheon in Rome. We are able to deepen our insight into Dionysian or Apollonian thinking because we *already know* these worlds to some extent. When visiting the Pantheon for the first time, we may feel strangely at home in such an ambiance. We should not necessarily see ourselves as utter strangers to a particular logic. There may be a basic affinity to begin with, something to work from. Still, it requires hard work to comprehend an artwork *from within*. This is the difference between reading and rereading, between sightseeing and *κατάσκοπεiv*.

How to determine the profile of a particular style of thinking? A method is not readily available. Building on Hegel, Spengler and others, it will have to be developed *along the way*. Nonetheless, some methodological guidelines can be provided. A style of thinking entails a grounding idea (a philosopheme) which articulates itself in the form of a concise slogan or summons: “Live in accordance with nature”; “Prepare yourself for the turn” (“Forsake this present world); “Existence equals will to power”. A style of thinking is a grounding idea which *realises itself* in social, cultural and intellectual practices, and embodies itself in buildings, research programs and artworks. A style of thinking fosters religious, moral, scholarly or artistic practices and proliferates, affecting both “subjects” (active human individuals) and “objects (tools, artworks, monuments, landscapes, institutions, and the like). By realising and embodying itself, it demonstrates its validity, its inspirational force. It commences as an ideal and realises itself in the real, but never exhaustingly. The idea or ideal is never fully realised, never fully identical with the real. It remains a critical norm, giving rise to the experience of “not yet” (*nondum*). Therefore, we must discern the ideal in the real, the rational in the inchoate. A grounding idea affects the whole. It is not restricted to particular practices, but infects all aspects of human civilisations.

To recognise the grounding idea, we will focus on specific objects of enquiry, particular intellectual practices or artworks, concrete exemplifications, speaking out to us as mouthpieces of a whole world. A grounding idea not only allows individuals to understand their world, but also to shape, transform and interact with it. Apollonian geometry sees itself not merely as an intelligent tool, but as the self-conscious awareness of a natural order which can effectively be brought to the fore with the help of Apollonian geometry. Magian astronomy (i.e. the effort to determine the opportune moment) is in tune with a world which emerges as an ambiance for pilgrimage. And the Faustian will to power experiences its driving “will” (its willing drive) not only as something which works internally (as a subjective urge), but also as the guiding force through

which nature shapes itself. A genuine artwork is self-made to some extent, namely as the realisation of the idea that is guiding human creativity.

A style of thinking cannot be captured merely by reading the sources. We must go and visit the things themselves. Take a work of art like Raphael's fresco *The School of Athens*. We may study the technical papers, the technical details, but should also be sensitive to how we are summoned and affected by it. A work of art calls out to us. An important truth or insight is conveyed by it, shared with us, entrusted to us. The artwork's expressiveness is the primal moment. It is that which forces us to have a closer look. Our analysis remains a dialogue. In principle, all artworks belonging to a certain style convey the same idea. Instead of being "disinterested" observers, we should opt for confrontation. Notwithstanding the body of scholarship that has been accumulated, there is always a knowledge deficit, a lack of understanding, an omission, a neglect, something which remained unsaid. The meaning of the artwork is never fully exhausted. Research means recovering the logic of Apollonian, Magian or Faustian thinking in such a way that we allow ourselves to temporarily *become* Apollonian, Magian or Faustian to some extent. It entails an exercise in revivification.

The end result of such a process is tested experience. An artwork becomes a point of entry into a lost world of meaning, so that we begin to feel at home in this lost world to some extent. Somehow, this world is still alive, as part of our cultural memory (Assmann 1992). Since the advent of modernity, we have been negating the pre-Faustian past. These previous forms of existence are not completely lost to us, however, and may still be retrieved. Scholarship and "objective archaeology" may be complemented by "inward expeditions". The novel *Carmen* by Prosper Mérimée, for instance, begins as the report of an archaeological expedition, aimed at pinpointing the exact location of the battle of Munda, which allegedly took place in what is now Andalusia. Gradually, however, the novel becomes something rather different: the retrieval of an obfuscated way of being-in-the-world, marginalised perhaps, but never completely barred. The author becomes a time-traveller as it were, discovering remnants of a lost culture in the folds and margins of modern civilisation. Likewise, while reading Tacitus' *Germania*, aspects of it may resurge in later epochs. Wagner operas may function as acoustic archaeology (Zwart 2012), aimed at retrieving forgotten Celtic and Germanic, Magian and Faustian soundscapes. Only as carriers of cultural memories can we meaningfully relate to Mérimée's *Carmen* or Wagner's *Ring*.

This phenomenon, that we, outsiders, may still recognise the *Geist* which realises itself in a particular cultural ambience, has been thematised as "cultural memory" (Halbwachs 1950; Assmann 1988). A similar idea is at work in the novels of Jack London. We must deepen our understanding of such phenomena *along the way*, by actually *practicing* this type of enquiry. We seem strangers in unknown worlds, but at the same time we are drawn towards its, returning natives as it were. We must bracket our 21st century convictions to

become sufficiently sensitive to the sounds, colours and gestures of the world we are entering. The once so captivating grounding idea may still be recognisable for us, as we make our questions and interpretations more precise. Let this suffice as a guide to help us reconstruct the zeitgeist of past epochs. In the next section, this methodology will be put to the test, using an ancient Greek tragedy as a window into a lost world.

§ 9. A methodological exercise: Dionysian thinking

In *Birth of Tragedy*, Friedrich Nietzsche (1980, KSA1) confronts the balanced, rational, Apollonian principle with its destructive, de-individuating Dionysian rival, as we have seen. Greek tragedy, he famously argues, staged a struggle between two aesthetic styles, represented by Apollo and Dionysus as the divine patrons of Greek theatre. From an Apollonian perspective, measure, intelligibility, harmony and self-restraint enable us to manage our passions without eradicating them. The Dionysian alternative remained very much alive as cultural backdrop, however, so that Greek tragedy entailed a temporary exposure to it, in the safe enclosure of the theatre, a dramatic crucible as it were: a dramatic containment of that which horrifies us (Gish 2016).

According to Nietzsche, Greek understanding of art did not express itself in concepts (*Begriffe*) but in powerful images (*Gestalten*), e.g. Apollo and Dionysus, representing two incompatible principles: measure versus excess, individuality versus intoxication (*Rausch*), self-knowledge versus frenzy (*Taumel*), rationality versus the irrational. Greek tragedy enacted a collision between these principles, so that Apollonian harmony was challenged by a disruptive intrusion of Dionysian celebration. The subsequent dominance of Apollonian rationalism, represented by Socrates and his school, resulted in the *death* of tragedy, Nietzsche claimed. For Nietzsche, Richard Wagner's *Gesamtkunstwerk* represented a return of the repressed, a reinvigoration of the ancient contest. I will come back to Nietzsche's interpretation at the end of this section. First, I will reread *Bacchae* as an agonistic force-field, a fascinating drama which allows both ancient and contemporary audiences to observe how the battle between the two styles or principles is acted out.

Bacchantes are female followers of Dionysus, whose passions have become "unregulated", from an Apollonian point of view. From a Dionysian perspective, a somewhat different type of choreography emerges: Maenads celebrate a Dionysian, rather than a formless pattern of expression. They abandoned their homes to live as nomads in the hills and mountains outside the city walls, exulting in "lustful" behaviour (again: from an Apollonian perspective). At first sight, they seem idyllic, peace-loving, pastoral creatures, living in harmony with nature in the sense that, during ritual dances, they become one with nature (with their mountainous ambiance), to such an extent that all

things seem to move as one single being. Yet, their devastating aggression can easily be aroused.

Dionysus explains in his prologue that time has come to take the stage himself. He has adopted a human form, posing as an oriental androgynous “Stranger”, a priest and follower of the god, so that the audience from the very beginning sees two persons, sees *double* as it were (Saban 2003), confronted with two personae: man and god, “Stranger” and “Dionysus”, actor and director. Dionysus takes the stage to confront Pentheus, a fanatic youthful devotee of Apollonian thinking, a guardian – φύλαξ – well-trained in apollonian logic. By staging Dionysus as his antagonist, *Bacchae* becomes meta-theatre (Segal 1997): a theatre about theatre as such, a dialectical art form exploring the dynamics of truth and illusion, combat and surrender. The purpose of Dionysus is to reveal himself. The sheer impact of his presence, in combination with his psychological and dramaturgical skills, will drive Pentheus, the god-opposing (θεομάχος) ruler, into intoxication and surrender, not by punishing Pentheus directly, but by bringing the obfuscated, Dionysian aspect of his personality to the fore, thereby exposing him as a divided subject.

I will reread Euripides’ dramatic masterpiece *Bacchae* or *Maenads* as a case study. To discern what is at stake, we must approach the drama in such a way that we ourselves may witness the scene from a position of proximity. We must closely study the events, as literally and physically as possible. Indeed, *had we been there* (712), we might have fallen under Dionysus’ demonic spell ourselves. How to achieve this, how to allow this collision (skilfully staged by Euripides) to become *our* experience? How to become eye-witnesses ourselves?

Although it remains a challenge, requiring a combination of hard work and sensitivity to available materials (to be handled with utmost consideration), some methodological guidelines have already been provided above. First and foremost, although the use of translations as auxiliary materials is obviously allowed, and even inevitable, it is prerequisite to consult the original text as well and to familiarise ourselves with the exact wordings, the idiosyncrasies of the language, as intimately and bilingually as possible. We must spell the primary sources to the letter, word by word, especially the crucial passages.

As indicated, King Pentheus is an Apollonian, iconoclastic youngster who brashly denies the existence of the god (δαίμων) Dionysus. He refuses to acknowledge the force of the Dionysian principle, thereby arousing the god’s outrage. Pentheus, voicing enlightened Apollonian rationality, wants to cleanse the city of Thebe from “Asian” superstitions. He wants to rid it of Dionysian frenzy (μανία). The most unsettling symptom is the unruly behaviour of Theban women, many of whom already left their homes to join the Maenads, a tribe of marauding female nomads, living in the wild mountains, dancing and chanting in honour of the new god, while honouring Aphrodite as lesbian lovers as well (225). Their erotic-religious furor seems impossible to contain. The upsetting influx of foreign ideas is noticeable inside the city walls as well. Even grandfather Cadmus is about to join the festivities. He has given in to the effeminate trend, carrying a

thyrsus in his hand: a ritual spear worn by Bacchae, as a sign of loyalty to the god. Although wise old Teiresias advises Pentheus to turn “bacchant” himself (313), the latter proudly refuses to give in to this pandemic craze and its pestilent rites. He boldly refuses to *submit* himself.

A gender dimension is clearly involved in this, for he notably refuses to become the servant or captive of women who, according to his (Apollonian) logic, are supposed to *serve him*. He refuses to accept a drastic reversal of roles, where he, a male, would suddenly be supposed to serve his female servants (δουλεύοντα δουλείαις, 803). He is determined to fight the Bacchic pestilence, which is turning women into hunters, hunting down and capturing men, like beasts (1204), armed with thyrsus-staffs as javelins, catching them in their nets (847). Roles are reversed as women force armed men to flight (764), but Pentheus firmly intends to defend the Apollonian principle of harmony and stability which, for him, logically includes the systemic subjection of women, something which is considered “natural”: legitimised by the Apollonian understanding of nature. He intends to avert the disruptive threat as a guardian (φύλαξ) of his principle, by capturing and re-domesticating the transgressive Maenads, putting a stop to their nomadic lesbian love-making (958). But his Apollonian understanding of nature as a balanced harmonious order suddenly finds itself confronted with a completely different manifestation of nature.

Like an experienced stage director who carefully dresses his actors (Segal 1997; Mueller 2016), Dionysus cleverly leads the antagonists into a “mighty clash” (εις αγώνα μέγαν, 973), a gigantomachia between two incompatible interpretations of nature, with dire consequences for inter-gender relationships. Step by step, we witness how Dionysus lures Pentheus out of his safe Apollonian entourage and into the trap prepared for him. Pentheus becomes emasculated and de-domesticated, robbed of his identity. This entails a series of role reversals. First of all, Dionysus himself, arriving from a journey through Asia with his train of wildly dancing and chanting women (who perform their revelling rituals preferably at night), has assumed a mortal human shape (μορφή, 4) as a prophet of the god. The most dramatic reversal, however, involves Pentheus himself.

Instead of guiding others (into battle, calling them to arms, as was his original intention), he allows a suspect stranger (Dionysus) to become his guide. Subsequently, he allows himself to be transformed from a male into a woman (εις γυναϊκας ἐξ ἀνδρὸς, 820), clad in the attire of a Maenad. For in order to secretly approach them and study their idyllic, bird-like lovemaking, he must paradoxically become very much like them. He adopts their outfit, acquires their shape and form, as a true “daughter of Cadmus”. Indeed, he becomes a Maenad in a remarkably convincingly manner (πρέπει δὲ Κάδμου θυγατέρων μορφήν μιᾷ, 917). Allegedly, he does all this to enter the Maenad’s mountainous world and spy on them, for that is what he intends to do: to spy them out (πρῶτον εἰς κατασκοπήν, 838).

The apex of conversion and reversal is Pentheus’ “coming out”, when he literally steps out of the palace to enter the scene, properly costumed in Maenad

garb. Rather than serving as a “contraceptive” or immunisation device, the maenad costume singles him out as prime target (Giegerich 1998), while Dionysus now overtly controls the situation. Instead of seeing Maenads, he is to become one himself, ritually dressed and carefully prepared to serve as sacrifice.

The transformation is so convincing, and the experience of exposing himself to the gaze of the Stranger so intoxicating, that he suddenly sees everything double: two suns, two cities of Thebe. The Stranger now seems like an intimidating bull to him (912, ff.), indicating how vulnerable Pentheus has become, although Dionysus explains that he now finally sees things as they truly are. Whereas Dionysus is deified, Pentheus is enslaved. While being hustled out to catch the Maenads, he is in bondage himself. His symptom, seeing everything twice, may indicate his revelling intoxication, but it also reflects a moment of metamorphosis, as he finally allows his feminine alter ego to manifest itself, as if he is combining male and female (or Apollonian and Dionysian) sense organs, replacing one set by another.

For Pentheus, the very experience of wearing the Maenad costume instils frantic desire (Mueller 2016). No sooner has he been dressed up, or he already tosses his head backwards and shakes loose his carefully coiffed hairlocks. Fully dressed up as a Maenad, he asks Dionysus whether he now really looks like Agave and her sisters, as if Dionysus is holding up a mirror for him and Pentheus is exulting in his likeness to the god’s most exquisite followers. We see *two* Agave’s, the original one and her feminised copy. Under the sway of the Dionysian principle, Pentheus’ identity and individuality become fluid and morphed. The former guardian now wants to be mistaken for a woman. Under the demon’s spell, the despotic ruler acts like a coquette little girl, for instance when he asks Dionysus whether he now will become as strong as a real Maenad, while in reality he has become completely helpless: no match at all for a fearsome Bacchante. His religious scepticism, which apparently had been over-compensating a secret longing for transgression, has been swept aside by the dizzying effects of his effeminate dress. The Bacchic cult is a “queer” religion, involving masculinised females and feminised males, turning women into huntresses while the emblem of hoplite masculinity becomes a childish coquette, concerned with his looks (Theodoridou 2008).

Seeing that he has utterly lost the struggle for power, the “wrestling bout” as he phrases it, Pentheus now fully surrenders himself to Dionysus. He is completely in the demon’s hands and fully belongs to him (σοὶ γὰρ ἀνακείμεσθα δῆ, 934). His mind (φρήν) is drastically reset. The cross-dressing becomes an initiation rite, a rite of passage, and he experiences a full conversion into a completely different way of thinking (μεθέστηκας φρενῶν, 944). Dionysus now fully and literally possesses him and Pentheus encourages him to do whatever he likes with him (Powell 1990). For Dionysus, having seduced Pentheus into dressing up and surrendering himself to him, indicates that the decisive step of the initiation rite has been successfully completed (Mueller 2016). Now, he will guide Pentheus through the city (to have him mocked and humiliated) and up to

the mountains. Someone else will bring him back: Agave will lift him high up and carry him effortlessly in her arms (944), and Pentheus is thrilled by the prospect, exulting in utter powerlessness and helplessness.

When he summons Pentheus to come forward and reveal his renewed self, but also later, when Dionysus, with surprising ease, hoists him into a tree, Pentheus is actually called Penthea (913, 1070), as if the metamorphosis has already been successfully completed.

In all these instances of transformation and role reversal, the Greek wording is important, literally emphasising what is actually happening. Pentheus transfigures and migrates, from one particular ambiance (the city of Thebe) into a completely different one (a mountainous wilderness), but also *out of* the world of males, *into* the world of women (εις γυναικας ἐξ ἀνδρῶς) as we have seen, assuming a female *form* (μορφή) as camouflage, in order to spy on the Bacchantes and to approach them as closely as possible, literally and figuratively: to study them without being seen. But this role reversal (from male to female) leads to a series of dramatic additional reversals. Instead of defending the Apollonian order by opposing the threat (his initial impulse), he is seized by the sudden desire (813) to stalk their encampment and witness their drunken, entranced, erotic rituals. Driven by voyeuristic desire to see a “primal scene” (Greco 2016), he becomes utterly exited over the idea of secretly spying on the Maenads (κατάσκοπον μαινάδων, 979) with passionate curiosity. Initially, his motive is to acquire strategic intelligence, but it soon becomes evident that what he really desires it to witness erotic activities, as a first introductory step towards becoming one of them. Under the sway of this scopic drive, he allows himself to be clad in female attire (ἐν γυναικομίμῳ στολῆ, 979), giggling, with curly long hair, neatly dressed up in a woman’s robe by Dionysus, who acts as his tire-maiden, so that heroic readiness gives way to travesty and parody. The stage becomes a psychic retort, a vessel (Saban 2003, p. 29) for conducting radical metamorphosis. Cross-dressing is not merely a more or less comical and temporary change in outward appearance. Pentheus has emptied himself for the god and now, bereft of his previous (masculine, Apollonian) characteristics, he has become a kenotic subject in a psychic experiment, ready for a reconfiguration into the Dionysian mode.

He abdicates as king, but as Apollonian individual as well. He is both the target of the intervention and the initiated adept, an assistant to the god, curious to know whether he has convincingly altered in the right direction, whether his outward appearance concurs with his psychic experience of transmutation (changing gender, but also adopting the Dionysian mood). Pentheus, now very pleased with his costume, asks Dionysus whether he walks and stands like a woman, while Dionysus carefully arranges his curls, skirt and posture, alluding that a special fate awaits him. Dionysus also provides him with protocol instructions: how to hold and handle his thyrsus, how to wear his coif. With his long and perfumed hairlocks, Dionysus is a bigender transvestite himself: “not at all a wrestler”, as Pentheus initially characterises him (455), although eventually he confesses himself to be the weaker wrestler of the two. Initially promising

Pentheus to secretly lead him through Thebe, Dionysus actually exposes him to ridicule, morphed into a female shape (γυναικόμορφον, 854). And instead of spotting Maenads, Pentheus himself is the one who is being spotted. Instead of targeting them, he himself is the one who is being targeted by them, so that the hunter (initially determined to “hunt” these women down from their hills and “trap them in iron”, 228, 231) becomes their prey. Dionysus lifts him into a tree for optimal view, positioning him in an optimal seat from where he may enjoy the spectacle. As spectator, he assumes that he will remain himself unseen. The stranger has guided him to a scene: a performance (θεωρία, 1047), a gigantomachia between rival worldviews, but at the crucial moment the stage director disappears from view, so as to allow the action to unfold. Rather than seeing them, the women discover Pentheus soon enough, seated in his treetop, wherein he is now trapped. Angry Maenads tear his fir tree to the ground with brute physical force.

In a previous dialogue with Dionysus, Pentheus agreed that he should not try to gain victory over these women using physical strength (ου σθένει νικητέον γυναικάς, 952), but now, as soon as he falls from the tree, Agave physically attacks him, brutally clutching his left arm in both her hands, setting her foot against his ribs, like a skilled wrestler, and furiously tearing his arm out of its joint. After this humiliating defeat, which leaves him helpless, other Maenads quickly join in to finish him off, while the rest of them cheers aloud. His body is torn to pieces and Agave triumphantly impales his severed head on her thyrsus-point, crowning it as it were. She then demonstratively carries her precious war trophy across the mountain scenery, even taking it home with her, with the intention of fixing it against the palace wall (1239), as a winners’ prize or hunting spoil. When Agave regains her Apollonian senses, re-entering the Apollonian ambience as it were, she greatly repents her deeds, but these cannot be undone. As *mater dolorosa* she now carefully pieces together his scattered bodily remains as partial objects in their proper order (the *compositio membrorum* scene).

To follow closely what happens, to *enter the scene*, we must closely follow the text, until we ourselves are caught in the act of spying on the Maenads, albeit without submerging into this Dionysian world completely, that is: without really *becoming* Pentheus, sharing his fate. Contrary to Pentheus himself, we are both insiders and outsiders. Still, for a brief moment in time, the drama allows us to enter the Dionysian ambience, so as to partially live up to our methodological adage of *being there*. It is as if this same fate could have (or should have) befallen us, trespassing into these forbidden realms, while refusing to pay our respect to the god. Euripides’ drama allows readers and audiences to visit the Maenad world and to experience the Dionysian mood: the violent and furious Dionysian logic, the Dionysian *principle*, which enables or forces these women to act, and forces Pentheus into submission, overpowering him and even tearing him apart. The brief, uneven wrestling match between Pentheus and Agave, their battle of the sexes, is actually a clash between two principles, two styles of thinking. By robbing Pentheus of his guiding principle, Dionysus knows that, in a bacchantic

setting, he will not stand a chance against his female foe, perfectly adapted to these unfamiliar surroundings. The drama, culminating in an intergender wrestling match between Pentheus and Agave, is actually a battle between two philosophemes, each of them giving rise to two completely different styles of thinking and acting, namely the Apollonian and the Dionysian style.

These styles are incompatible, but contrary to Nietzsche's interpretation the Dionysian principle is not counter-rational per se. It is only from an Apollonian perspective that the Dionysian mode strikes us as irrational. On closer inspection, it has an irresistible logic of its own, as demonstrated by Euripides' tragedy. What is wisdom for some, is folly for others. For Teiresias, siding with the Dionysian principle, Pentheus is a fool speaking folly (μῶρα γὰρ μῶρος λέγει, 369), while wise insights seem sheer folly to a fool (480). Cadmus adds to this by pointing out that Pentheus' rationality is actually the opposite of wisdom, from a Dionysian perspective (φρονῶν οὐδὲν φρονεῖς, 332). While Dionysus has kept his reason, he claims that Pentheus has lost his (σωφρονῶν οὐ σῶφροσιν, 503). Whereas Dionysus sees Pentheus as "strange" (δεινός, 971), Dionysus, the stranger, is depicted as even more "terrible / strange" (δεινότατος, 861) to disbelievers. Both interpret the conduct of the other as an unacceptable insulting insolence (ὑβρεῖς ὑβρίζειν, 247).

While Pentheus believes he is doing his Apollonian duty, Teiresias accuses him of being a bad citizen (κακός πολίτης, 271). The drama enacts the various steps in the process of initiation or conversion, luring Pentheus out of his familiar Apollonian ambiance and into the Dionysian wild, where he is exposed to a style of acting and thinking which he experiences as intoxicating. While Pentheus interrogates Dionysus, their dialogue seems remarkably reminiscent of the famous gospel scene mentioned above: Christ before Pilate, two protagonists representing colliding principles, and therefore unable to understand each other. When Pentheus asks him whether the stranger can actually see his god, the latter replies affirmatively. My god is right beside me, he claims, although you, being impious, cannot seem him (502), while "I can see him seeing me" (ὄρων ὄρωντα, 470). The exact phrasing is important here, for seeing or conversing with a god is a privilege of the initiated: only true believers can experience the god's presence, only they discern how god is looking at them and after them. Only they experience themselves as standing in god's field of vision. Only the initiated are sufficiently gifted and enabled to experience the existence of their god. To Pentheus, the last of the unconverted as it were, this experience is initially denied, until he undergoes his dramatic and fatal transformation. When the stranger, who actually *is* Dionysus, is miraculously freed from his dungeon (much like Saint Peter), he can indeed rightfully claim that he freed himself, effortlessly (αὐτὸς ἐμαυτὸν ῥαδίως ἄνευ πόνου, 613). While Pentheus suffers dismemberment (σπαραγμός), as a typical, Dionysian punishment, Dionysus arises from the grave. This is only a temporary outcome, however. The struggle will continue.

Bacchae is not only about gender and power, but also about knowledge. Dionysus tempts and plays with Pentheus' desire to *see*, in the sense of θεωρία:

watching the forbidden spectacle. He exploits Pentheus' desire to spy upon the secret Bacchant rites from a vantage point of Apollonian enlightenment, like a scholar almost, aiming to see clearly and distinctly, giving in to his desire to fathom the unknown. Pentheus wants to gaze upon the worshipping Bacchants with rational precision, without being seen himself, allegedly a form of espionage. He wants to explore the terrain in preparation of a military operation against them: his "rationalisation" if you like. His risky escapade (his scopophilia) is legitimised as part of a campaign, launched to restrain the oriental craze with military force. Yet, instead of counteracting the Dionysian threat, Pentheus, the "theoretical hunter" (Gish 2016) goes native and is captured by the Bacchants as their ultimate prey.

The encounter with the Bacchantes is a play inside a play, not enacted but vividly narrated (*εὐάργεια*). The vividness was so overwhelming that spectators of Greek tragedy had the experience of taking part in the events themselves. By witnessing the fight between two well-trained verbal gymnasts (Pentheus versus Dionysus, 492) and by observing (*κατάσκοπεῖν*) Pentheus observing the Bacchants, we ourselves become involved in the dialectics, where roles become dramatically reversed until the architecture of Apollonian rationality collapses. Dionysus is the winning competitor (*αντίπαλος*) in this verbal-dramatic wrestling contest, and wrestling (*πάλη*) is a key metaphor in Euripides' tragedy – although the actual wrestling (in the literal, physical sense of the term) is relegated to Dionysus' female retinue, so that the Dionysian principle regains its dominance.

Let us now reconsider Nietzsche's view on Euripides *Bacchae*. As said, Nietzsche adopted the idea of a tragic rivalry between Apollonian and Dionysian principles from Wagner, but a number of problems are entailed in his subsequent handling of these ideas, and his elaboration has been considered problematic from the very outset. Notably because, as soon as he actually applies these principles to the *Bacchae* of Euripides, one of the most impressive works of Greek tragedy, he confusingly seems to spoil Wagner's conception. According to Nietzsche, Euripides was a one-sided "rationalist" in the Apollonian sense, someone who (again: according to Nietzsche) had wanted to eliminate the all-too-powerful Dionysian element and to rebuild tragedy as a purely Apollonian world-view. Towards the end of his life, that is: when he composed *Bacchae*, Euripides himself posed the question whether the Dionysian principle should exist at all. Should it not be eradicated from Greek soil? Of course, we should, the poet says to us, Nietzsche argues, if only it were possible, but the god Dionysus is too powerful. His most intelligent opponent, Pentheus, is unexpectedly charmed by Dionysus and organises his own destruction. Euripides actually sides with Socrates, Nietzsche claims, although he uses dramatic dialogue rather than Socratic logic as his means of expression. This is a remarkable view indeed, and my rereading of *Bacchae* explicitly contradicts Nietzsche's interpretation.

Whatever may be said about Euripides, he is decidedly *not* a one-sided Apollonian Enlightener, as Nietzsche seems to be suggesting. Rather, I presented

Bacchae as a dialectical confrontation between two styles of thinking, between the Dionysian and the Apollonian worldview, rereading Euripides' tragedy as a magnificent dialectical highlight. Would it have been possible for Euripides to compose this tragic masterpiece at all had he not been conscious of and sensitive to both poles: Apollonian clarity *and* Dionysian celebration? Why did Nietzsche revert to such a binary way of thinking, identifying Euripides' own position as a playwright with the principle of rational enlightenment, instead of seeing Euripides as someone who profoundly exposed himself to both dimensions, exploring their incompatibility on stage? Nietzsche's characterisation of Euripides as a rationalist – Nietzsche's relapse into binary thinking – is both remarkable and disappointing, given the way in which Euripides stages the conflict between Apollonian enlightenment and Dionysian celebration, a basic collision which becomes sublated into tragedy. Even his hero Pentheus is far from "straight". What the drama reveals is that there is a Dionysian side to the latter's personality as well, making him susceptible to infection. Whether Socratic immunisation proves a more viable strategy will be further explored in the next chapter (*Chapter 2*).

As to the *compositio membrorum* scene, something similar befell Euripides' text as such. A Byzantine text entitled *Christus Patiens* contains a great number of lines taken from Euripides *Bacchae*, notably from lost portions, as *spolia* so to speak, botched together as a collage of quotations. This points to a continuity between the Dionysian and the Magian, between Dionysus and Christ, and many parallels can indeed be discerned between them: both are good shepherds, both are benevolent young gods, associated with wine. Nonnus of Panopolis authored *Dionysiaca*, an extended tale featuring Dionysus and the Bacchantes in their battles against Indians, but he also composed a hexametric Paraphrase of the Gospel of John, featuring Jesus as the god of love and wine (Cavero 2009; Shorrock 2011). This will be taken up in *Chapter 3*, in my discussion of Magian thinking.

Chapter 2. Cosmonauts: Apollonian thinking

The grounding idea of Apollonian thinking is that reality is a perfect geometric structure, a κόσμος, whose order and harmony can be discerned via contemplation. Cosmos literally means order or ornament in ancient Greek. This conviction is not the result of empirical research, but an *a priori*, self-evident truth which *precedes* research and *allows* certain forms of inquiry to unfold. It is the starting point, not the result of Apollonian (Euclidean) geometry, elaborated by Euclid in his manual *Elements*, but the same idea also guides Apollonian astronomy, and we find the same conviction at work in Apollonian architecture and Apollonian politics. To establish a well-proportioned polis, Plato argues, we must first of all determine the optimal number of citizens (1926/1994, 737C) and how they should be distributed into sections. The basic schema starts with a population of 5,040, a number that is optimally manageable because it can be divided into numbers (2, 3, 4, etc.) up to 10 (737E). Law-making and leadership require insight into geometric proportionality, i.e. knowledge of the right number (ἀριθμός). The number 5,040 allows for numerous subdivisions, depending on the situation, in the sense that warfare, for instance, requires a different distribution than what is required in times of peace. The number 5,040 is obtained by multiplying $1 * 2 * 3 * 4 * 5 * 6 * 7$. The ratio of societal classes (aristocrats, artisans, slaves) should be proportional to arrive at a natural situation of stability, harmony and order.

Like Apollonian politics, Apollonian ethics is an ethic of proportionality: the middle course (the golden mean), the right measure, while Apollonian medicine regards health as a state of harmony and balance, for instance between bodily humours or fluids. We will further explore the profile of the Apollonian style by allowing two famous artworks to guide us. First of all, the Pompeii mosaic depicting Plato's Academy, also used by Peter Sloterdijk in his analysis of spherical (Apollonian) thinking (1999). Secondly, the *School of Athens*: Raphael's fresco in the Vatican Museum.

§ 1. An intensive idyll

In 1998 and 1999, Peter Sloterdijk published the first parts of his *Spheres* trilogy, and in 2004, part three was added. The second part (1999) is entitled *Globes* and opens with a Prologue – “An intense idyll”. Here, he discusses a famous Pompeii mosaic, now in the Archaeological Museum of Naples, depicting a meeting, a philosophical exchange of ideas. The concentrated attitude is striking. It is as if an idea, a fundamental thought suddenly overwhelms the scholars involved, as Sloterdijk phrases it. The artwork immortalises a common fascination (“eine gemeinsame Bestürzung”). A fundamental insight enforces itself upon them: something which had never been thought before. Little is said: it is a silent and contemplative form of conversation. These thinkers, apparently, are facing a

fundamental truth which is revealed to them and seems to exert an irresistible intellectual appeal. What the artwork makes visible, according to Sloterdijk, is an exceptional event (1999, p. 14), a moment of commencement. A collective enthusiasm engulfs them. And the object of their contemplative admiration is a geometrical sphere (σφαίρα), representing reality as a whole. This perfect, ideal object of thought is both honoured and investigated (“verehrende Forschung”).

What is depicted here, according to Sloterdijk, is the reformation of thinking which took place in Plato’s Academy, the transition from proverbial wisdom to rational thought. The mosaic captures the birth of a philosophy that is fundamentally similar to ancient Greek geometry: a rationalistic philosophy – *more geometrico*. Only those who are trained in geometry are allowed to enter Plato’s philosophical garden. On the mosaic, these philosophers (“academics”) bend in astonishment over a sphere, as if studied for the first time. An intellectual shiver permeates them. They are confronted with a new insight which will dominate philosophy for centuries to come, the Apollonian conviction that a perfect geometric structure can be discerned in the universe as a whole, intellectually at least. This perfect structure is not an empirical phenomenon, but an intellectual idea. It becomes visible in the perfect spatiality of a sphere, as a model of the cosmos as a whole.

Seven philosophers gather around a central sphere, a decisive moment, according to Sloterdijk, a commencement in the history of thinking, hovering on the boundary between discourse and cult. They stare thoughtfully at the sphere of being, symbolising the κόσμος, the God of the philosophers – the God who spurs us into thinking. This globe is an object of admiration, but also of careful analysis, and measured with precision. Mathematical proofs and logical syllogisms are formulated. The artwork visualises the Apollonian piety of thought, the devoted intellect. A form of spatiality (the ancient κόσμος, conceived as a series of concentric spheres) is uncovered via contemplation. It is, according to Sloterdijk, a Pentecost of thinking. A new point of departure propagates among intellectuals, an intimate but powerful thought manifests itself – a decisive experience. A common consciousness unleashes its intellectual activity. From now on, they are to devote their lives to studying the spherical truth or whole, the spherical cosmos. A logical community begins to take shape, a counter-community, for the time being, in opposition to the pre-Apollonian Dionysian culture still prevalent at that time. But it is the beginning of a new thought that will soon conquer the world. These scholars form a πόλις of thinkers, a *mundus academicus*, in preparation of the political realization and implementation of this idea.

The mosaic immortalises the moment when a thought “illuminated”. Perhaps they experienced this Apollonian momentum for the very first time. Or maybe it was a ritual celebrating an insight that was already proliferating, so that the participants commemorate an event that occurred in the past. In any case, this artwork depicts the moment when, in the words of Kant, mathematics becomes science – Apollonian science, to be exact. In geometry, human reason emancipates itself from practical experience. Philosophers-mathematicians look

away from empirical reality to contemplate mathematical constructs, first and foremost the perfect sphere. From this moment of commencement onwards, immortalised by this mosaic, the spherical idea begins to flourish and spread throughout the world. Soon, this idea will also take root outside this intimate circle of philosophers. It becomes ubiquitous, and can no longer be ignored.

According to Sloterdijk, the power of the Apollonian idea is exemplified by the Pantheon in Rome, the Apollonian paradigm building par excellence. Spherical thinking has finally established its rule in this edifice, erected between 115 and 125 A.D. as the first truly spherical construction on earth (1999, p. 435 ff.), a form of architecture which captures the Apollonian truth in stone. The Pantheon symbolizes the moment when the whole world becomes absorbed into the Roman sphere of influence – literally. The world finds shelter in the spherical space of the Roman power dome. The pantheon is shaped like a sphere because it aims to absorb and encompass the whole world, as the spherical nucleus of a spherical empire, extending from this geometric center. That explains why there is room available for all the gods, even forgotten or unknown ones. The thought of the sphere underlies, motivates and legitimates Roman imperialism.

The Pantheon embodies spherical, Apollonian *building, dwelling, thinking*. While the Greeks contemplate the heavenly spheres, practical Romans apply spherical geometry to the political and religious world – *translatio philosophiae ad Romanos*. Apollonian understanding of Being as a whole is explicated in a “pan-theological” manner. The Pantheon is a product of constructive thinking and exemplifies pre-Copernican spatiality. The sphere has materialised into a building: the concrete ovum of the *pax romana*, a replica of the κόσμος in the form of a spherical cavity that provides foreign peoples and their deities an entrance ticket into the Roman Empire. In the Pantheon, empire building, cosmological awareness and political theology converge.

§ 2. The School of Athens

The mosaic of Pompeii, commemorating the beginning of Apollonian thought, was made in the First Century A.D. when Apollonian culture was already at its peak. The mosaic looks back on its context of discovery, Plato’s Academy, located in a sports park, just outside the walls of Athens. However exuberant and impressive this image is, the viewer is not really involved in this thought event, from which we are separated by such a huge temporal distance.

There is another artwork, however, which emphatically aims to re-evolve Apollonian thinking and bring it back to life as it were: an interactive artwork that invites the spectator to engage in a lively discussion with philosophers depicted large as life – the fresco *The School of Athens* by Raphael in the Vatican Museum – an impressive expression of a neo-Apollonian Renaissance, rendering the idea of the world as κόσμος plausible again, but under drastically changed conditions. The spectator is invited to participate in this celebration. It is a

retrospect that forms part of a cultural campaign aimed to rehabilitate the Apollonian style. Greek philosophers and scientists are depicted as if they are contemporaries, of each other and of the Pope who ordered the artwork to be made. In reality, these scholars lived in different times at different locations. They are united by the artist in an imaginary, utopian location. The Renaissance Pope wanted to consider himself one of them. This reunion of heroes does not result in a *consensus sapientium*, however. Some Dionysian dissidents disdainfully withdraw from the academic conversations at the centre.

Raphael (1483-1520) produced his masterpiece between 1509 and 1511. What he portrays is not so much a school as a battle between two schools. What becomes visible in this artwork is the struggle between two Greek styles of thinking, the Apollonian and the Dionysian style. The Apollonian style dominates the artwork, its protagonists control the scene and the fresco mainly depicts Apollonian teachers and students. Most scholars are engaged in verbal forms of inquiry, although there is also some reading and writing going on. Plato and Aristotle are involved in a debate at the centre of this utopian intellectual microcosm. Plato carries his dialogue *Timaeus*, while Aristotle carries his *Ethics*. In both books, Apollonian philosophy is connected with Apollonian mathematics. *Ethics*, however, is also the book in which Aristotle explicitly engages in a critical debate with his teacher (1926/1982, I vi. 1).

Other protagonists of Apollonian thinking are also represented. Socrates, the founder of Apollonian logic, literally thinks with his fingers: Human beings are mortal; Socrates is a human being; ergo: Socrates is mortal. Euclid teaches math using a wax tablet, and Ptolemy teaches astronomy using a sphere. However, rival Dionysian thinkers are also represented, demonstrating disinterest by turning away from the main characters centre stage. Heraclitus, Epicurus and Diogenes proclaim the idea that reality is a capricious, chaotic Dionysian feast, while tangible things are nothing but clotting and disintegrating atoms, under the influence of love and hatred. To articulate this truth, Epicurus developed a Dionysian physics, entailing a mathematics of its own, based on the concept of *clinamen*, i.e. spontaneous deviations giving rise to atomic swerve (Serres 1977). First and foremost, however, Dionysian thinking is developed through poetry (Zwart 2014a). Heraclitus (in the foreground) distances himself from Apollonian debate by writing a poem. And Epicurus (on the left, crowned with grape leaves) is writing a didactic poem about nature. For the Dionysian style of thinking, nature is not κόσμος, but unfathomable and uncontainable.

The artwork itself is one of the highlights of the Renaissance, the temporary rebirth of the Apollonian ideal, albeit under Faustian conditions. The ambiance has changed: the sports park has been replaced by a palace. The Apollonian revival aims to distance itself from late-medieval Gothic culture, but only partially succeeds in doing so. The fresco unequivocally radiates a Faustian Will into power. The building in which the Apollonian deliberations take place is, – much like nearby Saint Peter's dome – a hybrid edifice, a *coniunctio oppositorium*, combining Apollonian desire for harmony with Faustian craving

for height, gravity and perspective. The Apollonian style is engaged in a polemics⁵ with Dionysian thinking (voiced and enacted by Heraclitus and Epicurus), but also with Faustian thinking. The Baroque and its basic geometrical idea, the ellipse (the mathematical symbol of a world with two focal points: rationality and religion, science and the Church) is already quite near: a heavy, expansive, Faustian reclamation of Renaissance tendencies.

§ 3. Nostalgia for Plato's Academy

However impressive Raphael's fresco as artwork may be, the image of the Academy it conveys is quite misleading. Such a location has never existed. Raphael positions Plato, along with his followers and rivals, in a fictitious, idealized environment. Apparently, he imagined the Academy to be an immense theatre for education and research, an ideal university. The architectural ambience of the philosophers' conversation reflects the Apollonian thinking style, but in a mature version – as civilization. His vision of Plato's school is decidedly anachronistic. At the time of Plato, Apollonian thinking was still culture: a small-scale thinking practice. How should we imagine the Academy? Let us try to return to the beginning, the context or discovery.

The Pompeii mosaic offers a more faithful image than Raphael's fresco. Seven academics gather together in an outdoors location. There is silence and concentration. In the background we notice a park (near a stream), a tree (probably a plane-tree), a sundial and a city. The teacher teaches mathematics. With his stick, he demonstrates the geometric properties of the sphere. The Academy was situated in a park landscape. Apart from buildings of modest size, there were facilities for physical exercise. Such conditions favoured speculation and reflection, in contrast with the public, metropolitan locations in the city centre, where Socrates preferably hung about.

Plato's scholarly practice differed from that of his teacher Socrates. The latter was decidedly a city dweller, and the same was true for many of his contemporaries, the sophists. They practiced their intellectual pursuits in the centre, where public meeting places were located, primarily the market square (*ἀγορά*). Plato's first encounter with his mentor took place near the theatre of Dionysus, amidst a metropolitan crowd. Plato himself became an agoraphobic philosopher who wanted to escape the crowds. The elite began to eschew the public squares and baths. Philosophers played a key role in this exodus away from the bustle of the city centre. The centre had become too noisy for scholarly debate.

⁵ That Plato's and Aristotle's works have been retained, while the Dionysian legacy has largely been lost, is no coincidence. Texts were vulnerable and scarce, and competing schools were out to destroy the output of rivals (Cf. "Platon soll alle Bücher des Demokrit haben aufkaufen und verbrennen wollen" (Stenzel 1972, p. 60).

From Socrates, Plato had learned dialectics. On his travels to Southern Italy he picked up mathematics and became acquainted with Theodorus of Cyrene, teacher of his renowned colleague Theaetetus. In the dialogue named after him (Plato 1921/1996), we indeed encounter Theodorus as a maths teacher tackling the hazardous problem of $\sqrt{2}$ from an Apollonian viewpoint. The dialogue stages a conversation between Socrates, Theodorus and Theaetetus. Socrates (Plato) informs them that many young people travel to Megara to receive math training – he had been one of them. Shortly after his return to Athens, on his fortieth birthday, he founded his school (387 BC). Socratic dialectics and mathematics constituted the elementary principles of knowledge.

Plato founded his school in a park north of Athens whose name referred to a statue of the hero Academus. Although there were some buildings, including a *μουσεῖον* (school and library), it was primarily an open walled area with olive trees and plane trees, a *campus* (= field). The park served as a gymnasium, a facility for physical exercise, supervised by a *γυμνασίαρχος*. The location was not only used for sports, but also contained shrines and graves of prominent Athenians, while religious festivities such as torch parades were organised there as well. In short, Plato and his followers had to share the park with other visitors and users, but it was a considerably quieter and more pleasant spot than the urban spaces within the city walls. Diogenes Laertius (1925/1972) describes the Academy as a beautiful sports park with trees and fountains (for shade and cooling), located alongside the road leading from the Athenian *Κεραμεικός* (pottery) district to the North. Pausanias remarks that several sanctuaries like this could be found along Athens' main roads. He describes the Academy as a leafy sports park near a river (1971, p. 83): a nice place to be, a perfect meeting ground for aristocratic youngsters interested in physical and mental exercises, away from the hustle and bustle – to the extent that this was possible in metropolitan Athens. In 1966, the sanctuary was uncovered by archaeologists. They found large numbers of tablets used by students. Plato lived on campus as it were, among his students, and was buried not far from the main site.

The desire to distance themselves from the crowd must also be understood in socio-political terms: away from the masses. Conservative Athenian aristocrats assembled there to express their dissatisfaction with the democratic regime and to discuss what the ideal education should be for future leaders. The curriculum would build on mathematics. Athens had not been able to realise its political ambitions as world-power on the rise and Plato attributed this to deficient mathematics. This traumatic experience led to a craving for an “inner reconstruction” (Jaeger 1959, II, p. 2). In their sports park, Plato and his friends evaded the depressing climate of every-day political practice to ponder over questions concerning ideal politics and the good life. Mathematics was regarded as a basic intellectual pursuit. Above the entrance of sanctuaries, inscriptions usually could be found, such as “Only the honourable ones are welcome here”, and above the entrance to the Academy there was a similar caption indicating that only those who were well-versed in mathematics should

enter. Other intellectual exercises were considered impossible without a sufficient grounding in maths. Plato worked closely with leading mathematicians such as Eudoxus and Theaetetus. Eudoxus was poor and lived in Piraeus. To attend Plato's lectures, he had to walk eleven kilometres twice every day. He became famous for his work on the astronomical globe and on propositions (*Book V* of Euclid's *Στοιχεῖα*), while Theaetetus was responsible for the five regular polyhedra (*Book XIII*).

In *Πολιτεία* ("Republic"), Plato (1930/1999) provided an outline of the formation (*παιδεία*) for the guardians of the ideal state. As Werner Jaeger (1959) emphasised in his tripartite study, mathematical education was the core of the Apollonian training program that Plato developed. In fact, the ideal education that Plato outlines, reflects his own academic practice, albeit on a grander scale. In other words, in order to get a clear picture of how Apollonian practices in Plato's Academy were actually conducted, *Πολιτεία* should be consulted first and foremost, because it provides the blueprint of Plato's own school. Plato wrote his dialogues to advertise his program and to ridicule and discredit his opponents and rivals. They are literary documents conveying Athenian "urbanity" (Hegel 1971b, p. 25), notably the competitive debating practices, their style, complexity and pace. The "intramural" education, conducted within the walls of the Academy, were probably more formal and systematic in nature. Aristotle, when he mentions Plato, refers almost exclusively to the more philosophical dialogues, such as *Republic* and *Laws*, closely related to the verbal (esoteric) educational practices in which he himself participated for many years.

Plato's dialogues were intended for the outside world. Whoever had found his way to the Academy would discover another, more "esoteric" Plato (Wipperfurth 1972). The humorous and playful style would give way to the seriousness of mathematical research concerning numbers and geometric figures. Important concepts such as the soul or the good were mathematically defined. At one point, Plato dared to present a lecture in public, for a wider audience, concerning the good, in his esoteric style, based on mathematical methods, but this experiment resulted in a debacle. Mathematics, the language of true knowledge, apparently was not suitable for spreading ideas outside the safety of the immunizing walls.

Greek education included two components: musical education and gymnastics (Jaeger II 284), where physical exercise functioned as military propaedeutic. The gymnasium was a place where physical education and training flourished and Plato's Academy, located in the vicinity of such a gym, was the perfect entourage for mental exercises, as add-on to the traditional package. To the classical program of education and training (aimed at a harmonious and balanced development of body and soul through gymnastics and music), Plato added mathematics as "gymnastics of the mind" (Plato, 1935 / 2000, 521 C ff.; Jaeger 1959 III, p. 2). That was the quintessence of the educational innovation that he idealised in *Republic* and practiced in his own school. Academics saw

themselves as intellectual athletes. Especially books V, VI and VII give an idea of Plato's own intellectual practice.

Another dialogue that provides insight into Plato's actual education practice is *Meno* (1937/1999). While in *Republic* the outline of a complete curriculum is outlined, *Meno* stages an introductory lesson for beginners. Math methodology is used to analyse basic concepts at an elemental level, culminating in the famous mathematical exercise where an untrained student is made to demonstrate the theorem of Pythagoras. Probably, such an exercise functioned as an admission examination or intelligence test (Stenzel 1928).

From Plato's perspective, mathematics was ideally suited to bring about the mental "reversal" (μετάνοια) he aimed for. The attention had to shift from unpredictable Dionysian reality to the world of ideal forms, accessible only through intellectual contemplation, from opportunism to moral virtuosity. The perfect politicians whom Plato wanted to train would be willing to distance themselves from the political turbulence of everyday life in order to ground their political practice in a mathematical conceptualization of the ideal polis. Apollonian geometry was very suitable for this purpose because it did not focus attention on empirical objects, but on the properties of ideal forms (spheres, polyhedra, theoretical entities). Mathematics was the paradigm science and provided the basic building blocks for philosophical thinking (Stenzel 1972, 286 et seq., 293). As Plato explains in *Republic* (522 E ff.), Mathematics encompasses a number of sub-disciplines. First of all, the theory of numbers, not in the sense of practical arithmetic, but as a fundamental field, seeing numbers as proportions. Next, geometry as the theory of two-dimensional objects, followed by stereometry – the theory of the three-dimensional bodies, as static objects – and ultimately astronomy (the science that investigates the regular movements of perfect three-dimensional mega-objects). Plato acknowledges that mathematics may have some applicability and practical value (for example in the context of warfare), but its true value is educational and concerns the edification of the soul (Jaeger, 1959, p. 26). As gymnastics awakens the body, pure mathematics evokes a mental awakening. Mathematics is the tool that allows us to transform mere opinion into true knowledge.

The importance of mathematics as a core subject of academic (Apollonian) education is also confirmed, Jaeger argues, because it was a target of criticism by opponents, who rebuked Plato for encouraging his students not to engage in useful subjects such as rhetoric, but to squander their time on mathematical puzzles. This abstract trend, so characteristic of academic practice, was subsequently extended to other disciplines. Insofar as attention was given to empirical reality at all, for example to plants and animals, academic research and education consisted in classifying life forms, but again on the basis of the concept of proportionality (Plato 1925/1995), and primarily as a mental exercise. Music education did not mean that students learned to play an instrument, because that was just "technique". They were introduced in harmony as a sub-branch of number theory. Leading Greek mathematicians were familiar faces in Plato's

academy. The stereometrics to which Plato exposed his guardians was developed by Theaetetus. Euclid systematised the mathematical thinking of Plato's circle. Although Plato himself was not a mathematician, he was the philosopher who emphasised its crucial importance.

Socrates is the main character in Plato's dialogues (with the exception of *Laws*). He likes to mingle with non-academics in risky, exoteric exchanges of views, in the city centre or, even better, in the homes of wealthy Athenians. Such was the context in which Socrates felt at home.⁶ Plato's early dialogues breathe a metropolitan, not yet academic atmosphere. Other texts depict intellectual life in a leafy sports park outside the walls, a place of relaxation, of meeting like-minded people: the mean, as it were, between rural nature and plebeian urbanity.

In fact, we need to distinguish between two types of dialogues, namely those in which Socrates is truly given the floor, and later dialogues, where Plato himself is actually speaking and teaching. There are dialogues that take us back to the past (to the think-shop, the φροντιστήριο, Socrates' context or discovery), and dialogues that depict the specificity of Plato's own intellectual practice, using the label Socrates merely as a brand. The distinction between both types of dialogues is quite noticeable. The dialogues in which Socrates really plays a part, are set in localities he preferred: public places within the city walls, where large crowds gathered. Others are staged in gymnasiums and sports parks just outside the walls, with more opportunities for intellectuals to retreat and deliberate, with only students and colleagues as an audience.

In the opening passage of *Republic*, Socrates has a recognisable voice. We discover him amidst a crowd of people on their way back to Athens, after visiting a festival in Piraeus. Then, the house of a wealthy Athenian citizen serves as setting for an exchange of views with outsiders. In the course of the dialogue, however, Socrates gradually disappears from view and Plato himself is placed frontstage. The entourage changes accordingly, and later chapters provide a window into Plato's own Academy. *Symposium*, on the other hand, is firmly Socratic (Plato 1925/1996). The story begins in the theatre of Dionysus, which could host thousands of citizens, but then moves to the house of wealthy Agathon, who had just won the stage competition as a writer of tragedy. The "Socratic" dialogue *Gorgias* begins in a busy street and then moves to the house of Callicles. And in the dialogue *Protagoras*, Socrates is lifted from his bed while it is still dark and taken to a beautiful Athenian house erected around a patio. *Menexenos* is set in the busy city centre near the Agora and the dialogue *Theages* likewise begins in a busy street near the city centre. Socrates and his interlocutor then go to a colonnade not far from the Agora to continue the conversation (Plato 1927/1986, 121 A). Other Socratic dialogues also unfold within the walls of

⁶ "Sein Leben verbrachte er wie viele Athener auf der Straße, auf dem Markt, in den Gymnasien, mit der Teilnahme an Gastmahlen. Es war ein Leben des Gesprächs mit Jedermann" (Jaspers 1964/1983, p. 82).

Athens: the *Apology* in the courtroom, *Crito* and *Phaedo* in prison. *Charmides* takes place in a busy school inside the city premises.

These urban locations contrast with the more academic atmosphere of other dialogues. Whoever wants to develop an impression of Plato's Academy should read the first pages of *Lysis* (1925/1996). Socrates is heading to a sports park just outside the walls, near a spring, where a new wrestling school has just been opened. The school is visited by attractive, affluent young men who spend their free time with wrestling, games and discussions, under the guidance of a qualified philosopher,⁷ a convincing portrayal of Plato's Academy in its early days. The dialogue *Euthydemus* takes us to the same location, and also *Theaetetus*, in which the math genius appears as youngster, provides a viable image of the Academy as an environment for thinking and learning. The dialogue unfolds in a sports park. We see how young men get ready for a wrestling match (1921/1996, 144 C) on a race track. In addition to sports education, brain gymnastics is practiced in gymnasiums too. Visitors are introduced in geometry by Theodorus. A youthful Theaetetus explains what subjects he teaches (geometry, astronomy, harmony, numerology) and gives a demonstration of these exercises in a Euclidian style, using line sections and planes to solve mathematical problems. *Sophist* is conducted in the same location and also the mathematical dialogue *Statesman*, again featuring Theodorus, is situated in an academic ambience, where lines are drawn in the sand and intersected in the middle. As noted, *Meno* is thoroughly Academic. In the open-air, math problems are solved, again by drawing lines in the sand. And while the setting of *Republic* is initially Socratic, it eventually becomes truly Platonic. *Timaeus* is a Platonic seminar from the outset, a continuation of *Republic*. Such seminars must have been conducted by Plato on a regular basis. Plato's final dialogue, *Laws*, takes us to Crete, to the road that leads from Knossos to the Ida sanctuary.

In the comedy *Clouds* by Aristophanes (1962/1988), perhaps the most prominent critic of Apollonian thinking, the Socratic entourage is also emphasized. Socrates again plays the leading role here. The portrait which Aristophanes draws of him is the photographic negative, however, of Plato's version, but the contrast between city centre and sports park as locations for doing philosophy is drawn in a comparable manner. A verbal wrestling match is staged between two forms of logic: the good and the bad, to determine what the best education for young men is. The bad logic feels most comfortable in public areas, such as the agora, disputing in front of large audiences and mingling in loud conversations; The good logic, on the other hand, flourishes in gymnasiums, primarily the Academy, which is explicitly mentioned (1962/1988, p. 127 ff.). There, between plane, poplar and olive trees, young men are trained in wrestling, running and verbal virtuosity. While the bad logic attracts youngsters to the

⁷ "He showed me, just outside the wall, a sort of enclosure and a door standing open. We pass our time there, he went on" (Plato 1925/1996, 203B).

bathhouses in the centre, the good logic points the way to the academy, to the sports park, the runway in the shadow of plane trees.

Finally, in *Phaedrus*, the Academy is presented *in statu nascendi*, in its most recognisable form (Plato 1914/1995). When Socrates runs into Phaedrus, a student, they decide to deliberate about love outside the city walls. The conversation takes place under a plane tree, on the banks of a stream. This Arcadian landscape, quite suited as an ambiance for love and seduction, as well as for contemplation and education, is an exact replica of the Park of Academus. Phaedrus is heading for a walk outside the walls (περίπατον ἔξω τείχους). What is a young aristocratic Athenian looking for on such a hot day at this particular location? In the first place, intellectual relaxation. He intends to learn a text by heart which he is carrying in his hand, hoping to find optimal conditions for such a mental exercise. Secondly, physical effort. Socrates indicates that he is so eager to deliberate with the attractive Phaedrus that he is willing to follow him even if he intends to walk all the way to Megara and back (to the wall and back again, 227D). The phrase “to the wall and back again” refers to the physician Herodicus, whose specialty were physical exercises. Outside the walls of the city, he trained clients in walking or running (to the wall and back again, his slogan), gradually increasing distance or pace. In other words, this academic primal scene revolves around a combination of physical and mental training (a walk outside the walls to further this learning by head). Teacher and student find a suitable, leafy location, under a large plane tree near a brook, not far from a sanctuary, an altar for Boreas. Again, the Academy *in statu nascendi*. There are other statues in the vicinity – it is a sacred place (230B). For Socrates, the city-dweller, this is an unusual situation. His dialogues are usually staged on the market square, as we have seen, or in homes of wealthy citizens. He leaves the city rarely or never, he admits. He learns from people, not from trees. Nevertheless, in pursuit of beautiful young Phaedrus, he now admits that this place is very suitable for intellectual exchange, thus giving it his blessing as the cradle of what would become Plato’s own school.

Plato has good reasons to situate this scene in such an Arcadian environment. This primal scene legitimises his decision to establish his academy in such an extramural location, not far from a road, not far from a river, near a sanctuary. The location chosen by Phaedrus and Socrates is the prototype of Plato’s Academy. Socrates gives the example, Plato follows his master. Or rather, he presents his own decision (to establish a study centre in a park outside the city walls) as an endeavour which follows in Socrates’ footsteps. The anecdote serves to justify his innovation. In the park, he and his followers find a quiet ambiance for mental and physical exercises. As true aristocrats, they can afford to distance themselves from the masses. In *Phaedrus*, Plato allows Socrates to sanction this intellectual exodus.

When Aristotle establishes his own school, after his return from Macedonia, he likewise opts for a public exercise park, a gym, the Λύκειον (Lyceum), an open terrain near a temple dedicated to Apollo with covered paths

where he lectured in the mornings.⁸ The “peripatetic” school is named after this custom of teaching while walking on these covered promenades. There was a sanctuary for the Muses, a building with maps and a library (μουσεῖον). Aristotle’s philosophical garden reflects the Apollonian model.

This model contrasts with the gardens where Dionysian rivals did their thinking. The Dionysian garden of Epicurus, the *magister otii*, the master of pleasure, had a different character. Unlike the sports parks of Apollonian thinkers, it was a real garden, a place for pleasure rather than exercise. Pliny regarded him as the inventor of the city garden. As a garden philosopher he is portrayed by Nietzsche. Sitting pleasantly in his city garden, he criticizes his academic rivals. On the way to Plato’s academy, you would pass the garden of Epicurus.

Why all this attention for the Academy as a *location*? Because it is not a coincidence that Apollonian thinking evolved in a sports park. It was the place where educated individuals spent their leisure time. The emphasis was not on rhetoric, such as in the city centre, nor on practical skills. In the city park, you could devote yourself to pure geometry and pure politics, and become involved in intellectual games and high-brow political discussions, exploring the geometrical foundations of an ideal polis, led by philosophers who determined the properties of a perfect city in the same way as mathematicians determined the properties of a cube or a sphere.

Theaetetus is the dialogue which maximises the distance between public exercise park and city centre. The prerequisites for academic philosophy, according to Socrates, – but it is obvious that Plato himself is speaking here – are: a sufficient amount of spare time (σχολή) or, more preferably even, the absence of the time dimension as a disturbing factor, and the absence of uninitiated listeners. In the city centre, discursivity evolved under completely different conditions. Here, the duration and pace of the debate are constrained by external factors. The Academy offered discursive freedom (Ελευθερία του λόγου). True academics have no idea what is happening in the city centre (173 C) and spend much of their time studying the starry sky. The Academy is the place where philosophers dwell in proximity of the gods (176B). The absence (or minimal presence) of the time dimension also allows Plato’s dialogues to involve representatives of multiple generations (Parmenides, Zeno, Socrates, Theaetetus) in the debate as if they were contemporaries: the same conscious disregard of the time dimension so characteristic of Raphael’s *School of Athens*.

Academic thinking proved a sustainable product. Plato’s Academy continued to exist for almost a thousand years, although the famous plane and olive trees were cut during the siege by the Romans, when Apollonian civilization absorbed Athens within its sphere of influence. Diogenes Laertius describes how

⁸ “[Aristoteles kehrte] nach Athen zurück als öffentlicher Lehrer und lehrte dort auf einem öffentliche Plätze, Lyzeum, einer Anlage, die Perikles zum Exerzieren der Rekruten hatte machen lassen. Sie bestand in einem Tempel, dem Apollo Λύκειος geweiht, - Spaziergänge (περίπατοι), mit Bäumen und Quellen und Säulenhallen belebt” (Hegel 1971b, p. 140).

many generations received their education there as adults. Teachers spent their days on site, amidst their students. The combination of intellectual and physical exercise remained a signature feature. Sports were practiced naked and apart from philosophy, gay eroticism flourished. Socrates likewise seems to be looking for attractive male bodies as much as for conversation partners, in the places which Plato makes him visit. Platonic did not mean, as dictionaries phrase it, that the physical element was absent, but rather that the lover played the role of alter ego. The lover was a second self, belonging to the next generation. Teachers often had a favourite pupil, with whom they shared their campus existence and who were eventually appointed as successors. They formed a trans-generational unit. Gay erotic love facilitated the relay from one generation to the next. This was the context of discovery of the Apollonian style of thought.

§ 4. From φύσις to κόσμος

Φύσις was the term used by Dionysian philosophers of nature to refer to being as a whole. As Aristotle (1958/1982) phrases it, Φύσις meant that which moves, develops and perishes on its own accord, in accordance with its own principles of change, without our doing. In those days, human societies were modest enclaves amidst an immense, ubiquitous, inviolable nature. The impact of human activity was limited in scope, nature was experienced as awesome, and the basic experience or attitude invoked by nature was one of awe, a mixture of fear and respect. Human responsibility was confined to the human sphere. On nature as such, human action barely seemed to have an influence. Outdoors nature was not yet a subject of ethical reflection and environmental philosophy did not exist yet.

Nature as φύσις was the primary subject of Dionysian Greek thinking. These philosophers were physicists. The term φύσις refers to a nature experience that emphasizes its unpredictable aspects. It is difficult to study nature, as nature is wont to hide herself (Heraclitus). This experience of the changeability and fluidity of nature is also reflected in the famous statement that we cannot step into the same river twice. The visible, changing, natural real cannot provide reliable knowledge. That is, Greek thinking initially thinks in a Dionysian way. We must understand nature as the clustering together and breaking apart of invisibly small, elementary particles named atoms. Under the influence of love and hate, attraction and rejection, the figures and landscapes we observe with the naked eye are temporarily formed. Four types of atoms (elements) are distinguished (fire, air, water and earth). Real nature is made up of hybrid entities: mixtures of air and water (foam), water and earth (mud), fire and earth (lava), and so forth. The Greek elements live on in modern science as the so-called aggregation states (solids, liquids, gas), while fire was comparable to what Faustian thinking would later call “energy”.

In this Dionysian context a counter-movement developed: Apollonian thinking. This style aimed to supersede the capriciousness and unpredictability of

nature. Her science was pure geometry. Protagonists of this new style introduced a totally different understanding of nature, shifting the focus of attention from φύσις to κόσμος to emphasise order and harmony in nature. Apollonian philosophy, but also the mathematics associated with it (the geometry of Eudoxus, Theaetetus and Euclid) reflected a new basic conviction, namely that a perfect geometrical structure can be discerned in nature. This conviction (this basic truth) also provided guidance to politics and ethics. This new thinking style was destined to become the dominant one, but never uncontested. In the folds and margins of Apollonian discursivity, the battle continued. Apollonian logic continued to compete with its Dionysian rival. Dionysian thinking is less well documented and it is not unthinkable that representatives of the dominant Apollonian style deliberately tried to destroy its legacy, by literally destroying texts for instance. Socrates' negative verdict concerning textuality may have applied specifically to the Dionysian corpus, which was committed to the flames. But precisely *because* it was the counterpart or antithetic negative, however, surviving instances of Dionysian thinking may help us to specify the exact nature of the Apollonian thinking style. The opposite is also true, in the sense that Apollonian textual documents (in which the rival style is represented in a polemical manner) became a key source of information concerning Dionysian thinking. Via the confrontation with rival styles, it is possible to gain a deeper insight into the fundamental logic, the apparent self-evidence, the apparent *Selbstverständlichkeit* of Apollonian thinking.

§ 5. Nature as κόσμος

In *Timaeus*, Plato explains that nature should be understood as an intelligent design, the work of a mathematically trained craftsman, a demiurge who, at the beginning of time, created order out of the chaos. Despite the variability and capriciousness of existing nature, the construction plan (paradigm) of the demiurge was rational, balanced and stable (29B). In the starry sky, this perfect order was still visible to some extent for the naked eye. Here, perfect (spherical) bodies seemed to follow perfect (circular) pathways over the surface of perfect immense spheres. For Plato, the cosmos is a single, all-encompassing whole in the form of a sphere (33B), smooth and casted with great exactness (33C), that contains within itself all beings, including planet Earth and its inhabitants. Building on this grounding idea, Greek thinkers from Plato to Ptolemy envisioned the macrocosm as a series of concentric celestial spheres. Over the surface of these perfect mathematical figures, spherical celestial bodies described their orbits, their circular paths. The fact that this basic idea could not so readily be detected in the sky at night was indeed experienced as a problem, but it did not result in a reconsideration or rejection of the basic conviction as such. The grounding idea as such was never questioned. Spherical theory was not an empirical (inductive) theory, but a point of departure, a conviction *a priori* from

which reality was brought to the fore, putting everything in a spherical perspective.

The idea that reality actually reflects a perfect geometric structure also applied to the microsphere. Plato assumed that the elemental particles from which reality is composed, should be regarded as perfect three-dimensional shapes: tiny pyramids, cubes, and so on. At the micro-level, the level of elementary particles, there should be mathematical perfection as well (32A-32D, 55B-56C). Micro-nature, Plato claimed, was made up of perfect three-dimensional mathematical structures. Again, this idea did not result from empirical research (Plato was suspicious of knowledge coming from the sense organs), but was based on reflection, on a mental, intellectual vision (θεωρία). The fact that empirically perceived reality conveyed a rather chaotic, capricious and irregular spectacle had no effect on the rigidity, the apodictic import of the basic conviction that dominated Apollonian thinking. The perfect geometric structure of the cosmos as such was never a point of discussion. It was an object of contemplation, the central motive of speculative thinking, not the result of observation, but a point of departure that oriented and stimulated research. The senses were considered unreliable precisely because they did not clearly and undisputedly reflect the perfect geometric structure that simply had to be. Uninitiated humans were apparently unable to see the world in a proper perspective. Instead of developing instruments that could amplify the reliability of our senses, it was typical of Greek Apollonian thinking to rather rely on speculative competence. For developing a more technical and experimental approach, Greek science not only lacked the necessary technological dexterity, but also the proper logic.

For an Apollonian thinker, to observe meant to admire. *Observare* in Latin actually means to respect, to comply with, to regard. The cosmos was considered with awe. Admiration was the basic attitude or mood, the basic perspective from which nature was explored, articulated by Ptolemy when he confessed that he could not look at the starry sky without sliding into a state of divine inebriety.⁹ Nature as cosmos differed from real nature, the type of nature Greek farmers and fishermen were dealing with in their everyday practice: nature as a recalcitrant environment. Nature as cosmos was the nature of the gentlemen philosophers, the starry sky far above us and the elemental particles, only accessible for the initiated mind, trained in geometry. What they admired was a theoretical construct, an idealisation, projected onto nature.

This style of thinking, this logic, was decidedly unmodern. Faustian astronomers like Galilei or Newton also attempted to disclose the universe with the help of mathematics, but in their case a completely different kind of maths was employed – and a completely different universe emerge, a Faustian universe: infinite, terrifying, silent. The cosmos of Plato and Aristotle was a closed universe

⁹ “When I trace at my pleasure the windings to and fro of the heavenly bodies, I no longer touch the earth with my feet: I stand in the presence of Zeus himself and take my fill of ambrosia, food of the gods” (Boyer 1968, p. 158).

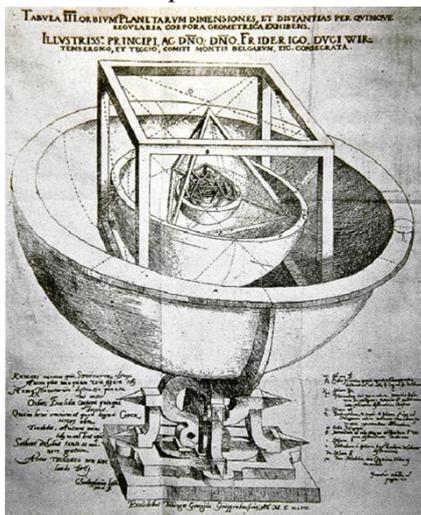
of limited size. Infinity for Aristotle was not a physical reality. The Faustian universe is infinite. Ptolemy could not perceive the cosmos without experiencing ecstasy, but the Faustian universe is cold and inhospitable. When Faustian astronomers began to envision the basic structure of their universe, the starting point was not the sphere, but the three-dimensional coordinate system with its three axes pointing towards infinity. The way in which Faustian astronomers perceived the universe differed profoundly from Apollonian thinking. The style of practicing astronomy changed radically under Faustian conditions.

As an undercurrent of Western thinking, however, the Apollonian style remained influential even after her demise. Thinking styles may resurge every now and then, to be driven into oblivion again later on, and a remarkable example of this is the early work of astronomer Johannes Kepler (1571–1630) who used Apollonian logic to produce a mathematical model of the universe in his *Mysterium Cosmographicum* (dating from 1596). The astronomy of the naked eye knew five planets (Mercury, Venus, Mars, Jupiter and Saturn). In 1543 Copernicus introduced the idea that Earth was also a planet, but he continued to assume that spherical celestial bodies describe circular orbits across concentric spheres,

with each planet circling along the surface of an imaginary sphere. The universe is spherical, he argued, because, of all forms, the sphere is the most perfect, being a complete whole, best suited to enclose all things. “Hence no one will question the attribution of this form to the divine bodies” (1543/1978, p. 8). This is Apollonian logic in optima forma.

The discovery that there are six planets, because Earth is a planet, inspired Kepler in his attempt to combine Plato’s five perfect three-dimensional solids with the six planetary spheres, placing the five solids (pyramid, cube, etc.) in the interspaces between the six spheres. In

other words, the universe represented a perfect (harmonic) geometric structure. For young Kepler, the universe was still a cosmos, a beautiful mathematical artwork. This mathematical fantasy (a compromise between Apollonian and Faustian thinking) failed to concur with the facts, however, and had to be rejected, but became an important step towards Kepler’s ground-breaking discovery that the orbits described by planets are ellipses, a Baroque idea: the ellipse being a key element in Baroque architecture.



§ 6. Apollonian ethics

Apollonian ethics is likewise grounded in geometry. Apollonian ethics operates *more geometrico* – in a mathematical fashion. *Meno* is famous for its treatment of the theorem of Pythagoras, but it is actually an introductory ethics lesson. The question is what virtuousness is and whether virtue can be taught. To answer such a question, Socrates/Plato reverts to maths, starting from a hypothesis “as mathematicians do” (86E). This same mathematical approach can be encountered in Aristotle’s *Ethics* (1926/1982), the Apollonian ethics handbook par excellence. Contemporary readers such as Martha Nussbaum (1986) read this text from a quasi-self-evident, but in fact very contemporary viewpoint, positing a distinction between humanities and exact science, between *esprit de finesse* and *esprit de géométrie*. Nussbaum emphasises the difference between the two, between moral sensitivity and scientific accuracy (p. 290 ff.). Her characterisation of ethics as something non-scientific is based on the contemporary distinction between humanities and science, a distinction which is completely un-Aristotelian, however, and, when applied to Aristotle, anachronistic, as Nussbaum herself admits (p. 245). One of the drawbacks of such a reading is that it overlooks the mathematical dimension of Aristotle’s ethics, whilst that dimension is emphatically present: it is the core of his approach.

While Aristotle wrote a *Physics* in which mathematics seems more or less absent, his *Ethics* is profoundly mathematical. This is understandable when we realise that we are dealing with Apollonian ethics. Aristotle admits that ethics cannot achieve the same level of precision as Apollonian geometry (1926/1982, I. iii, 1-4), but that does not prevent him from treating ethics mathematically. Indeed, Aristotle claims that ethics has its own level of precision. Mathematics and ethics are not incompatible and he emphatically uses Apollonian mathematics to define core ethical concepts. The good is determined as the middle between excess (hyperbola) and deficit (ellipse). Bravery relates to recklessness and cowardice as a circle relates to a hyperbola and an ellipse. Proper action hits the middle (στοχαστική του μεσου). This determination of the good as the middle between excess (υπερβολή) and deficit (έλλειψη) builds on Plato – cf. Plato’s *Statesman* (283C) or *Republic* (587C), where he discusses whether happiness is achievable by employing mathematical means. Aristotle is more willing than Plato to make concessions to actual practice, however, indicating that the good is not exactly in the middle. Strict, rigid justice is corrected by equity.

Aristotle’s concept of justice is further elaborated via the mathematics of proportionality, as developed by Eudoxus, member of the Academy and teacher of Aristotle, whose work is represented in book V of Euclid’s *Elements*. Distributive justice is a matter of proportionality. The distribution of goods must be tailored to someone’s social rank. Aristocrats are a relatively small group, but of great social value. It is therefore legitimate that they claim a relatively large share of assets. During his discussion, Aristotle used a diagram with the lines AA’ and BB’ representing persons and the lines CC’ and DD’ representing their share,

so that $AA': CC' = BB': DD'$ (V. iii. 6-8). We find this type of thinking about distributive justice also in Thomas Aquinas' *Summa Theologiae*. Justice is proportionality, geometrically defined.¹⁰

Faustian thinking, as we will see in later, entails a reversal of values. Faustian physics is unthinkable without mathematics, but in Faustian ethics, mathematics seems virtually absent – if not entirely. Kant (1763/1971), for example, – a Faustian thinker because the chronic tension between duty and inclination is his starting point –, attempted to clarify the distinction between good and evil using a Faustian mathematical invention: negative numbers. According to Spengler, these number are Faustian because they no longer correspond to things we can touch manually or count with our fingers (as in the case of natural numbers). Although the insertion of the number 0 (symbolising the gap that is left behind by an absent thing, e.g. an egg or a pebble) was the commencement of mathematics proper (disconnecting a number from a tangible item), negative numbers take this one step further. Logic and mathematics relinquish the reality principle in order to be transformed into a pure and apodictic form of $\lambda\acute{o}\gamma\omicron\varsigma$, which is then imposed on reality. Negative numbers exist because of the existence of mathematical symbols, of the symbolic order. Without the minus sign (without the signifier), a negative number would not exist. Kant now states that by using modern mathematical symbols (like +, – and 0), the moral quality of an action can be determined. If in an individual there are ten units of desire to violate a duty for instance (–10) and twelve units of willingness to act in accordance with this duty (+12), while in another individual there are three units of desire (–3) and seven units of compliance or responsibility (+7), then, in spite of appearances perhaps, the moral quality of the act is greater in the first case than in the second. As a Faustian philosopher, the conflict between duty and inclination is what counts, and in the first case that conflict is tenser than in the second. However, we are dealing with a completely different ethical logic here. Proportionality and the golden mean have given way to conflict and struggle as the basic Faustian starting point.

§ 7. Ridiculing spheres

Apollonian mathematics was an elite pursuit, practiced in locations where young gentlemen spent their free time without bothering themselves with practical applications. Politics was likewise conducted to allow mathematically skilled guardians to function as the inner circle of the spherical state. Apollonian love is Platonic love, in a spherical sense, and Plato devoted one of his most impressive literary achievements to Apollonian eroticism, especially apt to illustrate the importance of spherical thinking, namely *Symposium*. My discussion builds on

¹⁰ “Medium in iustitia distributiva sumitur secundum geometricam proportionem...”. (Aquinas 1922, Pars Secunda Secundae, Questio LXI).

Jacques Lacan's comments, in one of his seminars under the heading "La Dérision de la Sphère": ridiculing the globe (Lacan 1991/2001).

Like other dialogues, Lacan argues, this dialogue is the result of cerebral registration. Contained in the memory of listeners, it followed the route of verbal transmission before being put to paper. Place of action is the home of an aristocrat named Agathon who won a literature prize, in a theatre that could host thousands of spectators. That is the reason for the meeting. On his way to the party, Socrates experiences a crisis: he freezes in a porch and does not want to be awakened until he has processed ("worked through") his demonic inspiration.

A symposium was a ritual conducted according to certain rules, an intimate competition between excited gentlemen, between elite scholars, an intellectual game. The dialogue therefore contains a lot of information about Athenian aristocratic culture. The rules stipulate that guests make contributions in the form of an improvised lecture, and refrain from drinking too much. Plato's symposium follows this script, but is disturbed by an unforeseen disruption, an embarrassing event. A drunken Alcibiades (a wealthy political dandy, at one time Socrates' pet pupil) enters the house with a train of friends, ignoring all rules of propriety. He is renowned for his seductiveness, surrounded by followers and spies, attractive and witty, intelligent, boisterous and adventurous. He claims to role of chairman to confess some anecdotes concerning Socrates, allegedly his erotic mentor, who introduced him into the technicalities of Apollonian love. Alcibiades represents spherical dandyism. He was a political adventurer who put his energetic drive in service of the spherical desire towards empire formation, the expansion of the Greek sphere of influence, but his Dionysian personality proved disastrous, quite unfit for realising Apollonian aspirations.

The subject of the conversation is love; that is, Greek, Apollonian love, revolving around beautiful boys: the love between friends, the love of Greek intellectuals and dandies. It was an essential element of their intellectual culture. Due to the complexities and risks involved in heterosexual love, scholars found shelter in philosophical exercises as an erotic alibi. Apollonian love was the love of the school, of scholars. It was what Apollonian geometry was in mathematics: a simplification or idealisation, a model, compared to the disorderly, complicated love between men and women. The academy was a school also in this sense: a school of love. Students received erotic training (*ars erotica* as erotic exercise).

Aristophanes is a remarkable figure among the guests and his presence has puzzled experts. Was he not Socrates' archenemy, the one who ridiculed him and may even have had a hand in his death sentence? But his presence certainly has a function. His job is to criticize the spherical worldview which gave rise to a spherical understanding of love. The dialogue stages a competition between Apollonian thinking and its intellectual antagonist. According to Apollonian tradition, contemplation ("contemplation des astres, c'est-à-dire de la sphère", Lacan 1991/2001, p. 14) involves intellectual *jouissance*. The contemplative view, the geometry of heavenly spheres, brings the observer in a state of ecstasy and has a pendant in the domain of love: seeing the beloved as your other half,

your complement. Here too, pleasure is produced by harmony and perfection, in a spherical sense. It is not all that easy, Lacan argues, for us to grasp the logic of Apollonian love. Our own ideal or paradigm of love is infused in us by the world of cinema. Viewed from an Apollonian perspective, however, the cinema is a dark, deceptive cave beguiling us with phantasms and stories. To understand platonic love, we must enter a completely different world. Apollonian love involves a couple: the lover and his beloved, who together form a perfect unity – in a spherical sense. Aristophanes sees it as his mission to extrapolate the Apollonian conception (e.g. spherical desire) to precisely that domain where this way of thinking runs the risk of becoming ridiculous, namely eroticism. What does the desire for geometric spherical perfection amount to in the realm of love?

Symposium, Lacan argues, transports us to the second century after the birth of Apollonian discourse. Around 550 BC, a sudden, enigmatic bloom of thinking had erupted, an intellectual awakening, a moment of discontinuity, an epistemological leap, a *creatio ex nihilo*, a commencement, resulting in a geometrical discourse about nature. *Symposium* reveals that the struggle between Apollonian and Dionysian strategies of explanation is still ongoing. Aristophanes parodies Apollonian thinking by telling an Apollonian myth: a strategy known as gay science (Zwart 1996). He confronts Apollonian thinking with a consistent idea, building on Apollonian convictions, but leading to ridiculous consequences, taking the Apollonian style of thinking *ad absurdum*. Aristophanes extrapolates Platonic logic to the realm of eroticism. What is the inevitable consequence of the spherical idea if used in an Apollonian discourse about sexuality? Aristophanes' contribution involves a ridicule of academic discourse by taking its basic logic too seriously. His parody, his farce, entails a quasi-anthropological description of imaginary beings that allegedly constitute the missing link in the history of anthropogenesis. The narrative takes us back to the beginning, the dawn of human history, and aims to answer the question of the origins of sexual desire.

Once upon a time, Aristophanes tells us, humans had four arms and four legs. They were two counterparts, two halves, forever united. To punish them, Zeus sliced them into two, like boiled eggs in an Athenian kitchen, using a hair. A fatal panic overwhelms them. A frantic search for their lost other half sets in, but the two halves are no longer able to merge with each other, because of anatomical constraints. The result is mass extinction. Zeus takes pity on them and subjects surviving humans to an anatomical procedure, moving their genitals to the frontal side. In that way, they are still able to experience the pleasure of spherical fusion, albeit only briefly and occasionally. Because when they slide and fit into one another, with the help of their genitals, their shapes briefly reproduce the spherical form. Lacan notes that these bizarre, spherical super-creatures are reminiscent of clowns in a circus, entering the stage as quadrupeds. In ancient comedies, such clownish creatures were a familiar sight. The grotesque is employed to attack the core logic of the Apollonian style, making it seem utterly questionable. With his parody, Aristophanes tries to tear this worldview

apart. It is difficult to overlook the element of the spherical and circular. In the Greek original, the spherical form of these creatures is repeatedly emphasised.

Aristophanes ridicules spherical thinking as such. It is not easy for us to realize the impact which such a story must have had at the time. A globe is the shape that gives pleasure to the eye. Spherical humans were proportional and equal to themselves. Only such a being could be truly happy, according to the Apollonian mindset. Circularity was the only conceivable shape or movement for a celestial body. Apollonian thinking was only satisfied when something spherical could be detected, also in the realm of love. But Apollonian thinking dislikes the unrest entailed in genuine desire. It prefers to be at rest, engaged in circularity. In Aristotle's *Physics*, all bodies aim for a state of rest, which sets in as soon as they have found their natural place. Whereas in Faustian experience the emphasis is on desire and restlessness, Apollonian thinking envisions an ideal state without desire. The sphere is self-sufficient, enclosing everything, perfectly content and satisfied. It doesn't need sense organs, it doesn't need desire. To a perfect sphere, nothing can be added. By given the floor to comedy, Plato seems to undermine his own worldview, seems to reveal its vulnerability. The resemblances between *Timaeus* and *Symposium* are no coincidence. Astronomy plays a part in Aristophanes' argument as well. There were three types of spherical beings, male, female and androgynous, each with its own affinity: sun, earth and moon, a correspondence which suggests a logical connection between *Timaeus* and *Symposium*.

From an Apollonian perspective, however, Aristophanes' narrative reflects a misunderstanding. It is half the truth. Yes, an Apollonian lover is looking for his "other half", and expects that reunification will be a most joyful experience. This does not mean that Apollonian lovers move about in clownish garments to attain happiness and pleasure. The other is an *alter ego*, someone in whom a lover recognizes himself. While Dionysian thinking has a tendency of focussing on female rather than on male desire, the Apollonian lover is usually a man of around forty, at the height of his intellectual capacities. The beloved is a male adolescent, a student. Their relationship is intellectual, but also erotic. Intellectual and erotic desire reinforce each other. Erotic desire functions as a catalyst for intellectual pursuits. Platonic love is not a form of love in which the physical element is missing, but a love whose final objective is knowledge rather than pleasure. In addition, platonic love facilitates the transfer of knowledge from one generation to the next. The lover falls in love with his successor. Apollonian thinking associates women with intrusive physicality, boys, on the other hand, with chastity and purity.

Symposium emphasises the peculiar ambiguity of dialogue as a genre. It tells half the truth. Aristophanes knows the spherical principle, but he is either unable or unwilling to apply it consistently. Aristophanes laughs at Plato, but in the end, the laughter is mutual. This is the result, Plato seems to be saying, when you vulgarise Apollonian principles: implausible narratives. Those who really want to be introduced into the intricacies of Apollonian love, must sign up as a

student. Popular laughter (represented by Aristophanes) laughs at academics, but these academics subsequently question the validity of comedy as a genre. The dialogue is a playful introduction into Apollonian thinking. The next day, during a serious lecture (inside the walls of the Academy, where sober, esoteric genres flourish) Aristophanes' amusing mistake will undoubtedly be rectified by the master thinker. *Symposium* is self-parody, but it also parodies the parodist.

§ 8. Apollonian thinking as civilization

*The smallest miscalculation in the area of politics
annoyed me, as much as did the slightest
imperfection of the pavement at the villa (Hadrian)*

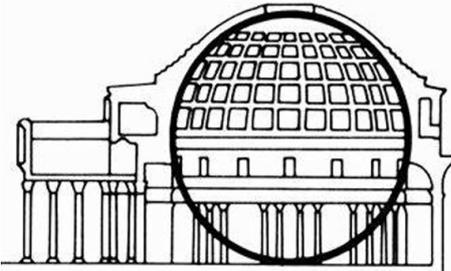
The Academy exemplifies apollonian thinking as a culture. According to Spengler, however, every thinking style inevitably spreads and develops into civilization. The Villa Adriana (Tivoli) is a complex of buildings in which apollonian thinking becomes visible *as civilization*. That is, the Villa is essentially the Academy, but now under different conditions, during a period of dramatic increase of scale: a projection of the Apollonian style on a much larger canvas. In this park, on a hill east of Rome, away from the hustle and the crowds, various buildings, including a Lyceum and an Academy were erected, as copies of locations visited by Hadrian during his journey to Greece. In this academic environment, platonic love was enacted and emperors spent their leisure time in intellectual forms of relaxation, including philosophical exercises, in the company of lovers. Stoicism is Academic philosophy, but adapted to living conditions on a larger scale, to life as it emerged in the context of a global world, the Empire. Attention has shifted from the metaphysics of the ideal polis to an ethic for citizens who try to survive, not in an imaginary ideal polis, but in a truly existing global environment. A process of dramatic expansion has evolved, but the thinking style is still recognizable. Platonism has been transferred from utopia to reality. Plato's Academy was the ambiance of the Apollonian style as culture, as a small-scale phenomenon, as an idea. Attempts to realise this idea in practice (by Alcibiades and others) had dramatically failed at the time, but the Apollonian ideal survived those disasters and finally evolved into civilization in the form of the Roman Empire.

This section explores the development of the Apollonian style of thinking from culture to civilization via architecture. The Roman emperor Hadrian (ruling from 117 to 138 A.D.) was a very prolific builder, responsible for the construction of two building that exemplify the development of Apollonian culture into civilization, namely the Villa and the Pantheon. The Pantheon is not only the realization of the spherical thought in stone, but also demonstrates the ambition of the Empire to assemble and encompass all ethnic subcultures and their deities in one spectacular building. The Villa can be seen as a reconstruction of the sports

park of Academus, but on a grander scale. Hadrian himself, more than anyone, is the emperor philosopher who dedicated his reign to the construction of a harmonious world order. And he expresses this ambition in his creation (an ideal city for the guardians of civilisation).

In 1951 Marguerite Yourcenar published her book *Memoirs of Hadrian* (1951/1977), based on a large number of written sources (texts about Hadrian and texts he himself had read), but also on statues and structures such as the Villa and the Pantheon. Her main method is that of trying to revivify Hadrian's world and to experience it *from within*. Yourcenar enters Hadrian's lost world. She spent a quarter of a century working on her masterpiece. The result is a well-documented, very personal but convincing image of Hadrian from close by. This document guides our effort to reconstruct Apollonian civilization. We will begin our reconstruction with the Pantheon, erected as the central building of ancient Rome.

Why is the Pantheon a spherical building? Because it is the nucleus of a spherical world: politically, astronomically and culturally. In the Pantheon, according to Sloterdijk (1999), the societal significance of the Apollonian geometry of the spheres was made immediately visible. For Roman emperors, the spherical idea was more than just basic science. They faced the immense task of harmonizing an Empire of gigantic proportions from a central position. The Pantheon radiates power, but also acts as a theological magnet. It symbolises and consolidates at the centre what Hadrian sought to achieve at the periphery of the political artwork entrusted to him with political and military means: the unity and stability of the Empire as a political dome, including all peoples and cultures, represented by all the gods that had been granted accommodation in this giant structure. Court architect Apollodorus officially acted as builder, but Hadrian decidedly printed his stamp on the construction. It is performative, *political*



architecture par excellence, meant to consolidate the Roman power globe. The dome functions as a tangible and politically active construction. The universe is concentrated into a compact form, a condensation of power. Heaven and earth are brought together in one overarching construction. While Plato's academy excluded those not versed in geometry, the visitor of the Pantheon is inevitably drawn into this project of a global and universal geometry of the spheres (Sloterdijk 1999, p. 443).

The exact division of labour between Apollodorus and Hadrian is a controversial issue, but in *Memoirs of Hadrian* the Emperor's role is strongly emphasized. He is supposed to have been responsible for the spherical character of the building. He considered Apollodorus' plans too moderate and timid and decided to improve them. More than in any other building, Hadrian expressed himself, his vision of the world. He was a traveling emperor, often on the road, from centre to periphery and back, and from one peripheral location to another.

He moved along the radii of the Roman sphere of influence, which had assumed global proportions. In this way, the idea came to him that the Empire needed a sanctuary for all the gods. Yourcenar quotes him as follows: “For the actual style of the architecture, I returned to the primordial. I wanted this sanctuary of all the gods to reflect the shape of the earth and of the heavenly globe: the hollow sphere that contains everything” (p. 155). And yet, it also reflected the form of the ancestral huts in which the smoke of the primordial human hearth escaped through an opening in the roof. That is, in the Pantheon, not only the spatial, but also the temporal dimension of the Empire was condensed: from peasant hut to metropolis in one go. The circular opening in the roof also functioned as a sundial for recording celestial movements. It was a building in which the whole cosmos converged into one spatial construction.

Hadrian was Hellenophile: he aimed to live and think as the Apollonian Greeks did. In Athens he felt more than anywhere at home and he did a lot for this city. In Athens he learned to think mathematically, in an Apollonian vein. Yet there is a distance between the Academia of Athens and Hadrian’s Apollonian civilization. The academic philosophers were pleased to study reality “in its pure form” (p. 26), but for Hadrian the spherical world has become reality. Plato also travelled, but Hadrian founded world cities during his journeys, ordered the construction of roads and improved legislation. “The city has become a state” is how Yourcenar has him summarize his achievement (p. 104). Standing at the tomb of Alcibiades, he realises that the world he governs is infinitely greater than that in which this famous / infamous Athenian lived (p. 151). Plato wrote *Republic* (the program for an ideal state), but it was for Hadrian to actually transform the Greek city-state into an immense Apollonian empire, notably by selecting and training a bureaucracy, a well-organised civilian army of guardians, able to defy and face the ages and to safeguard the essential.

Under civilized, large-scale conditions, Hadrian continues to think in a decidedly Apollonian mode. During his travels along the borders of the Empire, along the periphery of his power globe, now on the banks of the Rhine, then again in a city in Asia, then again on the banks of the Thames, he is strengthening the robustness of his empire. He commits himself to the *Pax Romana*, which stretches out to anyone and everything, like the music of heaven in movement (p. 125). His dream is a well-ordered, harmonious world, where justice prevails in terms of balance between the parts, a network of proportioned proportions. Every instance of unfairness is like a false note in the harmony of the spheres (p. 126).

An important question facing Apollonian emperors was the optimal size of the sphere, the optimal radius length. Outside the Roman sphere of influence, an immense barbarous world existed, but the radius of the empire could not be extended indefinitely without running the risk of collapse. Whilst the politics of his predecessor Trajan was still focused on expansion, almost as a goal in itself, Hadrian opted for consolidation. Standing at the border of his empire in Asia he says: “I envy those who will succeed in going the full 250,000 Greek stadia (so well calculated by Eratosthenes) which, in their entirety, will lead us back to our

point of departure” (p. 48). Ideally, the Roman Empire coincides with the earthly sphere, but the confrontation with the immensity of the world, with Asia’s endlessness, is an unsettling experience. Building the Pantheon is like erecting a protective screen, an attempt to keep infinity at bay and consolidate the sphere.

As the ultimate embodiment of spherical thinking, the Pantheon is at the same time a turning point. Sloterdijk quotes Spengler, as we have seen, when the latter not only defines the Pantheon as the ultimate sphere, but also as the first “mystical space”, the first, primordial mosque, the archetype of Magian architecture (Spengler, p. 98; p. 274). The building discloses a new, Magian space experience and marks the beginning, the rise, the genesis of Magian thinking, emerging in the form of religious epidemics of Eastern origin (Isis, Mithras), but eventually resulting in the Christianisation of the Empire. Christianity will establish its own monumental dome church in Rome. In the mosque or dome church, a different atmosphere reigns than in the ancient temple. It is an immense, Magian, enchanted cavity, a mystification of space.

The second major building Hadrian realized was the Villa, an ambience for *otium* and contemplation. While the Pantheon is placed in the city centre, the Villa is located outside the walls as an Arcadian landscape park in which various buildings could be found, basically a large-size replica of Plato’s Park. There were gardens, olive trees, covered lanes, ponds, fountains and sports facilities, as well as bath houses, libraries, theatres, guesthouses and dining rooms. The Villa is, in many ways, Pantheon’s counterpart. While the Pantheon wishes to emphasize the vital importance of the centre, encompassing everything in its magnetic field, the Villa is an open-air museum in which the provinces are represented. The Villa was a collage. Hadrian wanted to assemble buildings and locations he had seen and visited on his travels, to recollect them in one place, not as exact copies, but as buildings that captured and conveyed the spirit of their place of origin, the *genius loci*. The Pantheon is an abstract building, materialising an abstract, spherical idea. The Villa brings together the various cultures of the Empire in a harmonious way, on one pleasant location. The Emperor himself who, during his travels, had founded and restored numerous buildings, wanted to realize a synopsis of the buildings and locations that had impressed and affected him. Athenian elements could not be missed, e.g. the Stoa, the Academy, the Lyceum. A reconstruction of Plato’s Academy, surrounded by olive trees, was erected not far from the Canopus.

Pantheon and Villa, each in its own way, represent Apollonian civilization at its peak. However, the supremacy of Apollonian thinking was far from absolute. Hadrian was philosophically educated and academically minded, but whenever Apollonian philosophy disappointed him, he was already open to “magical explanations” (p. 30), and would revert to Magian thinking when he found that ancient philosophers failed to appeal to him and enlighten him. His travels brought him into contact with scholars who dedicated themselves to the study of Magian arts, because the Apollonian style seemed to become increasingly bookish and was beginning to lose its relevance: increasingly failed

to articulate new experiences. From Asia, from the East, with its vast territories and its richness of mysterious cults, an irresistible attraction and enchantment arose. While the Germanic tribes in the North seemed increasingly willing to adopt Roman technologies and to nestle themselves in the Roman sphere of influence, Rome had more difficulties when it came to pacifying Jewish or other tenacious Eastern elements. These Eastern cultures remained stubbornly opposed to become absorbed into the empire. The Jewish god was unwilling to accept a place in the Pantheon among the other deities. Between the Emperor and the East, a hate-love relationship arose. The East both fascinated and unsettled him. He was open to oriental modes of thinking, such as reflected in the Mithras cult, but the chronic and bitter opposition to Roman domination, notably by Jews, revolted him and resulted in violent conflicts. In Hadrian's buildings this ambivalence is discernible. As mentioned, the Pantheon is the first mosque, the paradigm of a Magian church, and the villa a collage of oriental locations.

At times, he turned his gaze toward the North, to Germania, a wet and misty realm with a monotonous, grey horizon, an ocean of trees, the reserve of white and blond people (p. 127). In the Batavian wetlands Romans encountered desolate dunes, whistling grasses and stilt houses in the border port of Noviomagus: sad places, shapeless landscapes, a heavy sea, polluted by sand, a chaotic nature. This entourage was to become the heartland of Faustian culture many centuries later. For the time being, however, he is preoccupied with the promises and threats coming from the East. Hadrian is still an Apollonian traveller, a cosmonaut. He travels from the centre to the periphery, from one peripheral location to another as we have seen (London, Nijmegen, Cologne, Trier, Vienna, Jerusalem, Alexandria, etc.). These journeys aim to consolidate the Empire, improve its laws, correct inequalities, literally and figuratively, add new cities to the spherical network of urban locations, and absorb reality into the spherical state (thereby making it increasingly real). Paul is a very different kind of traveller. He travels from the periphery to the metropolises to spread a new, anti-spherical truth. Paul travels in the opposite direction, both in the literal and in the figurative sense.

§ 9. The morality of the master

Apollonian ethics is a *particular form* of ethics, representing a *particular style* of thinking, as we have seen. According to Hegel, the ancient Greeks were not yet moral in the modern (Faustian) sense: the Greeks had no genuine conscience (cf. Spengler I, p. 340). Ancient morality did not yet present itself as obligatory for all, it did not contain a universal imperative or Law. Rather, moral perfection was considered an achievement of the moral elite: the outcome of conscious exercise and self-formation (1971a, p. 452). Heroes of Geek morality were "plastic individuals", Hegel argues, who had successfully managed to turn themselves

into exceptional works of art.¹¹ They were what they had managed to become. These virtuous individuals were self-made.

A similar idea resurges in the ethical writings of Michel Foucault (1984a, 1984b) who argues that human subjectivity should not be regarded a transcendental (extra-temporal, a priori) given, but the *outcome* of moral exercises and practices of the self (Zwart 1995). The human subject is not a *constant*, but a *variable*. In the course of history, various styles of moral subjectivity emerged, one after the other. The modern (Kantian) form of moral subjectivity (i.e. the conscientious, responsible, autonomous, rational subject presupposed by Kantian ethics) is the (temporary) outcome of a particular practice of the self, developed by a particular culture (German Protestantism) and adopted as a universal norm by a particular civilisation (Faustian civilisation). And yet, it still is *one particular form of moral subjectivity* among others, bound to disappear altogether (“without a trace”) before long, in order to give way to new and incompatible forms of moral subjectivity, whose basic features are as yet unknown to us. This process of morality-building is something we individuals are not in charge of, although in the folds and margins of dominant morality we may (via practices of the self) prepare ourselves for unprecedented forms of moral subjectivity: a different ethic, a different style of being.

Nietzsche already emphasised the symptomatic emphasis on obedience in Kantian ethics. In Kant’s philosophy, Nietzsche claims, morality is articulated in terms of obedience to a Law. Ethics is about restrictions and prohibitions. In *Morgenröte (Dawn of Day, 1980 KSA3)*, two conflicting conceptions of morality are juxtaposed: the Judeo-Christian conception of morality as obedience to an unconditional Law, and the Greco-Roman conception of morality as ascetic exercises, fostering self-management and temperance. The first conception envisions morality as a (Faustian) conflict between bodily inclinations and the *desire to obey*, resulting in a chronic sense of guilt. We remain guilty before the Law, unable to live up to its insatiable demands. According to the ancient conception, however, morality is an ascetic exercise, a permanent effort to refurbish body and soul so as to attain mastery over your passions. These are not to be exterminated, but governed in a prudent manner. By means of exercise and other forms of self-edification, individuals transform themselves into plastic individuals, thereby distinguishing themselves from the masses, setting themselves apart from the lower social strata – such is the morality of the master. Later, Nietzsche argues, many of these ancient techniques of moral self-formation were appropriated by slave morality – that is: they were placed in the

¹¹ “Er [Socrates] steht vor uns ... als eine von jenen großen plastischen Naturen (Individuen) ... wie wir sie in jener Zeit zu sehen gewohnt sind, - als ein vollendetes klassisches Kunstwerk, das sich selbst zu dieser Höhe gebracht hat. [Z]u dem, was sie waren, haben sie sich selbständig ausgebildet; sie sind das geworden, was sie haben sein wollen... Solche Kunstwerke sind die großen Männer jener Zeit. Das höchste plastische Individuum ist Perikles, und um ihn, gleich Sternen, Sophokles, Thucydides, Sokrates, usw. Sie haben ihre Individualität herausgearbeitet zur Existenz (Hegel 1971a, p. 452).

service of a morality of obedience. According to Nietzsche, we presently find ourselves in an ambiguous situation, a “moral interregnum”. On the one hand, notwithstanding the efforts of Enlightenment to rationalize morality, obedience still remains the basic moral mood.¹² On the other hand, the Judeo-Christian conception has declined considerably in strength, has become less self-evident, and something rather unexpected seems imminent.

During the 1980s, Foucault (1984a, 1984b) addressed the question of moral subjectivity quite explicitly. Rather than *being* subjected by disciplinary and normalizing practices of power, Foucault now allowed for the possibility that individuals constitute *themselves* as moral subjects, through self-discipline – *disciplina voluntatis*. Self-constitution adheres to the logic of the morality of the master. Via temperance and exercise, these masters distinguish themselves from the morality of the human herd (the majority of the people, who remain at the mercy of their drives and passions). Practices of the self (moral exercises) entail self-management, turning oneself into a work of art, stylizing and organizing one’s drives in a certain manner.

In Foucault’s interpretation of ancient morality, we easily recognise Aristotle’s version of Apollonian ethics as discussed above, with its focus on temperance and proportionality, entailing a mathematical logic of its own, seeing virtue as the mean (μέσον) between extremes, as the middle course between deficit (ellipse) and excess (hyperbola). Self-management entails the ability to steer one’s actions in the direction of the proportional mean, while exercise enhances the subject’s ability to hit the right middle.

At the same time, this identification of ancient morality with the elite morality of the master evidently entails a series of problems. Volumes Two and Three of Foucault’s *History of Sexuality* explicitly claim to describe the history of *ancient* sexuality, but the validity of his analysis seems restricted to a particular moral style, namely: Apollonian sexuality, the morality (the life-style, the dietetics) of the higher echelons, the upper social strata: the male masters of the ancient Greek and Roman world. There is no confrontation with other styles or other options, with *otherness*. The morality of the lower stratum disappears into the background as something negative. Yet, ancient morality was not a homogeneous ideological unity. Rather, it was a forcefield, a moral battlefield if you like, where collisions between incompatible styles unfolded. In ancient Greece, the counter-culture or counter-style (challenging the elite Apollonian life-style) was the Dionysian view of life as we have seen. In ancient Rome, Dionysian thinking resurged in the counter-culture of the *grotesque*, not only in the realm of aesthetics, but also in the realm of morality, dietetics and sexuality. The label “grotesque” is used here as a common denominator of the moral and aesthetical logic of this counter-culture, notably endorsed by the lower strata, as the style of thinking at work in popular morality (the morality of the masses). Whereas from

¹² “Auch zu uns noch redet ein “du sollst”, auch wir noch gehorchen einem strengen Gesetze über uns” (Nietzsche 1881/1980, III, p. 16)

an Apollonian perspective the grotesque is framed as immoral, obscene, uncivilised and illogical, on closer inspection the grotesque is a genuine *style of thinking* in its own right, with a logic and aesthetic of its own.

The Russian philosopher and literary critic Mikhail Bakhtin contributed significantly to our understanding of the grotesque, via his thorough analysis of grotesque thinking in *Rabelais and his world* (1968) and other writings (1988). During the Renaissance, Bakhtin argued, the grotesque style experienced a revival (in the writings of Rabelais and others), but it already originated in antiquity, in the form of grotesque festivals (Saturnalia, Floralia, etc.) and grotesque (Priapic) poetry, celebrating and singling out obscene body parts (phallus, mouth, anus, buttocks, belly) as partial objects of carnivalesque ridicule and worship. My analysis of the grotesque zooms in on one particular case study: *Carmina Priapea*, a collection of eighty or so (anonymous) Latin epigrams about, dedicated to or giving the floor to the Roman garden god Priapus. These epigrams, notoriously obscene, are probably written by one author at the end of the first century A.D. There are notable similarities with priapic poetry by other authors from the same period, e.g. Martial and Catullus (Richlin 1992, Elomaa 2015).

Priapus is a wooden statue, serving as guardian of enclosed gardens, punishing trespassers and thieves, subjecting them to sexual / corporeal punishment (notably anal and/or oral rape). Some priapic poems were probably used as inscriptions, as signs of warning, or as ludic versions of what today would be something like: “access forbidden for all unauthorised persons”. Whereas the content of the poetry is emphatically sexual (mostly dealing with the size and performativity of protruding phalluses), there is another striking feature which is important here, namely the fact that these poems consistently follow a recognisable logical scheme. Most if not all of these short poems entail a syllogism. Grotesque thinking is not illogical, but other-logical (*allo*-logical).

Inscriptions above the entrance to ancient gardens was far from exceptional. Remember the famous words “Let no one ignorant of geometry enter here” (Μηδεὶς ἀγεωμέτρητος εἰσίτω), allegedly inscribed above the entrance gate of Plato’s academia: geometry literacy as admission requirement. Know your geometry, or you will be a nuisance to us and likely to make a fool of yourself. In Priapus’ case, the various degrees of corporeal punishment to which trespassers would be subjected (increasingly harsh in the case of recidivism) also served educational purposes and even functioned as initiation rite. Trespassers would be educated, not by preaching (*predicare*) but by rape (*pedicare*), – a difference of only one letter (“una littera”, a slip of the tongue) as Priapus points out (in *Poem 7*). The logical structure of this corrective penal practice is quite straightforward: *if* (you are so bold as to enter and plunder this garden), *then* (sexual punishment is imminent). Action inevitably implies reaction.

The link between erotic literature and logic is far from remarkable. The writings of Marquis de Sade were likewise famous for their rigid and irresistible logic (pushing atheism to its logical conclusions), and the same goes for Sacher-Masoch’s oeuvre. As Gilles Deleuze (1967/2007) pointed out, the latter’s novels

and stories follow a strict logical scheme. They should be considered “pornology” rather than pornography, although in this case the (female) executioner is the one who is trained and educated. Priapus is likewise a therapist offering treatment to the betterment of his patients, e.g. dissatisfied women, lusty catamites, impotent males and thieves. These epigrams entail a warning: all trespassers will be punished ($\forall A \Rightarrow B$). Think twice before you enter.

Thus, priapic punitive practices were dictated by a priapic syllogism: in the case of theft, you will be punished with anal or oral rape (All thieves will be sodomised; you are a thief; ergo, you will be sodomised). Notably, the focus was on the three bodily orifices (mouth, anus, vagina) and on the phallus as an “orifice-filling” organ (Richlin 1992, p. 131). I will pedicate (sodomise) a boy, fuck a girl, and reserve the third punishment (irrumation) for adult thieves, Priapus points out (*Poem 13*). *Poem 22* likewise conveys an anatomy of priapic punishment. There are three options; if the thief is a woman, Priapus will stick his mentula in her vagina; in the case of a boy, he will penetrate the buttocks; in the case of an adult male, he will thrust his mentula in the trespasser’s mouth. *Poem 28* entails a similar message: theft will be punished with anal rape, but should this prove insufficient, Priapus will strike higher (i.e. irrumation as an even heavier punishment, employed in the case of recidivism). In other poems (23, 58), the curse of Priapus entails that the male thief will never again find a sexual partner (either woman, catamite or boy). May his erect mentula throb against his navel in vain! And thieves who point their middle-finger at Priapus’s threatening figure, thinking his mentula to be merely a piece of painted wood, will be irrumated by the landlord himself (*Poem 56*). When Priapus (after having thrust his phallus into the stoutest thieves) no longer functions, however, he himself is treated quite disrespectfully: his sickle will be taken away and his member will be cut off, so that he will resemble an emasculated adept of Cybele (*Poem 55*). Finally, his wooden corpus will be cut to pieces (*Poem 26*).

In her book *The Garden of Priapus*, Amy Richlin (1992) convincingly argues that Foucault, in his two volumes on ancient morality, actually wrote a history of elite male sexuality, focussing on recommendations for lifestyle and diet, on writings by nutritionists: a dietetic directed at a wealthy, elite, male, upper-class audience. What Foucault left out, she argues, was the Roman real, the aesthetic of priapic humour and the obscene: sexuality as it was practiced by the lower strata. Here, the popular, ithyphallic garden deity Priapus played a crucial role. Therefore, the *Carmina Priapea* as a collection of obscene (anti-Apollonian) little poems (“versiculi”), fit for a garden wall – as low-brow graffiti – not for a book, constitutes a perfect sample for studying the grotesque.

§ 10. The logic of the grotesque

“O Priapus, faithful protector of orchards, warn off the thieves
with thy red-painted amulet” (*Poem 72*)

Priapus was an ithyphallic deity, as we have seen, worshipped in the form of a wooden statue erected in the middle of a walled garden, with a sickle and an erect phallus (the embodiment of bellicose pride) as attributes, threatening thieves with anal or oral rape. Devotees would offer small presents, or short erotic verses, hoping for something in return (e.g. restored potency or erotic success in dealing with male clients). The *Carmina Priapea* consist of poems dedicated to Priapus, but also poems which give the floor to the god himself, as a “talking phallus”, the embodiment of what, in post-structuralism, is known as phallogocentrism (Richlin 1992, p. xvii). In the garden of Priapus, one may speak freely. The use of obscene terms is not forbidden here (high-brow inhibitions are superseded). You may call “a cunt a cunt, a prick a prick” (*Poem 29*).

Priapic statues served multiple functions. First of all, they served as road signs, guiding travellers through labyrinthian rural landscapes – cf. *Poem 30*: “O Priapus, with your sickle and your impressive part, please show me the way to the fountain” (probably, the traveller needs water to cleanse his mouth after irrumation). Secondly, priapic statues served as scarecrows, as signs of warning and as punishing device against thieves, threatening them with sexual harassment. Finally, they served as objects of worship, placed in the middle of the garden as an obscene shrine, where worshippers could deposit modest ex-voto offerings, such as apples (*Poem 21, Poem 53*, probably as a metaphor for buttocks), but also wooden phalluses (*Poem 34*) and waxen apples (*Poem 42*). Visitors also dedicated poems to Priapus, as we have seen. Priapic (obscene, jocose) epigrams (“*carmina plena ioci*”) could be scrawled on garden walls (as priapic graffiti, comparable perhaps to the kind of poetry we nowadays encounter in toilets in bars). This practice is mentioned in one of the two introductory poems to the series (*Poem 2*):

...quidquid id est, quod otiosus whatever it is that I, in my leisure,
templi parietibus tui notavi, have scrawled on your temple walls,
in partem accipias bonam, rogamus I request you, accept it in good favour

Such shrines attracted (nightly) visitors (male and female) yearning for phallic jouissance, or hoping to receive treatment for their impotence. If Priapus answered their petitions, they would leave signs of gratitude. In *Poem 37*, a visitor has injured his penis (during an erotic battle) and asks Priapus for a cure to prevent amputation (“*curatum mentulam sine sectionem*”). Priapus grants his wish. Ergo, he leaves a tablet with a facsimile of an erect, red-coloured penis on the altar. But the shrine could also function as a low-brow theatre where lovers practiced intercourse in multiple positions described by famous (mostly female) authors of sexual manuals, such as Philaenis and Elephantis (let us practice “*tot figuras, quas*

Philaenis enarrat”, *Poem 63*). Although the collection of priapic epigrams became a book, they were not meant for, nor considered worthy of a book (“horto carmina digna, non libello”, *Poem 2*). Priapic poetry forcefully defies its status as literature (Elomaa 2015). The poetry is not *poetry*, the book is not a *book*. This garden poetry (where garden = a collection of poems) is *not* (“non”) fit for virgins, and the Muses were *not* (“nec”) called upon to assist the poet, for it would have been improper to lead them to Priapus’ mentula. Therefore (“ergo”), please accept these low-brow verses for what they are. If Priapus fails to be of help, the disappointed devotee will turn his back on him (“vale, Priape: debeo tibi nihil”, as it is phrased in the final poem in the series: *Poem 83*).

Priapus was also the patron of female erotic performers, such as Thelethusa, a famous “circulatrix” (itinerant athlete and dancer, *Poem 19*), or Quintia, a famous performer at the Circus Maximus, who dedicated her “weapons” (cymbals, castanet, tambour) to Priapus, hoping they would continue to bring about erections among her male audience (*Poem 27*). Such women were slaves who earned their freedom through erotic performances, and the poetry informs us that Thelethusa performed at the Via Suburra, a lower-class district in ancient Rome. To show her gratitude to Priapus, she left an ex-voto on his altar: a wooden phallus (the partial object of worship) encircled with a golden crown (*Poem 40*). In *Poem 50*, a lover likewise promises to crown Priapus’ mentula with garlands, *if* the girl of his dreams will finally grant him her favours.

As indicated, the Priapic syllogism works like this. All thieves sneaking into this garden will be punished (sodomised); You are a thief, sneaking into this garden; Therefore (“ergo”), you will be sodomised. This syllogism, often involving variants produced with the help of negations (“non”, “nec”), is at work for instance to the first lines of *Poem 15*:

Commisso mihi non satis modestas	Whoever plunders with dishonest hand
quicumque attulerit manus agello,	This little field committed to my charge,
is me sentiet esse non spadonem.	Will discover that I’m not a castrate

We also recognise it in other poems, e.g. *Poem 31* (*If you steal from this garden, then the weapon of my belly will stretch your anus*) or *Poem 59* (*If you come as a thief, then you will leave dishonoured: “si fur veneris, inpudicus exis”*). A thief caught for the first time will be sodomised. If caught again, Priapus will irrumate him (a heavier punishment). If caught for the third time, he will be both sodomised and irrumated (e.g. *Poem 35: semel: pericabo; idem: irrumabo; tertia: et hanc et illam / pedicaberis irrumaberisque*). Indeed, *all* thieves who are caught repeatedly (*Poem 44*) will suffer irrumation ($(\forall A \Rightarrow B)$). Thus, a priapic statue conveys a straightforward message: beware of the phallus (“Cave mentulam”), thief. If I catch you, I will pierce you with my pole and stretch your anus (*Poem 11*). The task of protecting the garden is entrusted to Priapus, and his “watchman” will widen your behind and make your anus wider (“laxior”): by entering and exiting, thereby repeating the illegal treatment of the garden (*Poem 52*).

In some of the poems, however, we find Priapus complaining that his threats have the opposite effect: the prospect of sexual punishment itself attracts and lures “cinaedi” (catamites) into the garden (“ad poenam”, *Poem 51*). For them, anal punishment (rather than fruits or vegetables) is inviting. They adhere to the (inverted) logic of desire, so that it is not the fruit, but the punishment that allures them. Therefore, if someone steals just for the love of punishment (“amore poena”), Priapus will *ignore him* (*Poem 64*).

The garden of Priapus may also serve as a site where poetry is written, and where jocose poets are expected to leave some gay and playful poems (“versus iocosos”) on Priapus’ altar (*Poem 41, Poem 47*). In several poems, apples are interchangeable with, or function as a metaphor for poems (*Poem 60*), so that poems are sublimated apples (“poma”). Should the poet involved consider low-brow priapic poetry beneath his standing, let them mingle with the erudite (Apollonian) literati, but Priapus will make sure that he will do so with a widened arse (Priapus will “make him feel”).

Thus, there are various logical scenarios. The visitor may either be a thief (who wants to steal the forbidden fruits, literally), or a woman (who either seeks phallic enjoyment directly – using Priapus’s statue as a phallic device – or indirectly, by making offerings to Priapus, in the hope of attracting lovers or customers), – or a sodomite (seeking enjoyment, someone for whom the punishment itself is the enjoyment sought). What these visitors have in common is that they all suffer from a lack of enjoyment. They are all lured towards a statue that exhibits what is normally concealed (the object *a*, psychoanalytically speaking). The garden is the locus of the rustic god, a place for poetry or offerings, where short priapic poems are written on walls or tablets, or attached to branches of apple trees (*Poem 2, Poem 49, Poem 61*). It is a logic of reciprocity: *do ut des*, you gave to me, I gave to you; I will bring you an offering, *if you grant my desire*.

Unlike other gods, Priapus is ugly. The object of desire, however, is not his body as such, but a “partial object”, a particular attribute: his protruding phallus, signalling the phallic enjoyment visitors crave for, while threatening criminals with impalement. Aristotle’s famous adage that all human actions and practices seem to aim at some good ($\forall x \Rightarrow y$), also applies to visitors of Priapus’ garden, albeit in a subverted, parodied manner, as the good is not something Apollonian (e.g. happiness or virtue), but rather an obscene object. Those craving for phallic jouissance can either be males – who became impotent or injured their penis; *cuoad castrationem*, as Lacan phrases it (1975, p. 47) –, or women (who either desire sex with a statue or beseech it to enhance their prospects), or sodomites. Thus, several types of visitors can be distinguished: the adult thief (“fur”), the married woman (“matron”), the erotic performer, who considers Priapus her patron, the girl (“puella”), who wants to shed a glance at the phallus, and the boy (“puer”), who becomes initiated through sodomisation. It is a place where discourse (text) is produced in the form of prayers or poems.

In short, the grotesque has a logic of its own. This is ascertained by the frequent use logical terms in priapic poetry (“non”, “nec”, “ergo”, etc.). Most if

not all priapic epigrams entail a syllogism, a logical argument as we have seen: *if* (you plunder this garden), *then* (you will be punished); or: *all* deities ($\forall x$) are equipped with a weapon, a signature attribute; I am a deity; *ergo*, I am equipped with my signature attribute (my ruby wooden phallus). I will now elaborate these aspects in more detail, using concrete examples to exemplify how the grotesque (priapic) logic works, starting with the syllogism of deterrence. Subsequently, I will zoom in on the legal dimension (the logic of property and reciprocity: *do ut des*), the logic of joyous comparison, and the logic of phallic desire.

The syllogism of deterrence is discernible in multiple poems, as we have seen, as a basic scheme which allows for multiple variations with the help of logical terms. The epigrams scrawled on garden walls entailed a straightforward rationale. *If* you enter illegally, *this* is what will happen. *If* you intend to steal the fruit, consider the weight of the mentula which will be thrust into you (*Poem 69*). *If* you plunder the garden, *then* you will be taught a lesson and become “learned” (“doctus”, *Poem 71*), as I pierce my member exactly through your middle (*Poem 74*) – notice how Apollonian thinking is consistently parodied in all these threats. If someone profanes this rural piece of property, he knows what logically follows (“quod sequitur”, *Poem 82*). It will be his own doing; he *asked* for it; he himself wanted this. It is the logic of criminal justice that later became sublated in Hegel’s *Logic* (1830/1986, § 140, p. 277): the criminal is *entitled* to punishment. Criminals may see the punishment as an infringement on their integrity, but at closer consideration the punishment is the logical consequence of their own wilful act. They *asked for it*. It is not Priapus who is misbehaving, it is the thief’s own doing. Priapus enacts the logic entailed in the act initiated by the thief himself. Ergo: think twice before you act! The thief is the *Agent*, the initiator \Rightarrow forcing Priapus into action \Rightarrow resulting in a product: the punishment “enjoyed” by the thief.

The difference between moral education (“predicare”) and Priapus’ method (“pedicare”) is only one letter as we have seen (*Poem 7*). When this letter is obliterated, the priapic syllogism starts to function, and the punishment is inflicted (preferring actions to words: *Facta, non verba*). Felony results in corporeal punishment, as a form of atonement: I will sodomise you, thief (“Pedicabere, fur,” *Poem 35*). In the case of recidivism, the punishment will become increasingly severe: If you enter for the first time, I will sodomise you (pedicare). If you enter for the second time, I will punish you more severely, by forcing my phallus into your throat (irrumare). If you enter for the third time, I will punish you most severely (pedicare + irrumare: $A \Rightarrow B \Rightarrow A+B$). Other watchmen are requested not to hinder Priapus as educator. Poem 14:

Quid mecum tibi, circitor moleste?	Why do you bother me, meddlesome watchman?
ad me quid prohibes venire furem?	Why do you hinder the thief from coming to me?
accedat, sine: laxior redibit.	Let him approach: he will return “laxior”

Punishment is a transformative experience. “Laxior” means “wider” (literally, after anal sex), but also refers to a transformative experience. The thief is not just chased away. He has learned his lesson, he is converted, in accordance with the

pedagogy of *pedicare*. The syllogism can be perverted, however, namely when the felony is committed *because* the visitor wants the punishment (considering himself entitled to it).

The *Carmina Priapea* constitute a playful exploration and investigation of the logic of the grotesque. This is confirmed by the ample use of logical signifiers such as “ergo”. The first Poem in the series puts it like this. Playfully have I written these verses attesting thee (a pun on testes), o Priapus. These poems are worthy of a garden, not of a book (i.e. they constitute low-brow, not high-brow literature). Nor have I invoked the Muses to this unvirginal spot. Therefore (“ergo”), whatever I have idly jotted on the walls of thy temple, please accept it, I pray. All deities have poems written for them praising them in fitting style by devotees ($\forall A \Rightarrow B$); you are a deity; therefore (ergo), you are entitled to poems in fitting style, please accept them.

In some poems (e.g. *Poem 14*), we encounter a friendlier Priapus, now the most hospitable of all gods. Religious restrictions which are normally in place do not apply to Priapus. Come hither, approach my little altar, even if you have spent the night with a girl or visited a brothel. I am just a lower-class, rustic, open-air deity, fully exposed to inclement weather. Ergo, it is permitted to enter all who will. In ancient religious culture, those who recently had intercourse or had visited a brothel were considered unclean. In Priapus’ case, this is not an obstacle at all. General clause: “All visitors are allowed to enter, except those who recently had sexual intercourse”. In my case, this clause does not apply, the negation is negated. Ergo, all visitors are allowed to enter.

The term “ergo” also occurs in *Poem 77*. Obstacles are put in place to ward off thieves, *therefore* Priapus – who used to sodomise trespassers “usque et usque et usque” (encore and encore and encore) – is suddenly out of employment. Yet, although Priapus has grown old, he is still able to “perforate” thieves (“ego perforare possum”, *Poem 76*). By building high fences, obstructing the passage, a new generation of gardeners is making it impossible for thieves to enter. Although this may at first glance seem helpful to Priapus, it actually puts him out of work. While he had been diligently cleaving the buttocks of thieves, he is now no longer able to do so, standing there idly day and night. Ergo, he is now the one who is punished into forced abstinence, no longer able to carry out his duty. The syllogism “If you enter here unlawfully, then you will be sodomised” no longer functions, the logical machinery has come to a stop, preventive measures are blocking the way. The priapic logic is suspended, there is no more room any more for making up one’s mind. Trespasser are no longer “free” to violate the norm. The dilemma is no longer in place, and replaced by a physical fence. The guardian (“circitor”, who literally walks or circles around) hinders thieves from entering Priapus’ garden (i.e. from falling into the trap). If and only if this obstacle is removed (if this negation is negated), the thief will return home “laxior” (with a wider anus) than he came. Those who prevent thieves from entering the garden by erecting a big fence, hinder Priapus instead of helping him. Therefore (“ergo”) the one who was wont to cleave the buttocks of thieves ever and ever and ever,

now stands unemployed, like an abstinent lute-player. The syllogism has been obliterated, and although this may seem a more “rational” design, beneficial to all, involving a minimum of suffering, there is still a price to pay: Priapus and his logic are now the ones who suffer.

The legal dimension of the *Carmina* collection addresses violations of property. Although the owner (master, “dominus”) himself is mostly absent, there is a steward (warden, curator, “custos”) who employs Priapus as an instrument of deterrence, a punishment device, barring the entrance. This steward is entitled to *enjoy the fruits* (Latin: “usufructus”, cf. Lacan 1975, p. 10) of the property entrusted to him (although this does not imply a right to destroy or waste that property). In other words, these poems address the relationship between Law and jouissance. In *Poem 24*, for instance, Priapus points out that the warden mandated the care of this garden to him. And you, thief, shall be punished. Because of a cabbage? Because of a cabbage! Crime will be punished, even if the punishment (anal rape) seems disproportional. Priapus will plunge his foot-long phallic sceptre (*Poem 25*), which ladies and kings like to hold in their hands and catamites (“cinaedi”) yearn to kiss, into the thief’s abdomen (“intra viscera furis”), until Priapus’s testicles (witnesses) reach up to the thief’s anus and the pole up to his navel.

The legal framing of this treatment is confirmed in *Poem 15*:

<p>dicat forsitan hoc: 'tibine quisquam hic inter frutices loco remoto percisum sciat esse me?', sed errat: magnis testibus ista res agetur.</p>	<p>Here, in this lonely place among the bushes. The thief will say to himself, “No one will know that I have been thrust through.” He will be mistaken; my testicles will act as weighty witnesses</p>
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While the phallus serves as the instrument inflicting the punishment, the testicles literally serve as witnesses, for the same Latin word *testis* means both “witness” and “testicle”, and Roman comic authors like Plautus liked to play with this double meaning. Testicles are witnesses: *testis*. The term *testis* comes from “three”, the witness being a “third” party, while testicles give witness of a man’s virility. The connection with testicles may have been the practice of holding someone’s genitals while swearing an oath (speak *nothing but* the truth).

Many priapic poems entail negotiations and transactions, moreover. Take for instance *Poem 3*, where a lover is imploring anal intercourse: give me what Jupiter gave to Ganymede (i.e. anal intercourse), comparing it to what frightened brides grant their husbands on a wedding night:

<p>quod virgo prima cupido dat nocte marito, dum timet alterius volnus inepta loci</p>	<p>What on the wedding night the bride gives to her husband, dreading the hurt that could be inflicted in a different part.</p>
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Richlin (1992, p. 16) cites a similar passage from Seneca the elder. The bride’s fears on her wedding night result in allowing the husband anal intercourse.

The marriage bed is a legal site, giving rise to claims and negotiations about legal entitlements. Think of Lohengrin, for instance, where Elsa claims to be entitled to know her husband's name before granting him intercourse. In priapic poetry these negotiations may involve displacement ("Verschiebung"): anal intercourse as a compromise or concession, whereby the bride offers the orifice that is normally offered by boys (serving as sex toys for adult males). Thus, according to Priapic logic, married women ("matronae") may concede to play the role of a boy ("puer") to forego physical harm or pregnancy.

In *Poem 16*, a boy places his "apples" (buttocks) on Priapus's sacrificial table, expecting something in return. This logic of reciprocity is captured in the Latin adage *Do ut des* "I give that you may give". In ancient Rome, a *votum* was a vow made to a deity, conveying the contractual nature of Roman religion. We often encounter this kind of deal in priapic epigrams, e.g. in *Poem 5*:

<p>Quam puero legem fertur dixisse Priapus, versibus his infra scripta duobus erit: 'quod meus hortus habet sumas inpune licebit, si dederis nobis quod tuos hortus habe</p>	<p>The conditions which Priapus and the boy agreed to, are listed in this distich: You may freely plunder my garden exempted from punishment If you give to me what your garden (buttocks) contains in return</p>
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Or *Poem 38*:

<p>pedicare volo, tu vis decerpere poma; quod peto, si dederis, quod petis, accipies</p>	<p>I want to pedicate; you to pluck apples. If you give what I desire, you will receive what you desire.</p>
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At the same time, it is clear that the legal dimension often involves an element of parody, as an inherent dimension of grotesque poetry (Zwart 1996; 1999). Priapus is a deity, albeit not a lofty (Olympic) one, but a lowly and rustic one. A rustic landscape adorns itself with wooden icons. His sign (attribute, signifier) is the phallus, a "partial object", an "organ", functioning both as an instrument of deterrence and as an object of desire. He is a guardian protecting a shrine, like a Dvarapala placed near the entrance to Buddhist or Hindu temples, often portrayed as a warrior or fearsome giant, usually armed with a fearsome club. Priapus is part of ancient garden architecture.

In *Poem 1* it is explained that *neither* ("non") Diana, *nor* ("non") Vesta, *nor* ("nec") Minerva (three lofty virgin deities) dwell here. This is the shrine of a rustic phallic god, represented by a wooden statue (i.e. not a marble one), painted red (the phallic colour) and equipped with a fully exposed, erect mentula. *Therefore* ("igitur"), either cover it up (i.e. close the book) or continue to read (enter the garden). Two types of deities are distinguished in this poem: the lofty ones (the Olympians, immortalised by Apollonian sculpture) and the obscene. Ergo, it is up to you, make up your mind: *either* enter (i.e. read this shameless collection of artless verses), *or* opt out.

In some poems (e.g. *Poem 6*), Priapus threatens girls or boys that, although he is made of wood, he will capture them and keep them captured, burying his phallus into them, up to the seventh rib (*Poem 7*, perhaps a parody on the seven stages of initiation in Dionysian mystery cults). In *Poem 10*, however, a girl simply ridicules him and laughs at him. Priapus concedes that he is made of wood, not sculptured by a high-brow Apollonian artist, but hacked by a lowly servant from a piece of wood, a forked tree. Still, he is willing and able to initiate her in phallic jouissance.

In *Poem 9*, in response to a question addressed to him, Priapus compares himself with the Olympian gods. Question (“questio”): why are your obscene parts displayed without cover? Why is your phallus, your mentula, ostensibly visible? In his reply, Priapus compares his phallus with the instruments which lofty, Apollonian deities likewise carry with them as their signature attribute. Ten deities are listed one by one, much like a “catalogue” (Michalopoulos 2017). Poseidon does not conceal his trident, nor Mars his sword, nor Pallas her spear, nor Apollo his golden arrows, nor Diana her quiver, nor Alcides his club, nor Bacchus his Thyrsus. No god (“nullus deus”) conceals his weapon (“telum”). Why, then, should Priapus hide his mentula? Without his weapon, he would be unarmed, defenceless (“inermis”). The poem has the form of a “question” and the syllogism is clear: All gods carry their instrument, visibly on display ($\forall A \Rightarrow B$); Priapus is a god ($=A$); ergo, Priapus is entitled to his instrument ($\Rightarrow B$). Idem in *Poem 34*: every god ($\forall A$) is endowed with a distinctive attribute; Priapus is a god; ergo, Priapus is endowed with his distinctive feature. In fact, no god is “mentulator”, better equipped (the hyperbole of parody). We encounter the same argument in *Poem 20*: All Gods (Mars, Minerva, etc.: $\forall A$) have an attribute, a weapon (“telum”); Priapus is a god; ergo, Priapus is entitled to his obscene attribute, his weapon, his phallus. Later, in Christianity, martyrs likewise carry their iron grills and dissected breasts with them. This is Priapus’ attribute: unpolished and direct, while the attributes of the Olympians (trident, spear, etc.) may count as phallus Ersatz. Obviously, a phallus is not a weapon in the sense a trident or spear or quiver is. It is an obscene organ, a partial object, belonging to his body, yet sticking out, as a detachable part.

In *Poem 14*, Priapus once again compares himself to other gods, but now to emphasise his being different. Come hither, no obstacles apply. Other gods impose all kinds of conditions, not me. *Poem 39* contains another variant of the same syllogism: all deities are beautiful (of pleasant shape: $\forall A \Rightarrow B$), Priapus is a deity, but lacks (“carere”) beauty ($\neg B$); therefore, he is compensated with a magnificent phallus (that which all girls and catamites desire most, *Poem 43*). Priapus loves to parody the heroes and heroines of Homer and other epic tales. Should a thief want to know the punishment he will receive, this can easily be derived from a puzzle, by connecting the first syllables of the names of famous epic heroines and heroes (Penelope, Dido, Camus, Remus) = pedicare (to sodomise, *Poem 67*). The thief may consider himself epically brave and daring

by entering the garden, but he will be taught that he is not. Priapus is an illiterate rustic, but he knows his classics: Homer is all about cunts and pricks (*Poem 68*).

Heraclitus (Fragment 93) states that Apollo neither speaks nor hides (his message), but gives a sign (οὔτε λέγει οὔτε κρύπτει ἀλλὰ σημαίνει). Priapus' message, however, is rather straightforward. No need of vaticination ("augure non opus est"): the mentula simply exercises its proper function (*Poem 43*).

In poems directed at female visitors, a similar syllogism is involved: All women desire to secretly visit my garden, to glance at my phallus or even use me ($\forall A \Rightarrow B$); You are a woman ($=A$); Therefore, you want to make use of my phallus (after dusk, unseen, $\Rightarrow B$). Maidens who avoid looking at the erect phallus, cast an askance ("obliquis") glance at it (*Poem 73*), averting their eyes from the very thing they long to feel inside them ("intra viscera habere concupiscis", *Poem 66*). One day it may be of use to them.

Sometimes the oversized wooden phallus is openly on display, but it may also require an offering before it can be seen sticking out, boasting that this mentula would have satisfied Penelope (*Poem 68*). Women, eager to shed a glance on Priapus' imposing phallus ("magnam metulam") are discouraged from reading the lewd verses ("impudica verba") inscribed on the wooden statues (*Poem 7*). Keep away from these verses, married women, but they eagerly glance at his mentula (the object *a*; that which one cannot ignore, *Poem 8*). They too have to make a balanced decision. There are pros and cons to consider. There is a phallus to behold, but also the risk of being exposed to lewd verses. Think twice before you enter. One female worshipper offers images borrowed from an obscene volume written by Elephantis, imploring Priapus to imitate with her all the sexual positions depicted there: please do it like this (*Poem 4*). Elephantis was a female poet, author of a famous sexual manual. According to Suetonius, Tiberius owned a complete set of her works. Old women also come to Priapus for sex during the night, and engage in a "fight" between two partial objects: mouth and phallus (*Poem 12*; *Poem 32*). If they are willing to pay, Priapus ignores their age and treats them like a girl (*Poem 57*). Male visitors may go there to masturbate, using their hand for a mistress (*poem 33*).

The Priapus statue functions as an "apparatus of jouissance": jouissance is fitted out (*appareillée*) (Lacan 1975, p. 72) with a device. Although Priapus first and foremost functioned as a signpost guiding the way, these statues could also be used for phallic pleasure (after dusk) or corporeal punishment. All these functions are linked up with language, Lacan argues. The signpost speaks to us, indicating the right direction, but the statue may also convey a promise or warning. Direct physical use sublimates into poetry and prayers. Priapus is first and foremost a signifier. It is a rural production site whose fruits include poetry. Some poems are directed to thieves, others to sodomites, still others to women: the Priapic version of an ἐπιθαλάμιον, a song written for the bride to accompany her on her way to the marital chamber, the bridal bed, one of these apparatuses for jouissance consolidated with a legal status. According to Aristotle, our needs are satisfied by activity, by excitation (ἐνέργεια), while activity yields pleasure

(Lacan 1975, p. 80). Indeed, multiple activities are involved in Priapus' garden. First of all, there is pleasure in seeing: seeing phalluses, glancing lustfully at them, or deriding them. There may also be the pleasure of direct physical contact: the pleasure of friction, of corporeal activity producing heat. Castration is referred to on several occasions: "Beware of my phallus, for you will find out that I am not a castrate". And yet, there is the fear that his phallus may be cut off. When thieves steal his sickle, not to use it, but to humiliate the god, this is a symbolic castration, a cause for laughter. Visitors turn to him because something is blocking their phallic function, so that there is a gap between desire (the craving subject: $\$$) and the object (a). More precisely: this is the default, and visitors *need* Priapus' help to make it work, whether they are female performers (Theletusa, Quintia) or male lovers. This is precisely where poetry comes in. Phallic jouissance entails the pleasure of reading. Poetry is the product of a particular set-up: the garden as a poetry workshop. The poetry is logically consistent: logical poetry, for that is what poetry should be. Parmenides' poetry likewise was logical poetry, a logical discourse on being and nothingness captured in verse, but it was the discourse of an Apollonian Master (i.e. metaphysics). The *Carmina Priapea* contain logical poetry of a more practical nature: dealing with legal and ethical aspects of horticulture and sexuality. It captures the logic of managing an orchard which also functions as a shrine, a sex school and a school of obscene poetry.

The Renaissance is considered a problem, as we have seen. Superficially speaking, it is a resurgence of the Apollonian style (an interregnum between the Magian and the Faustian style), but actually, it is also the return of the grotesque Apollonian counterpart, from medieval festivals up to Rabelais. The Renaissance is the return of a *collision* between incompatible styles. In the history of painting, the return of the grotesque is known as mannerism, with its carnal lushness and its fleshy, muscular bodies. Mannerism is an anti-classical (anti-Apollonian) movement, emphatically challenging Apollonian virtues such as balance and modesty (Van Tuinen & Meiborg 2015), eventually even culminating in ecclesiastical obscenities: the corporeal intrusiveness of the Baroque.

Chapter 3. Waiting for the dawn: Magian thinking

I have come into the world as a light, so that no one who believes in me should stay in darkness (John 12:46).

In the previous chapter, Apollonian thinking was introduced via an artwork (the *School of Athens*), a location (the Academy) and a joint meal (Symposium). The basic word κόσμος determined the metaphysical profile of this style. We also payed attention to Apollonian ethics and, after focussing on Apollonian thinking as culture, attention shifted to the Roman Empire as Apollonian civilization. This chapter, dedicated to Magian thinking, follows a similar route. We will characterize Magian thinking via an artwork, a location and a meal. And after discussing Magian thinking as culture, we will continue with Magian civilization. We will pay particular attention to the fate of the word κόσμος, undergoing a striking reversal of meaning, a dramatic devaluation. Cosmos is still translated as “world”, but what is “world” from a Magian perspective? How does Magian thinking allow the world to appear?

§ 1. What is “world”?

The archetypal Magian meal, the Magian counterpart of the Apollonian Symposium, is the Last Supper: an event described in the Gospel of John with the greatest intensity. It is a Magian event that immediately reflects the distance, the world of difference between both styles. Five of the twenty-one chapters of the Gospel of John are dedicated to this event. Jesus is given the floor almost uninterrupted. At the beginning of His monologue, He immediately pronounces the word that we have come to regard as a grounding term of Apollonian thinking, namely, κόσμος: “Jesus knew that His time was coming and that He was about to return from the world (ἐκ τοῦ κόσμου) to the Father” (13: 1). The manner in which the word cosmos is used (pronounced, almost) reflects the profound distance that separates the Magian from the Apollonian mode of thought. For Apollonian thinking, the word κόσμος expressed the perfect order that was intellectually discernible in the universe as an all-encompassing sphere, the very opposite of a dark and unintelligible chaos. The human intellect could navigate this sphere via contemplation. In John, however, the term κόσμος still refers to “world”, but now conceived as a realm of darkness, and this shift of meaning is symptomatic of the fact that the author is a Magian thinker in a rather outspoken way. His world is the very opposite of clarity and order, it is a realm of confusion, contamination and apostasy. In other words, the term κόσμος has been devaluated, has acquired a negative value. It is a world in which the intellect no longer feels at home.

In his essay *Vom Wesen des Grundes*, Martin Heidegger (1929/1967) already emphasised the significance of this shift. More than any other

philosopher, Heidegger acknowledged that the world does not always reveal itself in the same manner. While the Greek term κόσμος expressed a basic experience of being as a whole, the Christian term κόσμος (“world”) rather tells us something about the basic mood of those involved. In Saint Paul’s epistles, κόσμος indicates a particular attitude, namely of a humanity that has distanced itself from God. And the same goes for the evangelist John, who (as Heidegger notices) uses the word κόσμος remarkably often, but as an indication of the extent to which humankind has turned away and become estranged from God. In other words, κόσμος no longer stands for order in the world, but indicates the disorder which now holds sway over human existence. The tonality of human existence has fundamentally changed, as if a dramatic, collective mood swing has affected humanity as a whole. A sombre shadow has spread over human existence. In other words, a dual shift in meaning has occurred, not only from positive to negative, but also from world as clarity to world as a label for the human condition. Darkness has not obscured the starry sky. Rather, darkness has fallen over mundane existence. And in this frightening obscurity, a light is suddenly ignited. For Plato, the cosmos was the gleaming sphere that became visible for whoever managed to escape from the Dionysian cave of myth. For John, paradoxically, the cosmos itself has become a dark cave, in which only the word and presence of Jesus now appears as a shimmering light, spreading a guiding clarity in an ambiance of confusing obscurity.

Whenever John the evangelist speaks about the world, this shift of meaning is ostensibly discernible. We must not envision the world as a particular domain, enclosed by a sphere of larger radius. Although Jesus says, “You are from below, I am from above” (8:23), these terms should not be understood in a geometrical, astronomical sense. Heaven cannot be located astronomically. Rather, the world and the Kingdom of Heaven are described in terms of darkness and light. During the Last Supper, Jesus explains how the term world must be understood. He will leave this world and return to His Father (13: 1). He has come into this world (κόσμος), but the world hates Him (7:7; 15:18). He is the light of this world and came to save this world (3:17), and whoever follows Him will no longer walk in darkness, but may follow the light of life (8:12). Before long the world will no longer see Him, but He asks His disciples to await His return, sending them out into the world to disseminate the truth. Before Pilate, he speaks the famous words “My Kingdom is not of this world” (18:36).

There is an artwork that succeeded in capturing the Magian atmosphere, the mood and ambiance of the Last Supper in a remarkably convincing manner, as a counterpart of Raphael’s *School of Athens*. I mean the fresco that Leonardo da Vinci (1452-1519) painted in the refectory of the Dominican Monastery near the Santa Maria delle Grazie in Milan. While Raphael wanted to immortalise the Academy, Leonardo’s fresco revivifies Jesus and His followers as a primordial spiritual community. The world, visible on this fresco as architecture, is obscure and non-spherical. The ceiling is flat, though the structure is still reminiscent of the inside of the Pantheon. It is a flat version of a Pantheon that lost its vertical

dimension and suffered a spatial bereavement. The Magian, mysterious, dreamy atmosphere is reinforced by the techniques Leonardo employed. The fresco, as it seems, was not painted for eternity and is exposed to the undermining impact of the damaging world. The artwork reflects abandonment. It seems to want to disappear and to erase itself. As if only care and piety can save it.

The poet Wordsworth visited the fresco during his Italian trip and this experience served as inspiration for a sonnet (1994, p. 342-343) explaining how, although damps have marred this work, the Saviour's calm, ethereal goodness and grace do not fail to awe, neither the elements nor the beholder. The annunciation of the truth made to the Twelve survives, in forehead and reposing hand, but also in the artist's eternal work. The sonnet enacts the struggle between the Last Supper as an elevated scene, and the dreary, thawing world. The world manifests itself as the Real, in the form of damp and moisture, something which over time severely seems to damage the work's integrity. In spite of these encroachments, however, the magical, mysterious aura of the work remains effective. Face to face with a brutish, entropic environment, Jesus' hand and gaze reflect the message that His kingdom is not of this world. The Magian message itself, discernible as it were in Jesus' countenance, remains unaffected.

The fresco shows us the precarious and temporary presence of light in obscurity. The disciples are clearly shocked by Jesus' announcement that one of them is about to betray Him. They gather in four groups of three. In a Magian artwork, such numerical ratios have meaning. In the Last Supper, Da Vinci succeeded in capturing the Magian mood or spirit in a most lucid and convincing manner. He worked on this masterpiece between 1495 and 1498. The damage that was done over time emphasizes the distance between Magian thinking and the present. It requires some effort to try and enter the lost world of Magian thought. It has faded – but not beyond recognition or repair. In Da Vinci's artwork the mildness of Jesus dominates, but as a Magian figure he also is a shadow blending into the background. The gospels describe, besides a loving Jesus, also a demonic Jesus who, when the disciples have embarked and night sets in, meets them as a spectre hovering over the water, even inviting one of them to come to him, almost causing him to drown (Mt 14:25-31). Jesus seems to take pleasure in the conviction that only a few will be saved (Mt 19:25). The Magian style has its sinister, ghostly aspect.

§ 2. The coming of the Kingdom

The grounding term of Magian thinking is not world (κόσμος), but Kingdom; The Kingdom of Heavens: Βασιλεία τῶν Οὐρανῶν. The gospel tells us how Jesus roams Galilee surrounded by followers to proclaim His message. Matthew describes how one day, he leaves his birthplace Nazareth, where he worked as a carpenter, to settle in a fishing village on the lake. From that moment on, He begins His preaching (4:7). But what is it that he actually preaches? His message

can be condensed into one compact formula: “Repent and convert, the Kingdom of Heaven is near.” That is what He tells those who cross His path. But what is meant by “Kingdom of Heaven”? Jesus answers this question by means of parables. “A farmer went out to sow his seeds...” (13: 3).

He uses two genres. His disciples receive the message in an esoteric version, although they often find it difficult and struggle to understand. For wider audiences, He uses a more accessible style, in the form of parables. The fact that Jesus does not put any of his ideas in writing (except for some words written in sand) is not all that astonishing. His esoteric teachings could only be transmitted verbally, to a small group of elect initiates. Moreover, it was a very concise and simple message: a limited set of compact formulas, explained with the help of simple stories, taken from everyday life, appealing to and easily remembered by illiterate listeners. The meaning of these parables is that we need to prepare ourselves for an event that we cannot bring about ourselves, but which will thoroughly transform the existing world and puts everything in a completely different light. What seems important now, such as the worldly question whether we should pay taxes to the emperor, will prove extremely trivial. A new order is imminent. Jesus calls upon His listeners to prepare for this event, the coming of the Kingdom. That is (in short-hand) His gospel. It is especially good news for those (fishermen, craftsmen, day labourers) who lead a simple life. For the rich and rulers of this world, the prospects are not so good, because what seems of value will lose all value.

This devaluation of the existing world in view of the approaching Kingdom is clearly expressed in Jesus’ dismissive attitude towards architecture. When one day he leaves the temple of Jerusalem, the largest, most impressive building in the whole region, of wondrous size, one of his disciples says: Look, Teacher! What massive stones! What magnificent buildings! (Mc 13:1). It is the astonishment of a young man from the province who visits (perhaps for the first time) the big city and is still easily intimidated.¹³ The temple as an edifice must really have been very imposing in terms of scale and size. Jesus, however, puts the building in a different perspective, already envisioning its destruction. He assures His followers that no stone will remain on top of the other and He will repeat this message later on, when they have climbed the Mount of Olives later that day: a shady hill east of Jerusalem overlooking the temple. The catastrophe which He predicts will first and foremost affect architecture. Jesus is not impressed by impressive constructions, for He lives in the expectation of a spiritual Kingdom. When facing architecture, He articulates what Hegel will later designate as the position of negativity. This negative attitude towards metropolitan buildings, already negating them before they are actually

¹³ This confrontation of simple folks with the big city is a repetition of a ‘typical’ event that repeatedly occurred in the course of history. Sloterdijk describes the origins of this experience as follows: “Wir müssen uns ganz in das Erstaunen eines Urmenschen versetzen, der zum ersten Mal inmitten der Landschaft diese Masse von Stein und Holz erblickt” (1999, p. 106).

demolished, it clearly a symptom of His renunciation of the world as such, and deserves our attention. At what locations did Jesus dwell?

Again, we need to distinguish two types of locations: esoteric and exoteric ones. The temple, despite its religious function, became contaminated by worldly influences. Therefore, it is a place where polemical dialogues with outsiders take place. The esoteric, more intimate forms exchange among initiates took place elsewhere.

§ 3. Primordial scenes

Jesus of Nazareth was an itinerant preacher with a message so simple that it has become extremely difficult for us to really comprehend its meaning: the Kingdom of Heaven is at hand. The message was announced on the road. His sect was initially referred to as the guild or the society of the Way. The gospel was spread in the open air: on the banks of Lake Galilee, on a hill, in simple homes of friends in villages alongside the road, where they made a stop. The gospel was a purely wordy affair *without* architecture, liberated from all worldly weight.

Jesus and His followers have no source of income. To provide for their living, they are dependent on others, on invitations, as a company of travelling vagrants. After many wanderings through the province, Jesus inevitably reached the end of his journey: Jerusalem, the capital, to face the confrontation of provincialism with the establishment. In the temple and at other crowded places, Jesus presents His teachings in a polemical manner. The debates concern issues related to textual interpretation. How should the Bible be read? But the actual doctrine is secretly shared and proclaimed, within a much smaller circle of devotees. The activities notably revolve around two specific locations, namely Mount of Olives and the cenacle (*cenaculum*), the room on the upper floor. Mount of Olives, like the Academy, is a park-scape with olive trees, east of the city, from which Jesus views the temple complex: a perfect location for someone calling upon his followers to critically assess the big city with its buildings, a perfect spot from where to launch His critical comments. His criticism not only concerned the discourse that flourished at the temple as a public forum for deliberations, but also the worldly (Apollonian) architecture that made this type of discourse possible. What was the upper room?

The evangelists Mark (14:15) and Luke (22:12) describe the locality where the Last Supper took place as ἀνάγαιον, a hall on the first floor of a house. In the Vulgate this term is translated as *coenaculum*. After His death, the disciples still gather there, near Zion Gate, in the southern part of the city. An upper hall has indeed been found on this very site, which presumably dates from the first century A.D. and has traditionally been regarded as the place in question. On 23 March 2000 this site was visited by Pope John Paul II.

The Acts of the Apostles describe how the disciples travel on foot up and down between Mount of Olives and the upper hall,¹⁴ but sometimes they also expose themselves to the public podiums near the Temple. We can compare this situation with the habits of the academics. On Mount of Olives and in the upper room they were among themselves. Here Jesus preached to His own circle of adepts. At other locations, other genres were practiced: the parable, the interrogation. In the upper hall, Pentecost took place. The temple, an architectural achievement of significance, precisely as an architectural highlight, evoked ambivalent feelings in Jesus and his followers. On the one hand, he explicitly refers to it as the house of His Father and the building therefore strongly appeals to him. He realizes that here, the ultimate test (the final tribulation) will take place. Here he will have to prove his credibility. On the other hand, this hyper-building, erected in Apollonian style, fills Him with aversion and revulsion.

§ 4. Jesus versus architecture

Jesus was not at all favourably disposed towards architecture, as a decidedly worldly art, an expression of leading thoughts captured in marble. This negative attitude is most clearly noticeable in the gospel of Mark, the oldest of the gospels. Jesus literally proclaims that large buildings will break down. While staring at impressive buildings such as the temple, He envisions a future situation in which they are absent; He already *sees* their absence, a future in which these monuments of stone have been wiped away. Jesus is an archaeologist of the future, discerning ruins instead of buildings. Jesus Himself prefers to dwell in the open air or in simple houses of ordinary people.

A similar scene is described in the gospel according to Matthew. After Jesus has left the temple in Jerusalem, He says to His disciples: “Do you see all these things?” he asked. ‘Truly I say unto you, not one stone will be left on another; every single one will be thrown down.’” (24:2). A big city means big architecture, huge Apollonian establishments. The attitude of a Magian itinerant preacher towards Apollonian architecture is outspokenly negative. Every building, and especially *the* building, the temple itself, will be destroyed. He proclaims it as a catastrophe, but at the same time he clearly takes delight in this prospect, phrasing it as a ‘good’ tiding. When Jesus adds that He will rebuild this impressive construction in three days, this doesn’t mean that He sees himself as an architect or master-builder. That was the ambition of his antagonists, the Roman governors, the emperors, notably Hadrian. The phrase must be taken figuratively. Jesus was not a temple builder, and architecture didn’t appeal to Him. He had given up on it as it were. Rather, the statement quoted referred to

¹⁴ “Then the apostles returned to Jerusalem from the hill called Mount of Olives, a Sabbath day’s walk from the city. When they arrived, they went upstairs to the room where they were staying [and] joined together in constant prayer” (Acts 1:12-14)

the temple of His body.¹⁵ His church, His religion could do without such buildings. Yes, Jesus is in the habit of visiting the temple, but at the same time He already anticipates its obliteration. He looks at the present from the perspective of the future. The temple functions in the gospel primarily as an entourage for polemics with the theological establishment. It is not a place where the message is truly and genuinely proclaimed. Those things happen elsewhere, in the localities where Magian thinking *in statu nascendi* originated. Early Christians visit the city centre primarily for polemics. Esoteric preaching, meant for an audience of devotees, takes place at different, less splendid sites.

The provocative scorn that Jesus displays in His aversion to architecture is all the more remarkable when we consider the construction He was actually dealing with. Herod's temple was an immense building, a world miracle. The temple as such, already quite huge, was part of an impressive complex of buildings covering the whole plateau and made from white stones in Corinthian style. The structure was dominated by high pillars, about a thousand, decorated with gilded vines. According to Jewish historian Josephus, visitors were stunned by the grandeur of the temple and her colonnades (1969, Book XV). Especially for those who, like Jesus, approached the complex from the East, the building looked gigantic. On the south side were the peristyles where teachers addressed their following. Here, too, was Solomon's portico (στοά), where Jesus conversed with his opponents and where His followers likewise gathered after His death.¹⁶ Just like Stoic philosophers gathered at the στοά ποικίλη in the centre of Athens near the Acropolis, the Jewish schools and sects gathered in the immediate vicinity of a sanctuary. In this metropolitan, Apollonian environment, quarrels between schools and sects were staged. Socrates debated in such a location with rivalling sophists, Jesus with the Scribes. However, the coming of the Kingdom was neither determined by nor dependent upon the outcome of such debates. The spiritual dawn would spread throughout the empire on its own accord. Faith is a matter of grace, not of arguments or discussions (cf. Augustine, *De civitate Dei*, XXII, 7). Still, hearts can be opened by wordings used on such occasions. The spirit works (as a spiritual infection) via words and deeds.

We must therefore not imagine the Kingdom of which Jesus spoke as an earthly city with temples and walls, quite the contrary. The temple Jesus wants to erect is of a spiritual nature, beyond architecture. The existing temple will perish – from the perspective of the existing world a catastrophe, but from a Magian perspective the beginning of something completely new. There is no continuity between the Kingdom and this world. The Kingdom is not a worldly empire (it is

¹⁵ The church is built on the foundation of the apostles and prophets, with Christ Jesus himself as the chief cornerstone (Ephesians 2:10).

¹⁶ “And Jesus was in the temple courts walking in Solomon's Colonnade” (John 10:23); “All the people were astonished and came running to them in the place called Solomon's Colonnade” (Acts 3:11); “The apostles performed many signs and wonders among the people. And all the believers used to meet together in Solomon's Colonnade” (Acts 5:12).

not of this world) and will not take root or feel at home in the buildings of Apollonian civilisation. In His vision, architecture is lacking. His faith was one of villages and country roads.

It was Paul who introduced the metropole into Christianity, and Christianity into the metropole. He dispatched his letters to Christian communities in metropolitan areas. With him, Christianity became a big city phenomenon: became civilization. The city of Rome, where Peter and Paul came to their end, would not have attracted Jesus. Jesus was not drawn to Rome. Because of this migration to the big city, the attitude of early Christianity (as a key representative of Magian thinking) towards architecture inevitably began to change. The civilization of Magian thinking inevitably gave rise to the birth of a Magian style of building. It is the purpose of this type of architecture to create a Magian, mystical, awe-inspiring space, where the presence, the divinity of the divine, can be experienced as shimmering light floating into the darkness. The primordial Magian building is the Pantheon, as we have seen. Although this building began as the completion of Apollonian architecture, it is at the same time the first man-made mystical ambiance. At the time this unique construction was taking shape, Oriental (Magian) religious movements began to pervade Rome.

Spengler sees the Pantheon as the archetype of Magian architecture, as “the first mosque” (p. 98, p. 274). Hadrian wanted to copy works he had seen in the East.¹⁷ Centuries later, after the fall of Constantinople, a similar event occurs. The Hagia Sophia can be transformed into a mosque without destroying the architectural construction as such. Byzantine and Islamic architecture have the same ambition: creating a mystical space, referred to by Rudolf Otto as *das Numinöse*. The inside of a dome is reminiscent of, and reflects the sublimity of the starry sky. The Pantheon materialises a Platonic conception, but also represents a turn towards a radically different style of thinking, which already has begun its ascent. In these mysterious cavities (spiritual enclaves in a worldly environment), certain ritual gestures and spiritual experiences become possible. Conditions are created for unworldly moods to evolve: commemorating the Last Supper as the primordial experience, the transformative event. Before analysing the profile of Christian civilisation in more detail, I will first try to find out more precisely what happened in the localities described above, when the gospel was still, in the terminology of Spengler, culture. What were Jesus and his followers doing and experiencing in their cenacle? And what kind of discussions were staged in the vicinity of the temple?

¹⁷ “Das Meisterwerk aber, die früheste aller Moscheen, ist der Neubau des Pantheons durch Hadrian, der hier sicherlich ... Kultbauten nachahmen wollte, die er im Orient gesehen hatte” (I, p. 274).

§ 5. Transubstantiation

During the Last Supper, Jesus articulates a Magian worldview. He is about to leave the hateful world, but at the same time hints at His return. The highlight event is a simple Magian gesture enacted by Him: take this bread and eat, it is my body: *Hoc est corpus*, a phrase which was travestied into *Hocus pocus* later on. He likewise offers wine, His blood (Mt 26:26-28; Mc 14:22-24; Lucas 22:17-20). In the gospel of John, the overall description of the scene is even more detailed and engaging. Jesus refers to Himself as the bread of life. Whoever eats and drinks will partake in eternal life (Joh 6:51-56). The philosophical terms for what takes place is transubstantiation, meaning that bread and wine as material substances undergo a profound ontological transmutation. Although nothing seems to visibly change, their value and meaning changes dramatically. Their ontological standing has been altered in a sudden, leap-like fashion. For a Magian readership, it is a climax, a highlight of intensity and participation. For those who have distanced themselves from it, it is a bizarre scene, a mystification, a misunderstanding. Diderot (1769/1951) will remark that the transformation of wine and bread into flesh and blood is a natural process known as metabolism, which does not involve any “galimatias”. But Diderot is undeniably a Faustian thinker, who has lost contact with the world of Magian thinking.

Transubstantiation means that the significance of a certain object dramatically changes. Another word for transubstantiation is sublimation. An example of sublimation is money, say: a coin. The value of a coin is not determined by the materials from which it is produced. As soon as a piece of metal becomes a coin, it becomes part of a financial (symbolic) circuit, and changes abruptly. It acquires a value which it did not have as a piece of metal, which could also have been used for other purposes. Whoever argues that the symbolic value is fictitious, ignores the reality of the value dimension, the symbolic order as a crucial dimension of human existence. This dimension precedes the coming into existence of the coin as a coin, making it possible. Due to this dimension, a piece of metal becomes a carrier of value. Coins have a certain intrinsic value (e.g. golden coins), or can be used to produce guns in times of war, but in order to circulate, currency value differs from material value. The coin as such is merely a vehicle, the real value is determined by a symbol, a currency symbol, minted by someone who has the authority to do so and whose stamp it bears. The tangible coin is never completely identical with its value or meaning. It carries the portrait of the emperor, sending it out into the world as *His* coin, as a piece of propaganda. By using the coin, we acknowledge the emperor as the rightful ruler of our world. The portrait reinforces the validity of the coin, while the coin reinforces the sovereign’s sovereignty. According to Magian thinking, a piece of bread can acquire spiritual meaning only in the context of a Holy Mass, conducted by a priest, acknowledged by Rome. It takes Faustian thinkers like Luther to flatly deny or even question such a truth (self-evident, according to the logic of Magian thinking).

The Roman Empire was the golden age in the history of the coin. The coin could function optimally in an Apollonian ambiance, as reflected by its circular shape, allowing it to circulate within (and at the same time delineate) the political sphere of influence. The coin represented the worldly empire, determined the radius of its power. All this explains Jesus' disdain and contempt for the coin. The Magian coin no longer desires to circulate. Magian coins desire to become transmuted into a treasure.

Another example of transubstantiation is the artwork, whose value is not primarily determined by the materials from which it is made (and this even applies to artworks made from gold or ivory or marble or jade). The artist adds a cultural surplus, via his signature. The first artists were shamans and a painting by Leonardo da Vinci still retains something of the miraculous. Value is created through art. A random coagulation of various types of paint will fail to create meaning, although this will be challenged by modernism later on. In the hands of the artist, the material thing undergoes a transfiguration.

Transubstantiation or sublimation also play a decisive role in love, notably in Magian forms of love, such as courtly love. Physiologically speaking, human beings are not that different from one another. In principle, all bodies function more or less in similar ways. Physiologically speaking, apart from conditions such as age or illness, our anatomies are more or less identical. In every single human body, the same organs, genes and proteins can usually be found. But the experience of love points in a different direction, putting the beloved body in a completely different perspective. Although the beloved body may not be exceptional in a biochemical way, a lover may exclusively want to experience intimacy with this particular body, to which some very unique characteristics are attributed, singling it out from and setting it apart from others. The beloved body may even be experienced as untouchable or inviolable. Due to the experience of love, the body's value increases dramatically. There is something Magian about falling in love, and something of the Magian tends to survive in instances of intimacy, for those who are sensitive to it of course.

It is possible to reduce phenomena of love to biochemical or physiological mechanisms and processes, and this is exactly what Faustian authors will try to do. In purely physiological or biochemical descriptions, the Magian dimension is indeed absent, obliterated as it were. In the Magian experience, physiology only plays a secondary role, and the spiritual dimension is the decisive one. The object is sublated into something out of the ordinary, something irreplaceable.

The paradigm of Magian love is courtly love, love from a distance, romantic yearning. The physical encounter is postponed instead of consumed, and precisely this deferral, this distance in place and time, increases the value of the desired object, transfiguring it into something of unspeakable value. The status of the desired object is decidedly unique. Thus, to the physiology and biochemistry of love, a mysterious dimension is added, a value which may even pervade the clothes worn by the beloved, as well as the words he or she utters.

Everything will share in this mysterious aura. Magian love, ideally, equals celibacy. Physiology vulgarises the love experience, because the focus of attention is now drawn towards the merely physiological, or even the obscene, from which Magian desire tries to immunise the object. Magian love is poetry rather than biochemistry.

Contemporary readers will probably see the relationship between Jesus and Mary Magdalena as a sexual relationship. For the Magian reader, the special value of their relationship resides precisely in the absence of the coital moment. "Consuming" their love would put the extraordinary value of the intimate friendship between Jesus and Mary at stake. They sublimate their love. What is entailed in this is not a marriage but a spiritual bonding.

To all things of value, there is a Magian aspect. Even an author as unmistakably Faustian as Karl Marx was forced, in a famous section in *Das Kapital*, to emphasise the mysterious character of the value dimension, up to the point of commodities being transformed into a fetish. On the one hand, the use value of most things is more or less evident, Marx argues. In addition, however, as market items (commodities), things acquire exchange value as well: the price paid in the case of purchase. However, that price is not determined in the first place by its use value. Brand may be important, or particular forms of jouissance hinted at in commercials. But where exactly does this mysterious value come from? Marx discovers a moment of discontinuity, a leap from practical value (use value) to exchange value (market value), as if things undergo a sudden transfiguration once they are offered on the market for sale. Marx (of all people) discerns metaphysical niceties that seem to resist rational (Faustian) analysis (p. 85). And this is what he refers to as the fetish character of value. A fetish is like an object touched by a beloved person, something unreachable, perhaps even bringing consumers into a pathological state of craving. The object is infected, in a positive sense. A Magian moment is involved. There is always something, a value dimension, which is mysteriously added, which puts things in a different light (the seductive light of the shop window where commodities are on display). For the art lover, it is the artist who adds value by placing his or her stamp on the things he or she produces, in the form of a signature, literally and / or figuratively (as signature may also refer to specific features of technique and style).

This mysterious ability of human beings to discern or introduce value and meaning into the world, transcends the purely material dimension. Precisely this is what is at stake during the Last Supper. The wine and bread that Jesus shares are everyday items that suddenly receive a completely different, symbolic meaning, creating a spiritual community (still celebrated today during catholic mass). Whoever emphasises that a biochemical analysis of this transfigured bread or wine will not reveal any measurable change, misses the point completely. Also, the chalice on whose surface Jesus leaves His fingerprints, later used by Joseph of Arimathea during the crucifixion to collect the blood dripping from His body, becomes an object of worship and desire. The chalice becomes the Grail – at least for those readers of the gospel who are susceptible to experiencing the Magian

dimension. This type of event, this transformation or sublimation, plays a crucial role in Magian thinking, and distinguishes the every-day (profane) from the sacred. The Magian event is something which befalls us, something that calls upon us, overwhelms and unsettles us, but which cannot be caused or brought about *by* us. Rather, our activity consists in preparing ourselves for such an event: the readiness is all.

Although the value dimension as such is not a characteristic feature of the Magian experience, the Magian style intensifies it, pushes it to the extreme. Jesus was a carpenter, Peter and John were fishermen, while Paul repaired tents, but in the light of the value dimension, such activities lose their meaning. Those involved may continue such professions after their moment of calling (conversion), but the tonality of their existence has changed and from now something of a completely different order is at stake. The old world has lost its meaning. Only from this perspective can we understand some of Jesus' polemical confrontations with the establishment, discussed in the next section.

§ 6. Jesus' laughter

...and the scorn of his laugh rang free (Ezra Pound)

While in the upper room the intimate dimension culminates in transubstantiation, in public places another type of discourse developed. Mark describes a famous discussion between Jesus and the Pharisees. The colonnade of the temple complex was a perfect entourage for this type of conversations. His opponents confronted Him with tricky questions. This probably was a kind of intellectual game between protagonists of the various sects represented there. Especially newcomers were tested in this manner. One tricky question was: should one pay taxes to Rome? This was a classic problem, giving rise to different opinions among competing groups. With such questions, they tried to corner Him. A dangerous question, a trap. A denial would bring Him into conflict with the worldly powers, a confirmation with the religious establishment. Jesus answers with a witticism, in the style of the ancient Cynics: "Let me see the coin. Whose portrait does it bear and whose inscription? The Emperor's? Well, then render to Caesar what is Caesar's and to God what is God's" (Mark 12:14; Matthew 22:21). The coin derives its value and meaning from the symbolic order wherein it circulates. The coin already belongs to the Emperor. From the perspective of the Kingdom, this makes it a meaningless, worthless object; not at all an item of concern. Use it, but with equanimity, do not attach any value to it. Do not allow yourself to be trapped by it. Followers of Jesus may pay their taxes, precisely because such action is irrelevant and trivial. The Kingdom of Heaven devalues the value of money put into circulation by worldly powers. This scene contrasts with what happens during the Last Supper. Here, exactly the reverse movement is discernible. Simple objects taken from everyday life, such as wine and bread,

acquire a value (in the light of the coming of the Kingdom) that can no longer be expressed in terms of worldly coins.

Jesus reveals a whole new value dimension, enacts a transvaluation of values. The seemingly valuable coin becomes worthless while things which seem of moderate value (use value) suddenly undergo an increase in value. The coin devaluates, the everyday item sublimates. During the Last Supper there is an atmosphere of intimate solemnity, which contrasts with the humour with which Jesus confronts the scribes. He solves a risky situation with a “formidable” joke (Lacan 1986, p. 115), masterfully avoiding dialectical pitfalls. Humour certainly plays a part in debates with outsiders. When it comes to questioning established truths, the category of the comical plays a decisive role (Zwart 1996). The dialogues staging Socrates in discussion with the Sophists, are highlights of comical world literature: philosophical comedies in fact. In the case of Jesus, the comical dimension is less obvious perhaps. Indeed, there is even discussion among experts about whether Jesus laughed at all (Morreall 1983, Hyer 1981). What is laughter?

Kant describes humour as follows (1790/1971, A 222). When someone becomes entangled in a difficult situation, bystanders catch their breath. They try to follow the thoughts and actions of the person concerned. Suddenly, because of a witticism or a joke, the problem is suddenly annihilated. By this unexpected turn of events, the mental process is interrupted, resulting in a sense of relief. Thorax and diaphragm relax. The bystanders laugh.

The polemics between Jesus and the Scribes seems to be in accordance with this scheme. Jesus, who supposedly never laughed, replies to His opponents in a humorous fashion. However, we are so used to serious readings of the gospel, that it has become difficult to discern the element of humour at work here. Jesus’ reply must have amused bystanders, they must have laughed. Is it permissible to pay taxes? At first, they hold their breath. Whoever says A or B puts himself in trouble, either by opting for collaboration or by stirring resistance. Jesus saves the situation by annulling the problem, allowing it to disappear, turning a theological trap into something utterly trivial. The relationship with worldly powers is presented in a different light. For the true believer, all this is really of no concern. Truly religious persons are not involved in this. It does not really matter. An unsettling dilemma has suddenly imploded. A different mood or state of mind is made possible by jokes. It is precisely because of this joke that His opponents begin to realise how dangerous Jesus really is.

During Last Supper, witticisms are completely lacking. At esoteric locations, we enter the realm of solemnity. Plato’s dialogues (staged in public venues) were more humorous than intellectual deliberations evolving within the inner circle of mathematically trained scholars. The coin touched by Jesus loses its value, while bread experiences sublimation. The coin belongs to the Emperor, and the emperor *is* this coin, is present in this coin. Without money circulating, empire-building would be unthinkable. The emperor exists because of the symbolic order which supports it. The true believer, however, does not belong to

this world. In the upper room, Jesus and his disciples open up a new dimension of existence which will become increasingly important during the centuries to come. They insulate themselves in this fold where the coming of the Kingdom announces itself. Here, its advent is experienced for the first time. Bread and wine become important entities. Jesus *is* this bread and wine. He is present in them.

§ 7. Christianity as civilization

Jesus addressed small groups of people, gathering in a house as confidants, although sometimes He would face larger crowds, but His preaching remained culture. The transition from culture to civilization is recorded in the *Acts of the Apostles* and accomplished by Paul. The latter no longer addresses the inhabitants of places like Capernaum, Nazareth, Emmaus or Bethany, as Jesus did. He rather reaches out to the Christians of Rome, Corinth and Ephesus, Christians living in ancient metropolises. Jesus spread His message orally, Paul rather opts for epistolary communication. He preaches via letters. Jesus travelled country roads, Paul prefers the important routes of traffic and communication, either by land or by sea. From Corinth he dispatched his letter to the Christians of Rome, while composing his letter to the Corinthians in Ephesus. Jesus visited His followers in towns and villages, but in the days of Paul, Christian churches had begun to settle in big cities, replacing Aramaic as a regional language by Greek as the lingua franca, the language of scholars. In each and every respect there is increase of scale. Jesus' wanderings eventually ended in Jerusalem, a provincial capital. Those of Paul ended in Rome, the centre of the world. Here, Christianity had to compete with other religious mass movements of the Magian era, such as Isis and Mithras cults. Like gnosis, these are truly Magian movements, on the level of civilisation, no longer constrained by spatial or ethnic attachments. Peter, at the beginning of the Acts, focuses exclusively on Jews, but at the end of the Acts, Paul's outreach coincides with a significant part of the Roman sphere of influence. Soon, a whole empire becomes spiritually imbued.

The big city is something very different compared to the rural landscape. World History basically unfolds in cities, on a metropolitan stage, according to Spengler. In villages, no history is written. Only at the time of Saint Paul, Christianity becomes history – *world* history. The big city is the stage where big politics is enacted, where science, social interaction and finance evolve. Only in a metropolitan world, Christian literature becomes a subgenre of world literature. There is a fundamental resemblance, regardless of time and place, between villages anywhere in the world. Here, a “general human pattern” (Romein 1954) establishes itself. All villages are similar to some extent. The city, however, is a phenomenon of a completely different order, e.g. the contrast between the misery of bad neighbourhoods and the splendour of the city centre. Inhabitants of a world city are no longer a people, but a multi-ethnic population.

An important moment in the transition from culture to civilization is Pentecost. The spirit descends on His followers, and they experience a state of divine madness: All are filled with the Holy Spirit and begin to speak. At that time, Jews had settled in various regions and linguistic communities, so that multiple languages and dialects could be heard in Jerusalem (the city as a social heteroglossia, as Bakhtin phrases it). But now these illiterate apostles seem to be infected by this multiplicity, they seem to speak and address bystanders in multiple languages. An important question in the Acts is whether Christianity has an ethnocentric or a global mission. Will the good tidings only concern Jews, or is its scope much broader: is it the onset of a movement of global significance? What the Pentecost experience makes clear is that the gospel is independent of a specific language. The gospel is not written in a holy language, but in a lingua franca, and therefore translatable and transplantable. The gospels are constantly translated, in Latin, Gothic and so forth, and such translations of the Christian message even results in a renewal of the language in question. Of several Germanic languages it can be said that they only became a language, in the sense of a national language, thanks to the translation of the gospels.

The followers of Jesus were fishermen and farmers of the Aramaic countryside who passed on these stories and statements verbally. Jesus apocalyptic message was, that the end of the world was near. In *Acts of the Apostles* we read how Peter and John healed a man who had been paralyzed for forty years. They practice Magian medicine, through haptotherapy, or by uttering a phrase. Thereupon they are questioned by Jewish scribes, who were astonished by the boldness (παρρησία) of these uneducated men (ἄνθρωποι ἀγράμματοί καὶ ἰδιῶται, Acts 4:13). Paul, however, spoke the metropolitan language of the literate. Christianity was becoming “civilised”. A final confirmation of this was the book *De Civitate Dei* by Saint Augustine. This intellectual, who came of age in an Apollonian environment, experienced the force of Magian thinking. Following the example of Paul, his style of thinking is urban, civilised. Augustine lived in metropolises like Milan and Hippo and *De Civitate Dei* envisions a divine metropolis, a city that is ever more splendid than the centres of Apollonian civilization. Worldly cities like Rome proved vulnerable. By contrast, God’s metropolis will supersede them. Augustine had been familiar with the Apollonian worldview during his youth, but never fully identified himself with this doomed perspective. Eventually he rejects the very concept of a spherical world. In *De Civitate Dei*, he rejects the idea that there could be antipodes inhabiting the southern hemisphere of a spherical earth. This logical and inevitable consequence of spherical thinking is brushed aside as an absurdity (Book 16, Chapter 9). The world is a sphere, he “knows” that, and at the same time he no longer really grasps the implications of this truth. Magian preaching entails a rejection of the spherical idea. Spherically is no longer endorsed, no longer followed consistently down to its most radical consequences. Augustine sees the world differently, as a cavernous space where a battle between light and darkness is raging.

There are two worlds, according to Augustine: the worldly and the divine one. The question what the city of God exactly amounts to, is not that easy to answer. It is a future event, a coming. God's metropolis is inhabited by the elect. Eternal bliss reigns there and it is Sunday interminably. Source of inspiration is the Book of Revelation: I saw the holy city, the New Jerusalem, descending from heaven, prepared as a bride adorned for her husband (21:2). It is a sublimated, transfigured Jerusalem, a change far more radical than optimisation: it is a transubstantiation of the idea of the metropolis as such. Matter becomes transfigured. The new world consists of precious stones and precious metals. Matter has undergone a sudden, alchemical change. On the other hand, the city of God is already among us, within us, present in our faith, in the ethos of true believers, regardless of whether they are carpenters or fishermen. This invisible city is a decisive factor in history, providing a sense of meaning and direction (in this seemingly meaningless theatre of violence and sexual reproduction). Believers already live their lives in the expectation of the coming of this Kingdom. A future event already affected the lives of Jesus' followers. They already lived under the sway of the dawning Kingdom, and did not want to have any part in the Pax Romana. They were awaiting the coming of a transfigured city (Hebrews 13:14). Peter and Paul travelled to Rome to witness the destruction of the spherical world.

§ 8. Islam as civilization

Christianity arose during a period of disorientation, allowing an influx of oriental religions into the Roman Empire. Christianity began as a movement of resistance against global political realism, but became gradually transformed into a movement that aimed to contribute to restoring political stability. Christianity became a global movement. Many centuries later, a similar event came about, in what was even more a hinterland than Galilee. Around 610, an Arab merchant had an overwhelming religious experience on a mountain near Mecca. Arab tribes were experiencing a profound transformation process. Their traditional nomadic existence was giving way to a more lucrative and extended trade economy. This new culture needed a new ideological superstructure. The traditional ethos was geared to a situation of permanent struggle for existence. Virility, fate and self-sacrifice constituted important concepts. The ancient tribes acknowledged multiple gods, with Allah as the chief deity. Mohammed took over some elements of traditional religion, but transformed this moral culture into a belief system that not only proved able to unite the Arab tribes, but even constituted the foundation for a Magian civilization.

Mohammed initially faced the same situation as Jesus and His first followers. At first, he believed that his message was tailored to his own ethnic group. Gradually, he began to realize the broader significance of his calling. In a remarkably short period of time, his new religion developed into a far-reaching

phenomenon. The rise of Islam occurred relatively late, but the pace of its spread indicated that the Oriental world was ready for Magian civilization. This explains, according to Spengler, the spectacular swiftness of Islam's dissemination across different continents. He gave the Arabs a spirituality that was consistent with their traditions, but which at the same time could serve as source of inspiration for a theocentric empire which reached from the Himalayas to the Pyrenees (Armstrong 1994, p. 159). Islam spread with unprecedented speed: Syria (634), Damascus (635), Egypt (641), Carthage (647) and Spain (710) were overrun, and almost Paris even (732). This phenomenal success, according to Spengler, shows how much Islam was a timely message, and how much of the East was craving for the advent of a Magian civilization.

What is a Magian religion? Traditional religions are bound to specific locations such as mountain peaks, rivers, lakes and springs. The divine is indigenous. For a Magian religion, this is no longer valid. Where two or three are gathered in God's name, a Magian church is present. Rome as the centre of the Roman Empire became the centre of Magian Christianity, with Constantinople as its rival. At first, Christianity distanced itself from Rome. There was no rapport whatsoever between the grand city and the new faith. Magian religion spread via its rituals, such as baptism or the breaking of bread. These rituals could, in principle, take place anywhere, in whatever ambiance, but when it comes to literally *replacing* previous religions, it makes sense to erect churches on the sites of former sanctuaries.

In Magian thinking, the battle between light and darkness is central. But if God is almighty, how can evil pervade the world? It is a temporary condition of obscurity. Important Magian concepts are resignation, patience, submission, prayer, spiritual exercises and grace. Islam literally means submission. Not we, the Almighty brings about the anticipated change. We cannot enforce the Kingdom's arrival. In Arabic and Germanic tribes, the Magian conversion entailed a dramatic break with the heroic morality of unconditional refusal to bow your head. A Magian religion entails a transvaluation of all values. Only God can genuinely act.

Mohammed experiences a captivating presence and commences to recite his verses. He listens, as a recipient of the text. In this way, one of the greatest spiritual works of all time comes into existence. He was illiterate and recited what was revealed to him (Armstrong 1994, p. 164). Others wrote it down, compiled it. A problem for Western readers is that the sublime beauty of Mohammed's Arabic is considered untranslatable. The overwhelming power of the language played a major part in Islamic conversions. Mohammad's religion incorporates ancient thoughts, but allows religiosity to unfold on a large scale. New beacons appear in the landscape, accompanied by a shift of attention towards verticality: the relationship between believers and their God. The world is a desert, we are strangers in foreign territory. Through daily prayer, believers keep in touch with God and with the place where God revealed himself, like a telegraphic connection. The Word spreads via art, through calligraphy, architecture and

horticulture, as testimonies of God's splendid majesty. Instead of the sphere (the god of the philosophers), the cube-shaped Kaaba ("cube") provides a sense of orientation to worshipping Muslims.

§ 9. Magian morality

Magian thinking experiences an unbridgeable distance between good and evil. The individual plays a passive role, waiting for the dawn. Magian thinking cultivates this attitude of waiting, awaiting the end of the established order, whose days are numbered. Magian individuals remain strangers to this obscure ambiance, under the sway of forgetfulness. The Magian mindset anticipates a sudden, dramatic change. Individuals can be instrumental to the downfall of the establishment and the commencement of a new order, but cannot enforce this event, for history ultimately does not depend on the decisions of individuals. Involvement of Magian individuals in society remains without any real commitment. Inwardly they are already citizens of another Kingdom. This idea inspires Magian politics (waiting for the cataclysm), but also Magian architecture, aimed at creating sacred enclaves amidst a meaningless world.

In Magian medicine, physicians are benefactors who heal by the touch of their hands or other Magian techniques (Speak one word only, and I will be healed), but ultimately it is a matter of grace: your faith has made you well. Without God's help, all medical activity is pointless. It comes down to suggestion and charisma.

In the domain of ethics, Magian thinking manifests itself in an attitude of *Gelassenheit*. At first, individuals inhabit a wasteland, obeying rules without reflection. But then, all of a sudden, conversion sets in. Outwardly, nothing seems to change, but the inner transition is all the more dramatic. Converted individuals apparently continue to accept the establishment. Apparently, they take part in the circulation of goods, but inwardly they have forsaken the world and turned away from it. They are inconspicuously preparing themselves for the coming of the Kingdom. Jesus' confrontations with the established order are symptomatic of this disdain, for example with regard to food ethics. Jewish food ethics was very strict. It was only permitted to eat animals with split hoofs that chew the cud. Everything else is considered unclean (Leviticus 11: 2-6; Deuteronomy 14: 3-8). The products of unclean animals are symbolically infected. By not consuming them, the individuals concerned demonstrate their allegiance to their ethnic Jewish faith. Also for the Sabbath, strict rules applied.

In the preaching of Jesus, we find a very different tone of voice (Zwart 2000). Do not worry about what you eat or drink, that is of no concern, the Kingdom is more important than food. What goes into someone's mouth doesn't defile him (Matthew 5:11). Whatever enters the mouth goes into the stomach and is excreted, but the things that come out of a person's mouth (e.g. evil thoughts) come from the heart and defile him (Matthew 5:17-18). Jesus transgresses dietary

laws provocatively. He eats and drinks with prostitutes, tax collectors and sinners (Matthew 9:11). From the perspective of the Kingdom, dietary laws have no meaning. The prevailing theological fashion is to emphasize continuity between Judaism and Christianity and to minimize the distance between Jesus and his cultural environment. Jesus was a rabbi, of course, that is true, and it is true that Luther was a monk. The essence of the gospel, however, is precisely the moment of discontinuity. What Jesus preaches is of a completely different order. Contemporaries (both followers and representatives of the established order) acknowledged this. Jesus may not have had the intention of establishing a Magian world religion, but that is not the point. His preaching brought about the genesis of a Magian religious movement.

Jesus is also a Magian physician, relying on Magian techniques such as faith-healing: covering the eyelids of the blind with saliva. One word will suffice for a miraculous cure. Your faith has healed you. For Jesus, healing is not a recovery of balance or harmony, nor is it the result of a therapeutic intervention. It is a matter of faith.

This also applies to his medical ethics. The gospel of John describes a cure in a bathing facility with a portico. A sick person had been waiting there for thirty-eight years, but Jesus simply says: Get up, take your stretcher and go. The man's health is restored immediately. It happens on a Sabbath, however, and this makes it a violation, from the perspective of established morality. For Jesus, however, all this has no meaning any longer, as the advent of the Kingdom is imminent. Whenever He is attacked, He responds with Magian arrogance. This is just the beginning: He will revivify the dead, Sabbath or no Sabbath, if God wills it. This is Magian medical ethics. The doctor is a benefactor, with only one technique, charisma, suggestion. And Magian patients know what it means to wait. For a Magian patient, a life spent in waiting is more edifying than healing as such (Lidwina of Schiedam).

§ 10. Magian love

The gospel of John is the gospel of love. Contemporary readers interpret love from the viewpoint of contemporary convictions, but evangelical love is of a different style. When we read that John was the beloved disciple with whom Jesus associated intimately and confidently (notably during the Last Supper, when John rested against His breast), contemporary readers may define this in terms of homosexuality, while the relationship between Jesus and Mary of Magdalen is easily interpreted as an erotic relationship in the sexual sense. It has become difficult for us to acknowledge that what we are dealing with here is love in a Magian sense. The most well-known form of Magian love is courtly love: love at a distance, under the sway of postponement. Even during the final moment, when they see each other for the very last time (under earthly circumstances), and Mary is about to embrace Him, Jesus emphatically tells her not to touch Him (John 20:

17), as He has not yet risen to the Father. His transubstantiation has not yet been completed, and would be disturbed by the moistness of her touch.

Courtly love distances itself from any remnants of obscenity or bestiality. Biochemistry and physiology are transformed into a more exalted love game. Sexual intercourse must give way to love at a distance, pure desire. Erotic craving becomes an exercise in abstinence. Love is sublimated into poetry and music, and gives rise to a culture of chaste gestures, such as kissing someone's hand or forehead (courtly gestures par excellence). Love is protected from earthly stains, while satisfaction and consumption are postponed into a distant future, so that sincerity can be put to the test and lovers can prove themselves worthy. And when the moment finally dawns that they may approach each other and experience their physical proximity and unity, it will be without any hint of obscenity. Courtly love found its way into monasteries, where it has had a major influence on mysticism, on mystic poetry, both female and male, transforming fierce longing (no longer of a corporeal nature) into sublime poetry. Courtly love is sublimation, a form of enhancement or upgrading. The love object is exalted, and becomes literally sublime.

In chemistry, sublimation means the transition from a solid to a gas state, bypassing the liquid stage. In ordinary love, flesh is converted into something which is moist, literally (vaginal secretion, sperm), but courtly love evaporates as passion becomes spiritual. This explains Jesus' chastity during the *Noli me tangere* scene. He has not yet risen, is not yet fully cleansed of earthly stains. Physical contact is too earthly and would infect Him. Their love will never be consumed. They exert a mutual Magian attraction, something spiritual or telepathic. Chaste love can also be found in later Magian heroines such as Hadewijch of Nijvel. It is not carnal sex that they are after, but spiritual enlightenment which arises from a love that goes much deeper and is more vibrant, according to these experts, than anything that usually goes under the name of love. Our frame of reference may be too contemporary to appreciate the true depth of Magian desire. Modern lovers *claim* the other. There is always a moment of taking-possession-of, of physical and mechanical friction, and all this is inherent in Faustian love. The Magian style is magnetic, telepathic.

As stated, an important aspect of Magian love is the moment of sublimation, when the loved one is deprived of his or her physiological dimension and turned into something remote. The evangelical garden scene is the paradigm of Magian love, while courtly love is a revival. It is an *ars erotica*, literally, as love becomes art, a stylisation of desire, a practice of ascetic abstinence, but now as self-renunciation (Lacan 1986). Those concerned awaits an endless prelude, an interminable series of tests, to prove their love and dedication. It is a service, a systematic edification of desire – resulting in the idealization or elevation of the object, who becomes something increasingly unique, priceless and elusive. The eventual unification with the object is depicted as a sudden moment of grace, when the object of desire suddenly gratifies the lover's craving, but it is union beyond anatomy. In the meantime, the lover must satisfy himself with courtly

techniques such as an occasional glance, but most of all with poetry and music: the love of the troubadour and the monastic nun.

Courtly love found shelter in monastic settings, but it is not something which definitively belongs to the past. This type of eroticism resurges in experiences of infatuation (Lacan 1994, p.88, p. 109, p. 122). In the behaviour of desperate lovers, we find traces of cultivation and regulation, a willingness to follow certain procedures or rules: techniques of self-containment, of postponing or relinquishing physical satisfaction, reminiscent of the theatre of courtly love. The beloved other, the object, is untouchable and inviolable. A touch is already a risky affair, as the love experience may become tainted with physicality, reduced to something normal, rather than becoming something exquisite. Falling in love entails an idealisation and elevation of the object into something decidedly fascinating, beyond comparison, while satisfaction can only be brought about as an act of grace, not as something to be expected, but as a sudden gift. Faustian love revolves around the physiological dimension, so that the object no longer hypnotises the subject.

§ 11. Magian chemistry

The gospel of John begins and ends with an alchemical operation or transubstantiation. Jesus performs His first miracle at the wedding in Cana, although His time has not yet come – and for an alchemist, considerations of timeliness tend to be crucial: wait until the opportune moment (midnight, full moon, etc.). Apparently, in the case of Jesus, such a strict observance of precautionary measures is of less importance. The subject has already achieved complete purity and is therefore less dependent on external conditions and constellations. He changes water in wine, almost unnoticeably: an abrupt and sudden change, not a chemical process involving fermentation. And it is not just a change, but an amelioration. He turns water into something more valuable, namely (good) wine. He creates value. During the Last Supper, there is another miracle: bread becomes flesh, wine becomes blood; sudden, abrupt changes; occurring without any visible cause or effort. It is not a chemical reaction, but a matter of grace and faith: a ritual gesture. Jesus adds value, with one simple gesture: sublimation. It is Magian chemistry, alchemy. What is alchemy?

Alchemy is often considered as the pre-history of modern chemistry. Alchemists worked with bottles and substances, with vials and ovens. But what did alchemists do? First of all, they believed that everything in nature is involved in a process of purification. Nature is striving towards perfection as a final state. Stones have an inherent desire to change into precious stones, and metals are striving to become precious metals. Hybrid substances want to become pure, anything unstable aims to become stable, what is lifeless wants to come alive. In their laboratories, alchemists attempt to accelerate the process, which is taking place since time immemorial. This gives meaning to their laborious activities. An

alchemist is a *minister naturae*, a servant of nature. Unlike Faustian chemists, alchemists realise that they are ultimately dependent on grace, on the willingness of nature to reveal herself. Nature cannot be forced to do so. Patience is of pivotal importance, and timing is even more important. The experiment can only succeed when God or nature literally grant the alchemist the privilege, at the decisive moment. An alchemical experiment is therefore not replicable. It is a unique and singular event. The alchemist will never be able to accurately indicate which actions led to the desired outcome. Something else, something extraordinary is always involved. And there is another important difference. Unlike chemistry, alchemy is subject-dependent. Chance of success depends on the purity of the subject. Besides purifying their substances, alchemists must first and foremost purify themselves. Alchemical operations are part of a program of self-improvement. Alchemy is psychotherapy, a spiritual exercise, a practice of the Self. Everything is aimed at purification, *κάθαρσις*.

For alchemists and other subjects given to Magian beliefs, fundamental correspondences can be discerned between the various spheres of reality: between the mineral, the herbal, the animal, the stellar and the human sphere. Everything is interconnected, not through causality, but via parallelism and concordance. The various realms of reality mirror one another. In the alchemical laboratory, purity of substances and of humans reinforce each other, reflect each other. Alchemy is a *Gesamtwissenschaft*. It is not a form of proto-chemistry, it is also astrology, mineralogy, metaphysics and Bible study.

Everything in nature tends towards sublimation. Whatever is ill, wants to become healthy, whatever is lifeless wants to come alive. From the perspective of alchemy, resurrection is not at all an absurd idea. Purity of the subject in question will be an important factor, but we remain dependent on divine intervention. To prove themselves worthy, the alchemists quoted the gospels during their work, crucial formulas borrowed from sacred texts, notably the gospel of John. Outsiders, lay persons, less fluent in these “dead” languages, easily got the impression that these practitioners, these adepts, were producing meaningless phrases. *Hocus pocus Pilatus pas* comes from *Hoc est corpus* and *sub Pilato passus*, phrases not only uttered during alchemical experiments, but also by priests during Mass. The miracles of Jesus and alchemical experiments were both Magian practices.

Another example of a Magian research field is astrology. This is how the gospel describes this practice: “After Jesus was born in Bethlehem in Judea, during the time of King Herod, Magi from the east came to Jerusalem and asked, ‘Where is the one who has been born king of the Jews? We saw his star when it rose and have come to worship him.’” (Matthew 2:1-2). A remarkable stellar phenomenon *must* correspond with, and therefore announces (not: causes), a similar event in the sublunary human realm. Therefore, the appearance of an exceptional star signifies the advent of a terrestrial novelty, such as the birth of Christ. And therefore, this phenomenon is to be investigated *with utmost precision* (*ἀκριβῶς*, Matthew 2:8). The star points the way, as a kind of

Magian GPS. For these magi, all this is obvious, it does not need an explanation; their worldview builds on correspondences of this kind.

The final, ultimate miracle is resurrection. What is transient and perishable gives way to what is pure and immortal. Jesus receives a “glorified”, transfigured body. His followers will likewise experience resurrection on judgement day. They will receive a heavenly (transubstantiated) body. What was transient will become imperishable. Paul says, “We will all be changed, in an instant (ἐν ᾠρώμῳ)”, in a fraction of a second. In a twinkling of an eye, the dead will be raised unperishable. It is not a process which takes time, but a sudden transformation, only taking an atom, a quantum leap of time. What is brought to the fore here (the prospect that is opened up), is an alchemical transfiguration or transmutation. In Christianity, the alchemical climax is omnipresent. There are footsteps that can no longer be erased, like the footprint of Jesus in a small church along the Via Appia (Quo Vadis?). St. Peter’s cathedral in Rome is strictly speaking the tomb of an illiterate fisherman from Galilee – sublimation. The body is perishable, but refashioned into an imperishable, priceless building. The everyday and the corruptible, become inconceivably valuable.

Eventually, however, alchemy will be drawn into a Faustian cultural climate. What begins as Magian science, become increasingly Faustian in the end. Alchemists in their laboratories are becoming increasingly active, and begin to take the initiative. Instead of waiting for nature to unveil herself, they try to enforce it. Goethe’s *Faust* enacts this turning point: the moment when alchemy becomes a Faustian endeavour. Alchemy forms a bridge between Magian and Faustian thinking, between waiting for the right constellation and *scientia experimentalis*.

§ 12. Waiting

The Magian God is omnipotent and even more powerful than the Apollonian Demiurge who transformed obscure chaos into an ordered cosmos. Nature in the sense of *creatio* is a creation out of nothing. God is almighty. Augustine is a more “Magian” theologian than his opponent Pelagius, who emphasises freedom of will. The quintessential Magian activity is waiting – waiting for the advent of the Kingdom, the coming of the groom. However, it is a rather particular form of waiting, involving a particular attitude towards the time dimension. It is about readiness, about keeping yourself ready for the inevitable. The earth has been profoundly damaged, but will undergo transfiguration. Salvation will come at the appointed time. The Magian mind lives in the expectation of the end. Magian physics does not think in terms of causal relationships, because there is only one cause: God (*causa sui*).

A typical feature of Magian religion is the reliance on sacred scripture, which, however, has to be deciphered. Only the true believer knows what is meant. Special techniques are developed to reveal hidden meanings, in the

context of research practices such as numerology (number mysticism), or Magian cryptology. Just as alchemy was both a facilitating and an inhibiting factor for modern chemistry – facilitating because of the development of laboratory instruments, but inhibiting because Magian thinking blocks the development of a truly experimental approach –, numerology both facilitated and inhibited the development of modern (Faustian) algebra. Numerology was a special branch of biblical interpretation. At the same time, it encouraged the development of new number systems, such as the logarithmic scale. Michael Stifel (1487-1567), a supporter of Luther and fascinated by the properties of numbers, used a logarithmic scale and exponentials to determine the date of the apocalypse on the basis of the Book of Revelation, replacing letters with numbers: a procedure explained in *Ein Rechenbuchlein vom Endchrist: Apocalyps in Apocalypsim* (A Book of Arithmetic about the Antichrist: A Revelation in the Revelation), published in 1532 and predicting that the world would end one year later.

The first centuries A.D. were the golden age of Magian movements such as the Isis cult, the Mithras cult, early Christianity, Gnosis, Kabala (a Magian form of Judaism, much given to number mysticism) and finally Islam. The basic message was the assurance that the Kingdom was imminent. What is lacking in Magian thinking is the concept of an autonomous subject. Only God truly acts. The Faustian mindset involves a transition from a style of thinking based on correspondences (between celestial and earthly events, but also between words and numbers, etc.) to causal thinking, while the cause is, in fact, the researcher himself, the independent variable who, consciously and actively, manipulates the object (the dependent variable) in order to control it. In the beginning is the deed: that is the essence of the experimental method.

Chapter 4. *Scientia experimentalis*: Faustian thinking

§ 1. Onset

Faustian thinking is characterized by dynamic unrest and a desire for height. The cathedral is the Faustian edifice par excellence, according to Spengler: petrified Faustian mathematics. From the perspective of the styles-of-thinking concept, one wave connects cathedral building with the Apollo project (Wachhorst 2000). St. Peter's Dome, a spherical building, is a product of the Counter-Reformation. It expresses a desire to hold on to a spherical form, but is at the same time a reinforcement of the Faustian Will to power, a gigantic and dynamic edifice. The Faustian principle, once brought to life, seems unstoppable and will continue to push through – not only in architecture, but first and foremost in the modern natural sciences.

After the year 1000 A.D., but especially in the 13th and 14th century, a new style of thinking announces itself, referred to by Spengler as Faustian. Nature becomes the target of experimental research with the help of technical contrivances. Science becomes intimately connected with technology. The experimental method originated in a monastic setting (Grant 1974) and prepared the way for the modern natural sciences, as well as for modern technology. Natural science and technology are now inextricably linked, forming a Faustian alliance. The modern machine, as the embodiment of this energetic, dynamic way of thinking, was originally conceived in Gothic monastic cells. Members of mobile monastic orders, such as Albertus Magnus and Roger Bacon, were the first machine builders and Petrus Peregrinus was fascinated by the phantasm of a *perpetuum mobile*: the archetype of mechanics, the one thing which all great machine builders up to Captain Nemo are trying to achieve. This desire is also expressed in terms such as “automobile” and “automatic”. Scientists build optical and mechanical instruments to manipulate nature (technological interventions as the independent variable), and to measure nature in a precise and reliable way (the natural phenomenon as the dependent variable). From now on, to observe is to measure. Faustian physics begin with studying magnetism and gravity: natural phenomena with a tinge of the magical. Both magnetism and gravity were experienced as occult phenomena, as mysterious forms of influence. The gradual obfuscation of this Magian dimension in Faustian research practices (the disenchantment of magnetism and gravity) required hard work, and perhaps we should see it as an interminable process which was never really completed. Quantum physics for instance was fascinating precisely because it mobilised lingering discontent in Faustian determinism, because it addressed phenomena which seemed to take us beyond the causality principle, in the deterministic sense of the term.

The gothic style, Spengler argues, was a restless striving for height, a proliferation of stone, a desire to emancipate from nature: the childhood stage of the industrial era. A historical thread unfolds from Notre Dame to Eiffel Tower.

In mathematics, Faustian thinking gives rise to the concept of infinity. The Greek cosmos was a world on a human scale. The Faustian universe is inhuman and frightening in its immensity and emptiness: frighteningly immense. The basic mathematical concept which allows astronomers to disclose this type of space is no longer the sphere, but the coordinate system, developed by Descartes: with axes of infinite length, starting from an arbitrary centre and stretching out into infinite space.

Another Faustian phenomenon is the modern, industrial city. Before the dawning of the Faustian era, religious orders such as the Benedictines established their monasteries in rural areas, in wildernesses, but Dominicans and Franciscans settle in big cities. In Paris, Oxford and Cologne they build their universities. Jesuits are city dwellers, attracted by big urban centres to teach and work. Eventually, the big city becomes the ideal ambiance for typically Faustian human types: the worker, the bureaucrat, the engineer.

The core concept of Faustian thinking is the will to power. Whereas Apollonian astronomers admire the perfect geometry of the spheres, Faustian scientists want to control and manipulate the universe. Faustian science is driven by the violent ambition to conquer reality in an energetic and aggressive manner. Research animals and human subjects are subjected to experimental trials which always entail an element of violence: it is a damaging type of research, bent on subjection. It is by damaging the body that Faustian scientists strengthen their sway over bodily existence. The will to know is a manifestation of the will to power. Medicine does not want to serve but to control the body. Power (rather than peace or harmony) is the grounding concept of Faustian politics. To establish a centralistic nation state, to enforce recognition, that is the idea, and the state is a machinery bent on control and mobilisation of the population. Power is what Faustian thinking strives for.

For Apollonian thinking, to observe and understand meant to admire, but this attitude of respect for nature now gives way to an active, manipulative style of perception and observation, culminating in the development of modern (Faustian) research laboratories: setups designed by researchers to increase their power over the real. In their laboratories, nature is forced to reveal itself under closely monitored circumstances, as a series of causal relationships that can be captured in measurements, formulas and curves. The primordial Faustian instrument is the camera obscura, a component that we find embedded in all optical instruments more or less. All optical contrivances contain (are designed on the basis of) a camera obscura. The laboratory as such is a camera obscura, a dark room, designed to keep reality at bay, only allowing tiny samples of light, matter, life, etc. to enter, samples that can be easily manipulated and controlled. Rather than being overwhelmed by the glittering, noisy, messy real, scientists create an artificial ecosystem which they can master, and where they can conduct their research with the help of precision instruments. Science no longer trusts the naked eye. Apollonian contemplation displayed a strong dislike of technology. Tools (indeed: even books) were suspect. The practical interaction with reality

was delegated to the lower social strata. Faustian science, by contrast, would be unthinkable without labour and technology. Science and technology enter into a Faustian pact: they become intimately connected, and the one becomes inconceivable without the other. In order to really understand what Faustian thinking is about, however, we have to start at the beginning: Paradise lost.

§ 2. Commencement: Paradise lost

Faustian thinking has a striking interest in Paradise, regardless of religious denomination, for it applies both to Catholic and to Protestant Faustian thinkers. The Dominican Thomas Aquinas and the Puritan John Milton both tackled the Paradise theme, albeit at different stages of the history of Faustian thinking. The Paradise theme is, among other things, the story of the transition from Magian to Faustian thinking.

Paradise is an ecosystem in which organisms are optimally adapted to their environment. Genesis 2 is an oriental fairy tale, set in a miracle garden where labour and death are unknown and everything is set for pleasure. Naked and uninhibited, Adam and Eve fully enjoy each other, for they have nothing else to do. They have nothing on their minds, their lives lack challenges and projects. The forbidden fruit triggers desire, and as soon as they consume it, the spell is broken. All of a sudden, they find themselves under radically different circumstances: on earth as Faustian humans know it, a place of toil, hardship and labour, of suffering and violence, where existence is experienced as harsh. In his *Summa Theologica*, Thomas devotes ample space to the original situation of innocence in which Adam and Eve once dwelled, as noble savages. He presents a touching fantasy concerning physical life under paradisiacal circumstances, *in statu innocentiae*. Life was innocent, unspoiled. Life was a joy. There was nothing unbecoming to the human body, neither smell nor sweat, and even excrements had nothing repulsive about them. Love was enjoyed to the full and without putting honourableness at stake.

In this miracle garden, this Magian idyll, this product of oriental imagination, God introduces a new dimension: the ban, the prohibition. When Adam and Eve finally eat from the forbidden tree of knowledge, they are not motivated by hunger (for they have plenty to consume), but by sheer desire, triggered by the ban. The prohibition as such provokes lust, the threat of punishment is what sparks their desire, as Dutch poet Joost van den Vondel phrases it in *Adam in Exile*. Prohibition puts an end to the innocence of pure pleasure and introduces a contrast between duty and inclination. The magic garden suddenly disappears to make way for a human-unfriendly, Faustian landscape where humankind makes a living through hard menial work and chronic struggle.

But it is also the beginning of progress and humanisation, of history and freedom, according to Kant (1786/1971). Strictly speaking, Adam and Eve lived

the life of animals, were guided by their senses, by smell and taste. It was only when, instead of merely consuming, they were facing a dilemma and had to determine which path to follow, that their eyes were opened and the world assumed a completely different face. Humans became aware of rationality and morality. The exodus from the carefree but onerous garden, the sultry Paradise, the calm passivity in which the first people were forced to dream away their lives, was a liberation. The desire for a golden age, a state of simplicity and innocence where people lose themselves in idleness, is unreasonable, says Kant.

In *Paradise Lost*, John Milton's version of the story, we are confronted with a similar transition: the abrupt emergence of a Faustian universe whose sheer dimensions are utterly frightening. The migration from the Magian garden to the challenging Faustian landscape coincides with a sudden change in the experience of space as such, a dramatic increase of spatiality. Paradise is a garden, a park, an ambiance of human size. After the Fall, Satan suddenly discovers an immense, frightening distance between heaven and hell. Overnight, the world has become unimaginably big. He discovers a terrible, wild and dark abyss, a vast vacuity, a wasteful depth. It is telling that on the eve of the fall, Adam and Archangel Raphael engage in a discussion concerning the size of the world. Adam expresses his discontent in the geocentric universe and has taken an interest in heliocentrism. He is, as it were, ready for heliocentrism, and already begins to experience the universe as being extremely large.¹⁸ Raphael tries to discourage this: the heavens should remain the object of contemplation and admiration. He admits that the spherical worldview (the desperate attempt to hold onto the sphere as a basic structure) is laughable from a heavenly perspective, but he urges Adam to consider the gigantic expanse of the universe as a symbol of God's sublime nature. These unfathomable spatial dimensions should not inspire astronomical research, but rather humility (p. 294). This attempt to calm down his budding inquisitiveness has a temporary effect (Adam goes to sleep peacefully), but cannot conceal that his experience of space displays a fundamental change – it is becoming Faustian. And Faustian space is incomparably larger than the spherical one – large beyond comparison.

§ 3. Copernicus: how large is the universe?

Copernicus represents a crucial moment in the migration from Magian to Faustian space, Kant argues. The transition from a geocentric to a heliocentric worldview was a second Fall, an exodus out of an imaginary, familiar world on a human scale, the “magic circle” of phenomenological experience (Teilhard de Chardin

¹⁸ “When I behold this goodly frame, this World / of Heav'n and Earth consisting, and compute / their magnitudes, this Earth a spot, a grain / an Atom, with the Firmament compar'd / And all her numberd Starrs, that seem to roule / Spaces incomprehensible, for such / Their distance argues...” (Milton, 1962, p.292)

1959). We still have the sensory impression that the sun revolves around the earth, but thanks to modern science we are able to withdraw ourselves from the power of this sensation and bracket immediate experience. Thanks to reason we can put naive receptivity aside, transcend it. Appearances prove deceptive. Thanks to our freedom of thought, we can leave the Magian cave of geocentric thinking behind and acknowledge the sun as the true centre of the solar system. We are able to de-centre ourselves as subjects. This Copernican revolution, transcending empiricism, has major consequences. The spherical, Magian worldview is doomed, but its heliocentric rival can only hold true if the universe is unimaginably large. Only when the distance between the sun and the earth, compared to the distance between the sun and the (other) stars is negligibly small, can it be true that the earth revolves around the sun. Because otherwise the circular movement of the earth around the sun would have to be visible in the position of the fixed stars (the parallax problem).

This does not mean, Spengler emphasizes, that Western humanity suddenly realises, thanks to Copernicus, how immensely large the universe is. Quite the contrary, heliocentrism presupposes a Faustian intuition concerning the infinity of the universe. The Copernican revolution was not yet a real break with Ptolemy, according to Spengler, but rather a hesitant articulation of a new world-experience. Aristarchos of Samos had already defended the hypothesis that the earth revolves around the sun in ancient times, but because he continued to view the cosmos in Apollonian terms, as a kind of sphere, his hypothesis did not hold. Copernicus' thesis confirmed the Faustian sense of the immensity of the world, the idea of a boundless space. Only in a Faustian-sized universe can the heliocentric hypothesis survive as a convincing theorem.

In 1543, the Copernican revolution had been an inconspicuous event. His publication hardly caused a stir. Not only because of the esoteric and mathematical style of his writing, but also because he was not really the revolutionary he is so often considered to be. In important respects, his universe remained spherical. He makes important concessions to the Apollonian sense of space, as part of the Renaissance as an Apollonian revival, so that he continues to imagine the universe in terms of perfect circles, concentric spheres and epicycles. He still endorses the phantasm, as Lacan phrases it, that we should think the universe as a series of concentric spheres (1991/2001, p. 114).

With Apollonian astronomers, Copernicus shared the basic (quasi-self-evident) conviction that celestial bodies follow perfect orbits. In the early work of Johannes Kepler, nature as *κόσμος* was allowed to shine once again, as we have seen. The "Copernican revolution", according to Lacan, is a historical fiction. Copernicus still wanted to reduce the movements of celestial bodies, even those of a "wandering" planet (*ἀστήρ πλανήτης*) to circles. His heliocentric thesis was a desperate attempt to bring the movements of these straying stars in correspondence with the Apollonian phantasm of a geometrically perfect universe. The Copernican cosmos still sounded Pythagorean. The silent, icy, empty universe of Pascal is still very far away. The difference between

Copernicus' (in many respects still neo-Apollonian) spatial experience and the Faustian universe of Galilei and the later Kepler, was the telescope – the powerful instrument by means of which Faustian investigators gained access into the depths of the cosmos, forcing the Apollonian veil to be lifted. It was an instrument, moreover, whose results required Faustian mathematics: an algebra suitable for calculating immense distances, an algebra which could handle astronomical numbers.

The spheres were shattered and the universe became infinitely immense. The famous aphorism by Blaise Pascal concisely expresses this astonishing experience: “Le silence éternel de ces espaces infinis m’effraie”, – the eternal silence of infinite space frightens me (1660/1958, 206/201). In one phrase, Pascal expresses the *horror infini* by which contemporary astronomers no longer seem to be bothered at all, but which constituted a disconcerting experience when the Faustian universe began to emerge. Natural scientists realized that the universe is infinitely large, empty, silent and cold – that was their epistemological Fall. In a perfectly harmonious universe, the Creator’s hand had been omnipresent. In the Faustian Universe, the subject no longer feels at home. It is only thanks to a compensating religious experience, – the inner certainty that God exists (compensating for the undeniable Faustian truth) –, that Faustian souls are able to endure the infinity and loneliness of the universe. The thesis of infinite spatiality and the complementary thesis of the sublime greatness and omnipotence of God, are both equally valid for Faustian minds. The Faustian image of God is likewise characterised by distance and inaccessibility. The divine presence in natural reality that the Faustian mind-set gave up, returned in Faustian faith. Stringent and demanding (“heavy”) Faustian theology, with its rigid and far-reaching normative claims, expressed by a frightening voice of conscience, by a rigid, demanding Über-Ich, counterbalances the frightening insight that the earth is only a small, dark, inconspicuous mass, circling through an infinitely large universe, surrounded by an atmosphere that becomes rapidly thinner as height increases, as Pascal demonstrated in air pressure experiments he designed, – eventually giving way to an abiotic, icy, uninhabitable void. The Faustian world is composed of mass and Mass, of force and faith. The inevitable result is an extremely strict, Faustian form of religiosity, a theology of rigorous moral principles and rigid dogmas.

As spiritual explorers, Jesuits were prominent officials in the process of Faustian globalisation, but at the same time they were paradoxically driven by the idea that the sphere could be restored, tirelessly striving to rearrange the scattered geographical points around a re-established spiritual centre. The process was nevertheless unstoppable. The static sphere became a dynamic network, and the order of the Jesuits became a paradigmatic embodiment of this. Jesuits gave an important impulse to processes of globalization (Aveling 1981). They not only opposed the Reformation (as a symptom of nationalised Christianity), but also the nationalisation of education. Jesuits preferably taught in Latin. The *Societas Jesu* relied on rigorous self-discipline and could do without monasteries, without

the protective immunisation provided by abbey walls. Through efficient use of human resources and training programs, this militant society managed to acquire enormous power and influence. The society was active worldwide, in a wide range of professions. Education in particular was a domain of conflict between global Jesuits and the nation states, who wanted to put educational institutions firmly in the hands of the state, in order to produce a nationalist bourgeois elite.

The Copernican revolution did not immediately put an end to spherical thinking. Rather, it unleashed a revolution that continued to require a great deal of intellectual work over the centuries. These efforts must nevertheless be understood as the result of a moment of commencement, “eine auf einmal zu Stande gebrachte Revolution” (Kant 1781/1971, p. 25). The new style has to prove itself, prove its credibility. Kant himself is an important protagonist of the Faustian style, who mercilessly tries to discredit nostalgia for Magian styles of thinking, which he dismisses as intellectual infatuation (“Schwärmerei”). In *Träume eines Geistersehers* (1766/1968), “Schwärmer” Swedenborg is his main target, whose rational mysticism constitutes a revival of Magian thinking: nostalgia for a Magian “Paradise” (p. 923, A3). Swedenborg distinguishes an outer person (who participates in everyday social intercourse) and an inner person (who participates in another, spiritual world). This inner person, repressed in most modern individuals, enables Swedenborg to clarify the hidden meaning of Bible texts and to develop his parapsychological and telepathic capacities. Kant tries to show that such a discourse does not meet the rigid criteria imposed by the Faustian program of intellectual self-discipline. Enlightenment has nothing to do with tolerance, for it only tolerates that which meets the criteria of reason as determined by Enlightenment. The tone of Kant’s writings are reminiscent of the way in which the Dominicans once fought the Magian Cathars a few centuries earlier, and Thomas Aquinas fought a similar battle in his *Summa contra Gentiles*.

In *Von einem neuerdings erhobenen vornehmen Ton* (1796/1968) Kant chooses a more difficult target, the arch-*Schwärmer* Plato. What disappoints him in Plato is the atmosphere of admiration and intoxication, as the intellectual mood this type of thinking sooner or later gives rise to, notably in its Magian (neo-Platonic) version. Kant is annoyed by authors who associate philosophy with initiation and inspiration, with knowledge of spiritual “secrets” and profound, divine intuitions. Philosophy is hard, discursive labour, Kant argues, and he is annoyed by the lofty, exalted tone of voice, already present in Apollonian thinking, but pushed to its extreme in Magian discourse. Plato is the arch-*Schwärmer*, as said, the father of infatuation, because he placed the origin of basic concepts in a divine intellect, which implies that a philosopher may trust his intuitions. As a truly Faustian thinker, Kant sees philosophy as intellectual labour based on strict criteria that encourage self-discipline and austere thinking.

§ 4. In the beginning was the deed

The *Phenomenology of the Spirit* by Georg Wilhelm Friedrich Hegel (1770 – 1831) contains a famous passage, of decisive importance for understanding the Faustian style of thinking, namely his dialectical analysis of the interaction between Master and Servant (*Herrschaft und Knechtschaft*). Hegel's analysis clarifies the relationship between lofty, Apollonian, aristocratic knowledge (contemplation) and the more active style of thinking, the hands-on knowledge practiced by Faustian workers – that is, by natural scientists working in laboratories (= workshops). The Master, according to Hegel, does not interact directly with unruly reality. He leaves the active handling and manipulation of matter to the Servant. The Master-gentleman devotes himself to enjoyment of things. This combination of contemplation and pleasure determines the epistemological profile of his views, of which Apollonian speculation is the textbook example. It is abstract thinking, not aimed at generating concrete applications for social practices such as architecture, arable farming or artisanal production. The Master enjoys beautiful things, the starry skies bring him into ecstasy, theory is more important than practice. He spends his leisure time in considering heavenly orbits and the metaphysics of the divine. The actual, productive handling of matter is avoided, because the material and the concrete are considered messy and impure.

The mindset of the servant, on the other hand, is pragmatic from the outset. At first, the servant does not think scientifically. He works on behalf of the (contemplating) gentleman, who is developing deep insights concerning the basic structure of being. Initially, the servant does not act on his own initiative. His practical interaction with reality is primarily based on experiential knowledge. Genuine scientific knowledge, insight into the how and why, is lacking. As far as knowledge is involved, it concerns practical insights that can be transferred via imitation and repetition. Knowledge is accumulated through incremental innovation – learning by doing.

The quintessence of Hegel's analysis, however, is that sooner or later, a shift will inevitably occur. The master alienates himself from material things. Although he enjoys resting his eye on things, his knowledge remains superficial. Concrete interaction is missing. He cannot put his views to the test. He consumes things, they offer no resistance, as resistance and recalcitrance have been crushed by the work of the servant. The master is confronted with the products of the latter's labour and lacks the knowledge gained in a practical context of conducting hands-on labour. The servant is really involved in things. He works with matter and thinks with his hands. "Manipulation" comes from *manus* (hand). The servant manipulates until the results of his actions manifest themselves (De Rougement 1936). Perfection and progress are achieved through anonymous technical improvements.

For a long time, progress remains undocumented, manifesting itself in concrete optimisations of performance. Instead of consuming things, the servant

is committed to maintain and improve things. And these things are upgraded by labour. His knowledge of things is on the one hand more violent (effectively gaining control over them, grasping and affecting them), on the other hand more intimate (he becomes familiar with and sensitive to them, his practices become attuned to them). He observes the consequences of his work as they manifest themselves in concrete things. Instead of consuming them, he sustains them by modifying, domesticating and taking care of them. In the context of this dialectical process, the labouring consciousness develops into a form of thinking that is considerably more robust, epistemologically speaking, and more effective than the detached, contemplative mindset of the master. By actively modifying things, causal relationships become visible in objectivity itself. Practical thinking begins as servitude, but emancipates and develops into experimental (Faustian) practice, driven by the Will to Power. Masters and their knowledge become increasingly irrelevant: useless ballast, like the Palace at Versailles. Absolutism gives way to liberty, equality and fraternity.

In Hegel's *Phenomenology*, Faust himself is described as the scientific individual who distances himself from established knowledge (1807/1973, p. 270 ff.). According to Hegel, Goethe's drama deals with the conflict between an ambitious but disappointed researcher on the one hand and authoritative, generally accepted forms of knowledge on the other, between epistemological "Befriedigungslosigkeit" and "die Lebendigkeit des Weltlebens". According to Faust, existing science dramatically fails to capture the Real and has become utterly impotent. Scholarly knowledge became a prison cell. Faust wants to escape his library, he wants "hinaus". Science wants to become Faustian, desires to transform itself into an active, worldly and experimental knowledge practice. If the goal is to gain real knowledge, we must be prepared to accept significant risks – that is the Faustian epistemological morale of the story.

The famous Faustian phrase "Zwei Seelen wohnen, ach! in meiner Brust" (1113) also applies to Goethe himself. On the one hand, he is still fascinated by a neo-Apollonian (neo-classical) culture, a world of beauty, clarity and harmony. In addition, as an aesthetic shadow, however, there is a competitive affinity, albeit more hidden: Goethe's sensitivity to Gothic culture, as the first stage of Faustian thinking. When young Goethe (with his neo-classical sense of taste) was first introduced in Strasbourg to the "monstrous" Gothic style exemplified by the famous cathedral – which seems to mimic the power and darkness of a primordial forest – the intimidating construction constitutes a test, a challenge. He climbs the tower to triumph in the struggle against his fear of heights (Safranski 2013/2015, p. 79). The Gothic cathedral with its extravagant decorations at first repels, but gradually captivates Goethe's imagination (Williams 1998/2001, p. 10). He manages to overcome his cultural prejudices and he quickly becomes obsessed with the Gothic (Faustian) style. His lifelong fascination with alchemy is also part of this Gothic complex. His masterpiece *Faust* captures the moment when Magian alchemy becomes Faustian science, a worldly, transformative knowledge practice.

The alchemist Doctor Faustus was a contemporary of Paracelsus. Just like in Milton's *Paradise Lost*, God allows the devil the opportunity to put Faust to the test, to subject him to a moral experiment. The devil (Mephistopheles) manages to persuade Faust to leave his mysterious cave. It is midnight. Faust is dwelling in his Gothic, late-medieval cell. He experiences discontent and struggles with a mid-life crisis. Faust, a renowned scholar, a workaholic, is used to labouring in seclusion well into the night. Thus, he managed to master all the disciplines practiced at that time. He made a name for himself, made it to master and doctor, but when he is honest with himself, he must admit that he actually knows nothing, that his knowledge is bookish, meaningless knowledge, devoid of practical relevance. This type of knowledge is literally *negated* overnight. It is dead and sterile, fails to provide insight into the real. When his collaborator Wagner persuades him to take a walk (it is springtime) it becomes clear how deep the crisis is, how depressed Faust is. The alliance with the devil vigorously awakens him.

Via his Faustian decision, his willingness to take risks, Faust enacts (and even serves as a model for) modern science as a Faustian endeavour. Spengler emphatically identifies the scientific style that Faust represents as Faustian. It is an extremely ambitious and decidedly violent form of research, first and foremost dangerous for the researchers involved. Faust is the literary counterpart of the legendary gothic monk Bertold Schwarz who discovered the diabolical powers of gunpowder in his late-medieval monastery cell, thereby killing himself, falling victim to an explosion. Faust is the prototype of the Faustian scientist who is willing to use violence in order to force a breakthrough.

Faust is a historical drama, but it is not so difficult to update Goethe's masterpiece and to connect it with scientific developments in his own era. *Faust* is a critical confrontation with the Faustian natural sciences, emerging in the early 19th century. The Faustian pact with the devil becomes a metaphor for the moral and physical damage that researchers involved expose themselves to. They will have to pay for their will to know with their health, or even their lives. Galileo allegedly damaged his eyes with his research into sunspots, – see for instance the play which Bertolt Brecht (1978) devoted to his case. Historians dispute the truth of the story, but this does not alter (but rather confirms) its concordance with the archetype of the Faustian scientist.

A well-documented example is the case of Isaac Newton. Although the "visible" Newton became best known for his work as a mathematician and physicist, the "hidden" Newton was active as an alchemist for many years. For those who are willing to read his life-story clinically rather than hagiographically, it is not difficult to see that we are dealing with a man who began to behave more and more strangely as the years went by. Moments of deep crisis are apparent in his life-story. Very unproductive and sterile years alternate with periods of extreme productivity and creativity, such as the wonder year 1666. There are times when a strange intellectual paralysis seems to take hold of him. That has its reasons. Biographer Westfall (1980) explicitly links Newton's behavioural

problems with the way he conducted his research and the risks to which he exposed himself as a researcher, especially in the context of his alchemical studies. He used his sense organs, his tongue and nose, his sense of taste and smell, as instruments for determining substances, even when heavy metals or other toxic compounds were concerned. He inhaled toxic fumes. For years he exposed himself to physical dangers. Posthumous research into Newton's hair revealed that it contained significant concentrations of heavy metals, many times higher than normal. Newton had been poisoning himself, with dire consequences for his health and personality. Driven by the Faustian will to know, he exposed his body to chronic damage.

Newton was not alone in that respect, far from it. He shared his methods with other chemists, such as Karl Scheele (1742-1786), who worked in the same manner and likewise identified chemical compounds (such as hydrogen sulfide) by tasting and inhaling them, and he also paid the price for it, poisoning himself. Scheele, Paul Strathern (2000) writes, suffered from extremely painful forms of rheumatism, along with many other ailments that were almost certainly caused by his laboratory practices. He attached much importance to identifying the substances he isolated or produced in his laboratory with his unprotected senses, without the use of special techniques. He interacted with his object directly. In his laboratory notebooks, he described how hydrogen cyanide tasted: an extremely toxic substance. An important discovery of Scheele was the effect of light on silver compounds. With that, he actually prepared the way for modern photography, a typical Faustian technology, which allows us to get hold of things, freezing reality into objectivity, capturing it. However, a high price was paid for this discovery: he undermined his health (Strathern, 2000, p. 198). Scientists working under unhealthy laboratory conditions often developed a professional psychopathology referred to as *hysteria chemicorum* by Justus von Liebig (Zwart 2005b). Experimental research was far more dangerous than reading books, and laboratory techniques were not yet very sophisticated.

Bible texts, especially the gospel of John, played a major role in alchemical research practices as we have seen. Faust attempts to retranslate the opening lines of this Gospel. At first, he waits for inspiration (*illuminatio*) by the holy spirit, hoping for a moment of grace, in accordance with the Magian strategy: we must wait for the truth to reach out towards us. But then he decides to use a more active strategy, he violates the text, thus arriving at the most famous sentence from Goethe's drama: "*Im Anfang war die Tat*" (1237) – a bold and Faustian translation indeed. He then closes the book again – he no longer needs it. The new science is an active, experimental science. Faust stops reading and translating and makes a new start, by experimenting: thinking with his hands. The abrupt, daring translation made this praxis possible, legitimises it.

Faust is not only about Faustian science, but also about Faustian love. Faustian desire no longer wants to wait, it is violent and culminates in the violation of the other, or even in the death of the beloved object. Faustian love is still in its virulent stage here, and did not have the chance to stabilise as yet. It is

an outbreak, after a long period of ascetic self-renunciation. The will to power manifests itself as the will to own and consume the object, even if the beloved one is thereby seriously harmed. Restless desire and damage are indeed part of the Faustian complex, but other, compensating elements are still missing in the cascade of pleasure experiences that Goethe's drama stages. Without a strong sense of responsibility (and the violent conflicts between duty and desire that result from this), the image of Faustian love is not yet complete.

In Turgenev's novel *Fathers and Sons*, Yevgeny Bazarov is a Faustian scientist who submits large numbers of frogs to vivisection, considering them as model organisms for biomedical research. And when he encounters the woman of his life for the first time, he exclaims: "What a magnificent body ... Shouldn't I like to see it on the dissecting-table!" (1861/1965, p. 155). This is Faustian eroticism *pur sang*.

§ 5. Newton's shed

Isaac Newton (1642 – 1727) was an arch-Faustian researcher, although even his research practice had Magian undercurrents as we have seen. To study the phenomenon of light, he comes up with a paradoxical design: he withdraws into a dark, light-proof room, a shed exempted from daylight, and drills a small hole in the wall. He reduces the phenomenon of light to a minimum, something which he can fully control and manipulate as much as possible, for example by breaking it with the aid of a prism so that it diffracts into a spectrum. Instead of leaving the phenomenon intact ("untouched"), Newton actively investigates it by isolating and manipulating it. The whole purpose of an optical experiment is to control light – hold a moonbeam in your hand, as the musical nicely phrases it. Precisely for that reason, he is criticized by Goethe: he damages the phenomena. Goethe himself starts from everyday observations, showing more restraint and more respect for the phenomenon as it reveals itself to us on its own accord.

Kant, however, unequivocally sides Newton. Human reason only understands what accords with its own principles, Kant claims. Science forces nature to comply with these principles. Newton is not at all a passive observer. He forces nature to answer the questions he is asking and to manifest itself under the conditions he designs, determines and controls. He forces nature to speak his (mathematical) language, forces her into his format, considers the natural phenomena in function of circumstances he himself can adjust. On the basis of this experimental set-up, he is able to control and – therefore – understand the phenomenon of light. The mathematics he is using in his experiments is no longer the mathematics of ideal geometrical figures, but a dynamical mathematics, with the concept of the function as its core. The horizontal axis indicates what, in Faustian terms, could be called the deed: the independent variable, the investigator's own actions and interventions. The effects of these actions become visible along the vertical axis. This mathematical understanding of measurement

and experimental design gives the researcher power over the phenomena. What Newton makes visible is that we can capture enigmatic, apparently Magian phenomena, from tidal ebb and flow up to the movements of celestial bodies, with the help of a handful of letters from the alphabet, with the help of one simple formula. The alchemist awaits the moment of grace, but the Faustian investigator enforces this moment of revelation and discovery – his experiment is replicable. From now on, method (procedure) determines the conditions.

And yet, a Magian residue resides in Newton's research practices. The cornerstone of his theory of gravity is Magian. Like love, gravity is a mysterious, inexplicable form of influence that works from a distance (*actio in distans*), a strange form of attraction, comparable perhaps to Goethe's elective affinities (*Wahlverwandtschaften*). Ebb and flood are the result of water being attracted by the moon, as if we are still dwelling in a Magian world. At the same time, this mysterious influence is now compressed into a formula, so that the phenomenon of gravity can be calculated and predicted. Isaac Newton is a divided subject, consisting of two epistemological personalities, just like Faust: "Zwei Seelen wohnen, ach! in Meiner Brust". On the one hand, he is the Faustian discoverer of the differential calculus, a powerful tool for analysing the results of the experiments he is conducting. On the other hand, he devoted many years of his life to Magian research practices such as alchemy and Bible cryptology: the latent epistemological inverse side or back page of his research.

Two works of art by Joseph Wright of Derby (1734-1797) demonstrate the contrast between the Magian and the Faustian style, namely *An Experiment on a Bird in the Air Pump* from 1768 and *The Alchemist in Search of the Philosophers Stone* from 1771. The painting from 1771 shows an alchemist in his Gothic study – similar to Faust's cell. The disorder in his laboratory symbolizes the lack of a straightforward methodology. In despair, he uses a multitude of procedures and instruments, making his experiment utterly non-replicable. We see the (very old) alchemist precisely at the moment when he (finally) discovers the element phosphorus – without really knowing what he is doing. He experiences this event as a moment of grace. Nature finally comes to his rescue. The researcher has devoted his entire life to this apparently hopeless project, whose positive outcome seems to seriously damage him, however, for he seems to be struck with blindness. It will be a difficult task for the young students observing him to replicate this feat.

The (young) scientist in the painting from 1768 adopts a completely different style of working. He has his affairs in order and knows exactly what he is doing. He uses a pump to create a vacuum in a laboratory flask. He creates an *unnatural* situation. He uses a test animal, a bird. When the bird almost suffocates, he can open a flap, so that the animal will probably survive the experiment. However, this moment of "compassion" does not diminish the violent nature of the scheme. Everything is focused on manipulation and control, on calculated procedures. It is clear that this is not a singular or unexpected event, but that a validated protocol is closely followed.

The experiment allows truth to appear. Wright's artwork perpetuates a truth event. The experiment is a replication of an original discovery preceding it. It demonstrated the relationship between truth, experimentation and art. The artwork reveals the moment of truth captured by the experiment. What we see is not a particular event, but Faustian thinking as such. Martin Heidegger (1889 – 1976) emphasizes the ambiguity of the concept of truth. On the one hand, truth means correspondence (*adequatio*) between theory and reality. According to Heidegger (1927/1986), however, this is a restricted and even obfuscating interpretation of truth, and his entire oeuvre is one persistent attempt to articulate a different understanding. In a more original sense, according to Heidegger, truth means bringing forth. In order for thoughts and propositions to adequately reflect reality, reality must first of all be opened up. A style of thinking is a fundamental way of experiencing reality, of bringing reality to the fore.

A style of thinking conveys a fundamental answer to the question concerning the mode of being as a whole. For the Dionysian style of thinking, being is φύσις: immense, all-encompassing, impenetrable. For Apollonian thinking, being is κόσμος, a perfect order. For Faustian thinking, being equals objectivity. If we see being as an aggregate of things with qualities, we use a particular grammar, speak in a particular key, pertaining to a particular style of thinking, allowing us to approach and experience reality in a certain way. At present, the emergence of a completely new way of perceiving, speaking and thinking seems imminent – a new way of thinking that will make the world appear in a completely different light – perhaps a way of thinking that will be more respectful of things, allowing us to encounter them in a more poetic manner. Faustian thinking sees all animals as research animals. The laboratory animal is a form of animalhood that is very closely linked with the Faustian style of thought, the Will to Power.

A style of thinking implies a certain sensitivity to those aspects of the world that reveal themselves in such a way that it seems to align with and confirm this style of thinking. We should not see ourselves as mere recording devices, for we are imbued with historicity. The way we think and the way reality appears to us are two dimensions of one and the same interactive process. Heidegger refers to the moment when reality is brought to light for the first time as ἀλήθεια (1927/1986). It means “truth”, but in the sense of non-concealment. Before scientific research allows us to develop theories that correspond to the facts (objectivity), this objectivity must first be revealed and experienced in a certain manner: made accessible for research, so that ἀλήθεια precedes *adequatio*. Correctness can only be achieved if reality is allowed to reveal itself in a certain way. There can only be truth in the sense of adequacy when a certain style of thinking has already established itself. In the light of this style of thinking, certain ideas about reality can be adequately demonstrated.

The emergence of a style of thinking, the awareness of its convincing, converting power is the truth event thematised by Heidegger as ἀλήθεια. A dimension of reality that was previously inaccessible or hidden, becomes

accessible. It is the moment when we first become aware of the world in this way. From now on, reality forces itself upon us in this manner. Without a style of thinking, there would be no world, and it is the world itself that manifests itself in this way, at a certain point in history. Our way of experiencing the world is profoundly historical. Things present themselves to us in such a way that they invite and encourage certain practices of inquiry, and it is our style of thinking which makes the world light up in front of us in a particular manner. Magian art does not merely use different techniques than Faustian art. Magian artists experienced the world in a profoundly different manner.

This also explains why Heidegger pays so much attention to the moment of commencement of a style of thinking: the beginning, the decisive moment of ἀλήθεια. Everything that follows from this is mere adequacy: hard intellectual and manual work, no doubt, to ensure that reality is disclosed on the basis of this grounding idea. Endless series of experiments will generate adequate statements about reality, but ultimately, they aim to demonstrate the validity of a particular way of thinking. The idea of an experiment as such is already grounded in the conviction that we can produce reliable knowledge about nature by systematically modifying and objectifying nature. The moment of ἀλήθεια has the character of an epistemic leap, a moment of discontinuity. It is seeing and thinking at the same time. All the rest merely amounts to working through. However, as the distance between the starting point and the subsequent events increases, we become the victims of forgetfulness: we forget how our way of thinking and perceiving is *one particular* way of thinking and perceiving, obfuscating other possibilities. The original moment (the epistemic leap or fall) gradually falls into oblivion, is no longer open to reflection and contestation, until a new basic conviction emerges that challenges it, perhaps resulting in a transvaluation of all values.

From where do these basic convictions, these decisive thoughts originate? According to Heidegger, being itself invites us at a given moment to discover and approach reality in a certain way. For example, he states that it is not true that Greek (Apollonian) thinking destroyed the mythical (Dionysian) style of thinking. The latter vanished from the scene because mythical nature herself withdrew herself from us.¹⁹ The disconcerting experience that Pan was dead, enabled a rational way of thinking to take advantage of the situation. On the other hand, we are the ones who make this event possible by grasping the opportunity provided. It is something which comes over us, overcomes us, but at the same time it happens via us.

At a certain point, however, from a styles-of-thinking perspective at least, Heidegger's understanding of the relationship between science and art becomes problematic. According to the styles-of-thinking approach, a particular style of thinking will manifest itself in multiple cultural domains, simultaneously more or

¹⁹ "Es ist ein Vorurteil zu meinen, der μῦθος sei durch den λόγος zerstört worden. Das Religiöse wird niemals durch die Logik zerstört, sondern immer nur dadurch, dass der Gott sich entzieht" (Heidegger 1954, p. 7).

less. These manifestations will mutually enhance and reinforce each other. Moments of ἀλήθεια can loom up in different domains, *also* in the realm of science. When Anthonie van Leeuwenhoek spots microbes and spermatozoa for the first time through his microscope, an unknown world lights up, a window looms up in front of him. According to Heidegger (1957) however, art plays a privileged role here. Only artworks allow moment of ἀλήθεια to occur. The artwork allows things to appear in a certain manner, reveals a world. Through the artwork, a world is opened up, things are brought to the fore. In contrast to art, science is a derivative phenomenon: the systematic development of a truth already disclosed by art. Rembrandt's *Anatomical lesson of Dr. Nicolaes Tulp* (1632), for instance, should not be seen as a representation of anatomical procedures, but as an artwork that makes this practice possible. Art reveals a world for science to explore, while the latter is unable to accomplish this truth event by itself. True art is a grounding of truth, a moment of commencement, ahead of science. Science itself does not think, at least not in the genuine sense of the term (Heidegger 1954, p. 4).

This view, which ascribes to art a more profound and original relationship to truth, is at odds with a styles-of-thinking approach. According to the latter, moments of ἀλήθεια may occur in various practices, in various cultural domains, and research practices are emphatically included. When Charles Darwin reveals, in *The Origin of Species*, that the natural world is a struggle, a struggle for survival, while others were still describing nature as an idyllic environment, he allowed the world to appear in a new light. He saw nature with very different eyes, namely as struggle, and this new vision constituted the basis for an impressive research program, which is still unfolding. The same experience emerged in other domains. In art, romanticism gave way to realism (e.g. the naturalistic novel). In politics, conflict and struggle were suddenly seen as constituting the basic momentum of reality: struggle between individuals (liberalism), between classes (socialism), between ethnic groups (racism). Nietzsche likewise discovered that all reality is Will to Power. We cannot say that art took the lead in this. The new experience of reality was articulated by various “seismographs”, in multiple contexts, more or less simultaneously.

Thus, when Anthonie van Leeuwenhoek, with a self-made microscope, spotted microorganisms in ditch water for the very first time, that was a moment of ἀλήθεια. He did not merely represent what he saw (*adequatio*). He first had to bring this new world out in the open, he had to create a window into a microbial world. He still had to learn to see and portray this new-found objectivity, albeit relying on technical instruments instead of on the naked eye. Due to this initiative, nature was allowed to manifest itself in a completely new way, as a microbial planet. The beautiful drawings he produced of microorganisms are scientific artworks, but we cannot say that the eyes or gaze of the artist preceded the eyes of the scientist. Rather, we discern something like co-originality and proximity. The artist and the scientist working side by side, as imaginative and inquisitive individuals. In the novel *Girl with a Pearl Earring*, Tracy Chevalier (1999)

describes the friendship between Anthonie van Leeuwenhoek and Johannes Vermeer. They lived in the same neighbourhood (a case of *Nachbarschaft* between art and science) and shared their interest in optical experiments. Chevalier describes how Vermeer uses a camera obscura to analyse colour and light. Vermeer produced two paintings in which scientific practices are portrayed: *The Astronomer* (1668) and *The Geographer* (1669). In both artworks, the focus is on making the world accessible. The scientists involved, surrounded by instruments, are extremely concentrated: they embody intentionality. The light suggests that they are portrayed at the very moment when they experience a kind of revelation, seeing things with new eyes. These artworks portray ἀλήθεια. It was probably Van Leeuwenhoek who posed for both portraits (Seymour 1964; Schwartz 1966; Fink 1971; Hockney 2001), – proximity (*Nachbarschaft*) between science and art.

While Van Leeuwenhoek and Vermeer were working on their optical experiments, on the other side of the pond Isaac Newton was experiencing his wonder year, his *annus mirabilis*, 1666, almost exactly *at the same time*. He too designed experiments involving light, in the same manner as Vermeer more or less, in accordance with the same basic conviction. Light (optics) was what these three explorers had in common: a painter, a naturalist and a physicist. Their basic *rapport* with light was quite comparable. They were intrigued by the same phenomena, their intentionality converged. They used lenses and cameras to modify and diffract light in various ways, analysing it, using it as a point of entrance, a window into the real. Interestingly, Vermeer's *Geographer* displays a striking similarity with the famous etching of Faust by Rembrandt from 1692 (Wheelock et al., 1995, p. 174). Both works of art perpetuate moments when the Faustian style of thinking seizes the researcher involved.

Chevalier describes the moment when the maid Griet, the main character of the novel, stands face to face with the camera obscura as an artefact. Vermeer invites her to look into the camera, to expose herself to this new way of seeing, facilitated by optical techniques. "The camera obscura helps me to see in a different way," he explains. She accepts the invitation and he asks her what she sees. Initially, she seems intimidated by this unknown and even perverse, voyeuristic device. She suspects that it is part of a seduction strategy. The device brings them, literally and figuratively, closer together. It is an initiation. The device is indeed perverse and perverting, but in a literal, original sense. The image that lights up in the camera, is an inverted world. Vermeer explains that what she sees is an "image" of reality. The camera obscura makes it possible to manipulate and analyse this image. "What is an image, sir? It is not a word I know" (p. 62). The new way of seeing is so new, so esoteric, that words like "lens", "projection" and "image" seem a secret language. The new view, with a strange new jargon accompanying it, has not yet established itself, has not yet entered mainstream discourse. Griet is not simply shown some images: she is initiated into a new way of perceiving.

The microbiologist Van Leeuwenhoek and the artist Vermeer, both living in Delft, were pioneers, their initiatives are equal-original. Vermeer is the Van Leeuwenhoek of painting, Van Leeuwenhoek the Vermeer of biology. Chevalier's novel can be read as an extremely lucid and meticulous description of the emergence of a new observational style in two different domains, natural history and visual arts, in the 17th century. Vermeer's studio is an alethotoop, a truth site. Scientists and artists both use optical instruments, inviting or forcing nature to manifest itself in a new way. A new reality appears on these pages and paintings. They use the same techniques to make this event possible, but we cannot say that Vermeer had a head start. There is like-mindedness, proximity (*Nachbarschaft*), as congruent practices were flourishing in the Netherlands at that time.

In his later essays about technology, Heidegger (1962) explicitly concedes that technology is a power that discloses the Real. Moreover, he emphasizes that technology should not be seen as mere application, as a derivative of natural science, but that natural science is essentially and inherently technical. For Heidegger, technology has primacy, which explains the Faustian profile of the modern science, relying on technicity to overwhelm and completely control the object. First manipulate, then observe. Without technology, scientific experiments would be unthinkable. Van Leeuwenhoek's research starts with technology: the construction of the microscope. At the same time, however, Heidegger argues that technology is an exploitative and impoverished style of disclosure. Nature is reduced to raw materials: a resource, a standing reserve. Our era is essentially technical, in other words: Faustian, so that we are at the mercy of technical, Faustian thinking. We cannot realize a turn towards other ways of bringing forth ourselves, we cannot *decide* to think differently: we do not have the authority as it were. We have to wait for a fundamental turn ("Kehre") when a new possibility, a less violent (post-Faustian) relationship with the world presents itself. We have to wait for a new style of thinking and acting, poetical rather than technical. Quite in line with the styles-of-thinking concept, Heidegger states that we cannot simply decide to create a new style.

Faustian natural sciences are inherently technical, but does that mean that they exclusively and necessarily play an obfuscating role? Or can they play a revelatory role as well? It should be noted, in this context, that Heidegger's position towards Spengler is an ambiguous one. He sees *Decline of the West* as an elaboration of Nietzsche's (Faustian) interpretation of being as will to power, but criticises Spengler for seeing philosophy as one particular expression of the Faustian spirit among others (architecture, art, science, etc.). And this, Heidegger considers an enslavement ("*Verknechtung*") of philosophy, symptomatic of contemporary (Faustian) civilisation (1930, p. 200).

The styles-of-thinking approach does not treat art as a privileged domain compared to, say, politics, architecture or science. Moments of revelation occur in other practices as well. And there is technicity in art as well. The moment of ἀλήθεια which we discern in Vermeer's artistic experiments, is intimately related

to the world-disclosing activities of Van Leeuwenhoek and Newton. After Newton's wonder-year, we see light with different eyes. The element or medium that reveals everything else, that makes everything visible, assumes a different role. Van Leeuwenhoek adds a whole new dimension to our world, namely the microbial dimension, the realm of microbial existence. Similarly, a whole world of light and space manifests itself in Vermeer's artworks. These three technology-dependent forms of world disclosure mutually elucidate and reinforce each other. The same style, the same basic conviction speaks to us via these activities, in art, natural history and optics. The optical instrument opens up and illuminates a new world. Vermeer's artistic practices are technology-driven. The style-of-thinking concept removes Heidegger's technophobic bias. As soon as we draw attention to the context of discovery, we discover genuine moments of commencement in multiple domains, not only in philosophy, and not only in art. While a younger Vermeer still echoes a Magian experience of being in his artwork *Christ in the house of Martha and Maria* (1655), with its diffuse colours and shapes, he immortalises the Faustian experience of being in his highly accurate, detailed and discrete artwork *The Geographer*. In these later works, he not only pays close attention to technological contrivances and scientific instruments, such as the compass and the globe, but he also *uses* scientific technologies to capture (quite eloquently and convincingly) the style of thinking that is inherent in these scientific practices, depicted in this work of art.

§ 6. A world of supra-human scale: the temporal dimension

The essence of the Copernican revolution is not the claim that Planet Earth revolves around the sun, but the realisation that the size of the universe is unimaginably and incomprehensibly large. Epistemic resistance (discontent in heliocentrism) was primarily a response to the metaphysical implications of Copernicus' thesis. The same applies to another narcissistic offense the Faustian worldview had in stall for us, as Sigmund Freud (1917/1942) phrases it, the "second" Copernican revolution, this time emerging in the life sciences: Darwin's theory of evolution. Humans are not, as the Paradise story suggests, the crowning glory of creation, but a temporary outcome of ongoing evolutionary processes: an animal among animals. Here again, however, the disconcerting truth of Darwin's theory does not concern the thesis that, from an evolutionary viewpoint, humans are naked apes. It may have become difficult for us to experience the hesitation that seized Darwin and his contemporaries (and not exclusively his opponents). The unsettling insight was that Darwin's theory of evolution can only be true if nature has enormous expanses of time at her disposal. Like the heliocentric revolution, the Darwinian revolution was accompanied by a dramatic increase in scale, this time in the temporal realm. Darwin says it plainly; it is the philosophical content of his work: nature is unimaginably large – "We continually forget how large the world is" (1859/1985, p. 309).

For centuries it had been the experience of breeders that, although it is possible to produce new varieties, we cannot change species. This experience was extrapolated to nature as such, but where breeders work in time-spans of decades, or centuries at most, the natural evolutionary process takes place on a different scale, in a different time dimension – it takes millions of years to sculpt a new species. The amounts of deep time that nature has at her disposal are unimaginably large: “Nature grants vast periods of time for the work of natural selection” (p. 147). They transcend the boundaries of human imagination. These “incomprehensibly vast periods of time” (p. 293) were far beyond the traditional temporal horizon. Our world is a world on supra-human scale. What Darwin tries to impress upon his readers is that evolution is only thinkable if we realise that it takes place in a completely different time zone than human time: “long intervals of time”; “long lapses of time”; “vast intervals of time” (p. 299); “enormous intervals of time” (p. 310); “very long periods, enormously long as measured by years” (p. 437). This is the basic insight that seized Darwin during his inter-continental journey: “A man must for years examine for himself great piles of superimposed strata, and watch the sea at work grinding down old rocks and making fresh sediment, before he can hope to comprehend anything of the lapse of time, the monuments of which we see around us...” (p. 294); “what time this must have consumed!” (p. 295).

There is a second insight, no less Faustian, that made the idea of evolution possible. When Darwin embarked on the H.M.S. Beagle, he was a theologian, still inclined to discern harmony in nature. Upon returning home, he had learned to view nature in a completely different way. When he wrote his book, he had learned to see struggle, fierce competition and violence in nature.²⁰ What he had discovered was the proliferating urge of nature, expressing itself in competition, reproductive drives, killing fields and bottle-neck survivals. Darwin’s book introduces a new way of looking at nature. After some initial hesitation, his point of view is adopted because it is timely, in accordance with the spirit of the time. The spirit of competition is in the air, is everywhere. Political movements see Darwin’s “realism” as a moral justification for their political ideology (Van den Berg 1984). Capitalists and liberals were enthusiastic about Darwin, but Marxist readers as well. Not only Marx and Engels themselves (the latter read Darwin’s book shortly after it was published). The leading Marxist Karl Kautsky (1907) explicitly pursued a synthesis of Marxism and Darwinism. He saw class struggle as a continuation of the natural struggle between species. Darwin’s book also became a source of inspiration and moral justification for capitalism: a justification of a view of society based on social competition between individuals,

²⁰ “We behold the face of nature bright with gladness, we often see superabundance of food; we do not see, or we forget, that the birds which are idly singing round us mostly live on insects or seeds, and are thus constantly destroying life; or we forget how largely these songsters, or their eggs, or their nestlings, are destroyed by birds and beasts of prey; we do not always bear in mind, that though food may be now superabundant, it is not so in all seasons of each recurring year...” (1859/1985, p. 116).

a struggle for social existence in which the favoured and privileged would triumph, and rightly so.

National Socialism was also inspired by Darwin. In *Mein Kampf*, Adolf Hitler likewise describes history as a struggle for life and death between ethnic varieties of humans, and he wanted his fellow-Arians to become more aware of this undeniable fact of history and nature. Bible Book *Genesis* now becomes a tale of reproduction, proliferation and multiplication (off-springs that will multiply until they become as numerous as stars in a desert sky), but also selection and elimination: God as a breeder and destroyer of human varieties, carefully selecting favoured strands while consciously eliminating others, as is indicated by the subtitle of Darwin's book, and we should notice its Biblical ring ("Preservation of Favoured Races in the Struggle for Life"). As was already indicated, philosopher Friedrich Nietzsche articulated this same Faustian view when he depicted human civilisation as a merciless, unscrupulous and tyrannical proliferation, but also as an extremely creative and productive struggle.

§ 7. Faustian civilisation: the world according to Jules Verne

In terms of Oswald Spengler, Newton represents Faustian thinking as culture, a small-scale phenomenon. Faustian civilization settled in Western metropolises in the 18th and 19th century, proliferating from there into a global form of existence. On the one hand, these cities were old strongholds of Gothic (early Faustian) origin, now undergoing profound transformations and evolving into industrial cities, such as Paris. On the other hand, we see the rise of new Faustian metropolises, new urban centres such as Liverpool and Manchester, meticulously depicted by Friedrich Engels (1845/1962) in his *The Condition of the Working Classes*: materialisations of the Faustian principle, monstrous cities that embody mobility, expansion, productivity, social disruption and mass pollution. At that point in time we are really entering the Faustian era of mobilization and globalization. The grounding, enabling condition of this process is the emergence of the Faustian, fossil-fuelled machine. And the author who saw and expressed this as no other, Sloterdijk (1999, p. 836 ff.; p. 895) argues, was the hyper-productive novelist who devoted a large part of his extensive oeuvre (92 novels) to machines and their world-disclosing, globalising and mobilising impact: Jules Verne. The motto of the anti-imperialist machine builder Nemo concisely summarises the Faustian experience: *Mobilis in Mobili*, mobile amidst mobility. According to Sloterdijk, this is the epochal formula which captures the essence of an entire era in words (1999, p. 895).

Jules Verne (1828 - 1905) is an author whose oeuvre entails a systematic analysis of Faustian civilization. He is sometimes discarded as an author of children's books, which is partly the result of adaptations to which his novels were subjected, although it may also be due to the fact that in his books the psychological dimension is sometimes underdeveloped. As psychologists of

bourgeois mentality, contemporaries such as Tolstoy (1828 - 1910) and Ibsen (1828-1906) clearly outcompete him, but Verne is pre-eminently the author who turned the Faustian machine into a literary subject. His novels revolve around machines and closely related phenomena such as industry, metropolises, technoscience and the mentality of the engineer.

Novels by Jules Verne are set in two types of locations. Start and finish are situated in large industrial centres, in Faustian cities: Liverpool, London, Paris, Hamburg, New York, Philadelphia, Baltimore or San Francisco, large-scale constellations of labour and capital during the second half of the 19th century. From there, journeys of adventure are organised into unexplored areas: polar regions, obscure places in Africa or South America, or even towards the Moon. In this mobility drive (this urge to explore new forms of mobility across rivers and oceans, through the air, or even into space) the Faustian desire for expansion manifests itself. Heroes visit formerly inaccessible and uninhabitable locations that become accessible and habitable thanks to ships, submarines and airplanes, thanks to Faustian machines. Verne is fascinated by new forms of energy that begin to attract a lot of attention in his time: electricity first and foremost.

Verne is the photographic negative of his contemporaries Tolstoy and Ibsen as it were. In *The Lady from the Sea* (*Fruen fra havet*), Ibsen describes how the unapproachable Norwegian fjords coast is made accessible for tourism by English steamships: δεινός (tremendous) on the outside, but extremely comfortable (with bar facilities etc.) on the inside (Zwart 2015a). In his novel *Anna Karenina*, Tolstoy likewise describes how Russia is opened-up by the steam trains that suddenly connect cities such as Moscow and Saint Petersburg. This is a genuine Verne-novel theme: the train as a Faustian machine (both frightening and comfortable) that makes completely new forms of mobility possible. This train is the A and Ω of Tolstoy's masterpiece, the starting and ending point of the story, for the novel begins and ends with the arrival of a train in a train station. The novel itself, however, is largely devoted to the psychology of modern marriage, not something Verne was very much concerned with, – although there are some marriage scenes in some of his novels, such as *Kéraban the Inflexible* (1883), a novel about a Black Sea journey, which includes a narrative about a recently divorced Dutchman.

Something similar applies to Ibsen's dramas. Arrival and departure of a Faustian steamship in a Norwegian coastal town is the start and end point of a play that deals primarily with marital psychology. Verne's novels are complementary to this setup. He also describes Victorian couples, but marriage psychology is not his greatest talent. Although his novels start and end with relational problems (deferred engagements, unhappy marriages, etc.), the true protagonists of his novels are invariably machines. And he usually prefers celibate men as a crew. Tolstoy expresses fear of the machine. There is fear in Verne's books as well, but this fear neither applies to machines nor to women, it applies to marriage as such: not misogyny but misogamy (Moré 1963).

Prior to the arrival of the machine, journeying through Europe was slow, time-consuming, laborious and uncomfortable. Thanks to steam trains and steamboats, it becomes possible to travel around the world in eighty days, provided the subject is prepared to accommodate his style of thinking, his experience of time and space to the logic of the machine. In Tolstoy, the demonic aspect of the machine is the dominant aspect. The train makes the liaison between Anna and Vronsky possible, but it is first and foremost the monster that destroys the heroine's life. We do find this ambivalence in Verne as well. Although enthusiasm for the machine is dominant, there is a recessive dimension. Verne does have an eye for the demonic, sinister side. Primarily, he emphasizes that machines increase mobility, making life more comfortable, enabling unprecedented forms of transport, but the Faustian aspect of technology also gives rise to disruption and pollution (Zwart 2005c).

Verne devoted a novel to a mobile machine that he himself got to know, the *Great Eastern*, a giant steamship with the dimensions of a floating city that brought him to the United States (Verne 1871). A sublime machine, also called Leviathan: immensely large and sophisticated, a ship of oceanic dimensions, that moved across the oceans with majestic calmness. A fascinating, but also monstrous phenomenon that literally destroys human lives. Crew members are killed by the machine and the Faustian creator of this industrial Gesamtkunstwerk, Isambard Kingdom Brunel, dies of exhaustion a few days before the first voyage. A mega design, δεινός in all respects, a "metal mountain", a "steel mass", a "mysterious power", a "floating city", built to connect metropolises (Liverpool, New York) and continents (Europe, America) with each other, transporting thousands of passengers to colonize the frontiers of the Faustian empire, but also laying transatlantic telegraph cables on ocean bottoms. A vessel that is more powerful than humans. "I thought machines were made to serve people," Verne writes, "but the reverse turns out to be the case." An immeasurable yard, a whole army of workmen is needed to manufacture this machine in Liverpool. It is a synthesis of heavy industry (engine rooms) and Victorian comfort (a palace-like hotel): an archetypal Faustian machine, the embodiment of energy and restlessness. In New York, Verne continues his journey in a comfortable steamship that travels up the Hudson River, a mobile hotel that visits the land where the heroes of Fenimore Cooper (1826/1992) had roamed through "impervious forests" on foot, not that long ago.

Verne's ambivalence towards machines must also be understood in the context of his relationship with Jules Hetzel, his publisher, whose social program, in which science and technology played a decisive role in propagating progress, was waiting for a workaholic like Jules Verne to exploit. Indeed, "Progrès" was his key signifier, and Verne was exactly the author he needed. This workhorse, mercilessly exploited by his liberal and progressive publisher, was forced to produce two books a year (92 in total), while Hetzel received most of the revenues. In an early novel about the city and the machine, set in Paris in 1960, Verne had wanted to reveal the threatening, apocalyptic, dystopian aspects of

modern industrialism (1863/1994), – featuring a main character named Michel who frantically searches for literature in a world where only books about science and technology can be found – but this manuscript was resolutely rejected by Hetzel. In the 1860s, he persuaded Verne to emphasize the progressive aspects of machines, although the shadow side was never completely absent. After Hetzel's death, there is a striking change of mood. Verne becomes a gloomy, pessimistic author who primarily perceives science and technology as a merciless threat to human happiness and global ecology. But if we read his books carefully, this aspect was always there.

§ 8. Experiments on a grander scale

In the ninety or so novels that Verne produced, most of them entitled *Extraordinary Voyages*, a Faustian design can consistently be discerned. All these novels are structured like an experiment. The journey to the moon is literally described as an “experiment” without precedent.²¹ The crew members of the moon capsule are research subjects themselves, while test animals are also on board (a dog dies during one of the tests). The lunar journey is not only an experiment, but also makes a large number of experiments possible, for example concerning weightlessness. The occupants spend an important part of their time experimenting and carefully record their findings in a scientific notebook.²² Technology creates ideal conditions for lunar science. It enables this team of researchers to study the moon very closely, from nearby. The moon capsule is an artefact that makes whole new forms of scientific inquiry possible, enabling the emergence of a completely new form of scientific *experience*. It is a machine that makes a (previously inaccessible) dimension of reality accessible. The pioneers not only design and build but also inhabit their voyaging optic instrument (their voyager). Human existence used to be relatively rural and static, taking place within one dimension, namely on earth. In Verne's novels, engineers develop machines that open-up new dimensions and *mobilise* humanity, represented by an avant-garde of scientifically trained or autodidactic pioneers. Faustian machines make sea, air and space accessible, but the same applies to underground depths: caves and corridors become accessible to humans, as well as apparently inaccessible areas in the heart of darkness, the most interior regions of Africa.

The typical Verne machine is a dynamical machine. Most of these machines are themselves constantly in motion. They are manned mobile observatories and laboratories, that make innovative research possible. Researchers imprison themselves in their instruments, and this is how they then embark on a long, adventurous journey. Scientists are not only the ingenious

²¹ “Une tentative scientifique sans précédent dans les annales de la science” (Verne 1870, p. 1).

²² “Ils passaient leur temps à faire des expériences” (Verne 1870, p. 210).

developers of these machines, but also the ones who (with a truly Faustian contempt for lethal dangers) expose themselves to series of novel experiences that become possible, thanks to these machines. The experiment takes the form of a journey and the machine that makes the new research practice possible is usually a vessel (a submarine, a hot air balloon, an aircraft, a rocket). The basic mood, the basic attitude towards science is enthusiasm, but Faustian desire and anxiety always play a role, such as fear of Faustian landscapes: cold, dark emptiness, abiotic nothingness, apparently uninhabitable. Several of his books are set close to or even beyond the polar circle. In Verne novels, there are always moments when scientific travellers find themselves in frightening isolation, trapped in a void, in abiotic darkness, where even Genesis never dawned. “No living creature animated this vast, dead loneliness,” as Verne phrases it in *Hector Servadac*, a story about an incredible space journey (1877a, p. 200).

Science is present in Verne’s stories in two ways. On the one hand, science *makes* the experience possible. On the other hand, science is *made* possible. To give an example: the journey to the moon is made possible by ballistics, – a Faustian science par excellence, allowing experts to calculate exactly how artillery can exterminate as many victims as possible. This same science can also determine the exact speed the capsule must have to leave Planet Earth, and which orbit it must describe to reach its goal (the moon) at a specific point in time. Once the capsule has been launched, however, a new type of scientific practice becomes possible, a new form of selenography (moon cartography). Until then, the moon’s surface had to be studied and mapped from



a distance. Gigantic telescopes on mountain tops could only partly bridge the distance between earth and moon. Thanks to ballistics, the moon can now be approached up to a few kilometres and the moon’s surface can be examined very closely and carefully, and from a comfortable position, because these proto-astronauts still look like gentlemen in their Victorian study. A new form of scientific experience is made possible. It becomes possible to check mainstream orographic insights regarding the surface of the moon and to improve them drastically on the spot if necessary. There are no authorities for these travelling experts. A more reliable way of observing is suddenly practiced, resulting in a more reliable lunar map. The *Mappa Selenographica* by De Beer and Moedler from 1830 can be drastically adjusted thanks to the moon voyage. Ideal conditions (unprecedented physical proximity) make extreme and unprecedented levels of precision possible. Faustian science forces itself upon the object. Respectful distance is no longer an issue.

On the one hand, a considerable amount of scientific knowledge and technical expertise is required to construct Captain Nemo’s Nautilus in *Twenty-*

thousand Leagues under the Sea (1870). On the other hand, thanks to this wonderful underwater observatory, new forms of scientific research are possible, not only in physics, but also in oceanography, marine zoology and archaeology. Pneumatic knowledge is needed to construct the balloon with which Samuel Ferguson and his fellow passengers hover over Africa for five weeks, but the balloon also makes new and more reliable geographical explorations possible. Thanks to machines (trains, submarines, balloons), humans can observe their scientific objects more or less directly, from a close distance, with the naked eye or from behind a screen. These machines are windows into formerly inaccessible environments, even into the past. Thanks to these machines, the researchers are able to go “to the things themselves”, as it were. The balloon is both a means of transport and an observatory: “And the map of Africa is unfolding beneath our feet” (1863/1992, p. 25). The traditional method of practicing cartography (exploration on foot) is not only slow, dangerous and uncomfortable, but also provides less reliable information. Such explorers were swallowed by their object as it were. Machines makes it possible to optimise the geographic observations of Burton, Speke and other explorers. In the trip to the North Pole, which Verne (1866) describes in *The Adventures of Captain Hatteras*, a new type of scientific enquiry becomes possible: meteorological and physical research at extremely low temperatures. Doctor Clawbonny (the scientist on board) describes the polar regions as “a vast laboratory” where unique and groundbreaking research under low temperatures can be performed (1866, p. 80).

Around the World in Eighty Days (1873) is likewise an experiment. Thanks to new Faustian machines (e.g. steam trains and steamboats), it should theoretically be possible to describe an orbit across the earth’s surface and to return to the place of departure within exactly eighty days. The question is to what extent such calculations comply with the practice of Faustian transport. To what extent do mathematical calculations correspond to physical reality? Can correspondence be ensured between Faustian thinking and the real world? The usual view is that “in practice” such a journey will inevitably take more time, due to so-called “unforeseen circumstances”, but perhaps these can now be reckoned with as well? Phileas Fogg wants to prove that what is theoretically possible is also practically feasible, provided that the person involved knows how to behave like a clockwork or calculator himself, remaining totally indifferent to scenic, cultural, touristic and erotic attractions. Does time really take as long as we think, based on mathematical calculations? If we travel long distance at a high speed, do we indeed arrive exactly on time?

The outcome of this experiment (somewhat surprisingly perhaps) is that time is relative, to some extent: time depends on movement, on the mobility of the observer. Mobility is bound to have an impact on time. Whoever travels long distances, by making a journey around the globe for instance, in an Eastward direction, will win 24 hours upon returning home. In *The ABC of Relativity*, Bertrand Russell (1925/1969) describes an experiment with two clocks on two trains that move away from each other at very high speed. The time measurements

will inevitably deviate. This intuition, that new forms of mobility and speed have an impact on time perception, forms the basis of Verne's novel, decades before Einstein came up with this idea. The art of novel writing precedes science.

Thus, the machines designed and manned by Verne's scientific heroes are mobile laboratories for conducting experiments, epistemological devices that make it possible to practice science under optimal conditions. Those involved constantly carry out observations, while continuously taking notes. Thanks to Nemo's submarine, Professor Aronnax has to completely revise the oceanographic monograph with which he made a name as a scientist. He recovers from his mid-life crisis, caused by epistemic stagnation, as mainstream oceanography had reached its limits. Finally, he is able to provide more reliable information.²³ To make genuine progress, we have to submerge ourselves, using the submarine as a window into the world of marine phenomena. Before joining the hunt for the Nautilus, Aronnax had experienced epistemological malaise. He had been wasting his time, giving interviews and offering advice. Thanks to Nemo's submarine, he is able to make an epistemological leap, to revolutionise his field, lift it to a higher plateau, a more comprehensive level of performance. The Nautilus enforces an epistemic breakthrough. Aronnax no longer needs to study the deep sea from a great distance, on the basis of sparse and questionable data, he can now study living nature alive, vis-à-vis as it were, as a *living laboratory*, from behind a floating screen, inside a technological eye that allows him to see in the dark. Thanks to the journey, he is able to publish a scientific bestseller. The submarine, this ingenious artefact, makes a more advanced and reliable form of scientific research possible because it opens up a new dimension for experience and mobility. Nemo's Nautilus is like a manned and floating optic instrument, an artificial body, manned by Nemo as a Faustian homunculus.

In *Journey to the Centre of the Earth* (1864), semiotics (cryptology) enables scientific travellers to decipher an alchemical cryptogram, while geology and mineralogy show them the way through the dark interior of Planet Earth. These sciences make new experiences possible in areas such as evolution theory, speleology and palaeontology. The main characters want to experimentally prove the validity of Humphry Davy's theory, who claimed that the interior of the earth consists of cavities. They discover lost worlds, inhabited by prehistoric life forms, that once existed on the terrestrial surface, but became extinct millions of years ago. They spot plants and animals that were replaced by other life forms. These travellers can directly witness distant phases in the history of evolution, frozen as it were, with the naked eye. Their journey through the interior of Planet Earth is in fact a journey back in time, upstream evolutionary history, an introductory course into palaeontology. An extinguished Jurassic world is preserved in a cave-like time capsule, an underground theatre or cinema, where a Jurassic opera is unfolding: strange sounds, strange actors, against the backdrop of a strange décor, – a genre taken up later by authors such as Arthur Conan Doyle (1912) and

²³ "J'avais maintenant le droit d'écrire le vrai livre de la mer" (1870, p. 420).

Michael Crichton (1990/1991; 1995/2002). Verne's lively descriptions of the battles among huge, voracious monsters set a model for these later writers. Under extreme circumstances, in far-off, isolated, inaccessible places, evolution follows different pathways, or was even put on hold. And then, all of a sudden, the spell is broken and the travellers are back on earth.

We find similar "regressions", similar journeys backward in time, in several other Jules Verne novels. Besides anticipating the emerging future, they also allow us to explore the past. On the one hand, Verne's heroes use advanced vehicles (fast and comfortable trains, helicopters, luxurious cruise ships), but in novels such as *The Courier of the Czar* (1876), we notice a steady regression, in the sense that the mobility becomes increasingly pre-Faustian, until the protagonist walks on foot again, struggling through limitless plains, the Russian arch-symbol (Spengler) – a landscape abandoned by machines.

§ 9. Staffing and anxiety

Verne's mobile machines are staffed by Faustian types: an engineer, a worker, a journalist, a banker's son. Typically, there are three crew members aboard the machine: the scientist who designed the experiment, his dedicated assistant, and a critical reviewer, a sceptic who vehemently refuses to believe in the feasibility of the experiment and who can only be convinced by finding his disbelief experimentally refuted. He is invited to attend the experiment in person. This will put a stop to his criticism. And then there is the general public: newspaper readers, who enthusiastically become acquainted with the set-up of the test and who respond with massive enthusiasm when the scientific travellers return safely: well-fed and in good health, ready to publish their report. A Verne voyage results in a sensational scientific bestseller – a Verne novel.

We find this division of roles in *Robur the Conqueror* (1886), for instance. The novel describes an experiment designed to settle an interminable dispute between two scientific principles. The question is whether the future of aviation will be based on the principle "Lighter than air" (balloons) or on the competing principle "Heavier than air" (helicopters and other types of aircraft). Robur kidnaps two critics and forces them to witness, against their will, on board his vehicle, how the experiment settles the dispute to his advantage. "What is this series of tests we have to take part in?", they exclaim (1886, p. 86). In other novels, the scientist is actually the sceptic who, together with his faithful assistant, is taken on board by a scientific genius, as happens in *Twenty Thousand Leagues under de Sea* (1870), where genius Nemo forces his guest – Professor Aronnax, the most renowned naturalist and oceanographer of his time – into the role of student. The professor becomes a pupil. Nemo shows him the epistemic limitations of mainstream science. His ingenious machine makes it possible to practice various branches of research under optimal conditions. Nemo has long solved all the major issues that leading scientists are still discussing, and he's in

need of an elite audience, reduced to a minimum, consisting of one single expert, accompanied by a faithful servant and a brawny whaler. At the same time, he has no need to publish his results. The genius doesn't need recognition, doesn't have to defend his insights before the scientific forum. This Faustian Übermensch is driven by contempt for formal academic reviews, with the exception of Aronnax perhaps, the most talented and broad-minded of them all, but still handicapped by the obvious limitations of university research. Whoever wants to study the oceans must leave urban scholarly environments such as Paris behind, and dive into the ocean as a living lab.

In *Journey to the Centre of the Earth* (1864), the main characters discover how monstrous life forms from bygone eras managed to survive in the earth's crust, in a protected environment: a gigantic, womb-like cavity. It is the first paleontological monster novel, the first dinosaur novel. Two monsters fight each other: a struggle for life and death. The monster archetype is omnipresent in Verne. We find various monsters in *Twenty Thousand Leagues under de Sea* (1870). First of all, the submarine itself is considered a deep-sea monster. Later, the people on board come face to face with an octopus, a school of sperm whales, a giant shell and other deep-sea marvels. The monstrous is always there. In other novels (1865; 1866; 1877a), protagonists play with monstrous, astronomical numbers. Scientists enter into a discussion about the weight of planets until laypersons witnessing them finally exclaim that such numbers are beyond human comprehension (1866, p. 218). In the lunar voyage (1865) we find similar versions of this typical scene and in *Hector Servadac* (1877a), the travelling companions are literally made mellow by astronomer Rosette's explanations bulging with astronomical numbers. Rosette provides a quick course in Faustian astronomy, lecturing on periodic and non-periodic comets, on chances and risks of anyone travelling through space, on the history of astronomy and on the likelihood of the Earth and a comet colliding (1: 281 million). Rosette calculates during the day, while making acute observations at night. In short, we are dealing with a scholar who knows how to create optimal conditions for his science, even under the most unlikely circumstances, who feels perfectly at home among the most intimidating phenomena, thanks to his fluency in the mathematics of astronomical numbers. His mathematical skills allow him to decipher cosmic datasets as if they were a Rosetta Stone. His lectures culminate in expositions about trillions, quadrillions and sextillions: "The earth weighs six quadrillion kilograms, a 25-digit number, the sun 2 quintillion, a 31-digit number, Jupiter, 2000 quadrillion kilograms, 28 digits..." – in short: Faustian mathematics.

The South Pole is the archetype of an immense, silent, freezing, unapproachable mother. The Faustian desire to conquer this mother is what keeps the Nautilus moving (like an electric sperm cell) *en route* through the world's oceans. Once the target is reached, she threatens to choke the Nautilus and swallow it. Blue veins are visible on her spotless white skin. The people on board, trapped in her icy embrace, run out of breath, of oxygen. In the last moment, they manage to escape from this claustrophobic intimacy. In the capsule in which the

journey to the moon is made, fired by a giant, phallic cannon, we likewise recognize a spermatozoon, on its way to a celestial, maternal body, emphatically and repeatedly referred to as “mother”.

In *The Black Indies*, about mining in Scotland, the mine is “the corpse of a pre-worldly monster” (1877b, p. 15), but also an immense maternal body. Mine corridors are veins. Thanks to the safety lamp, an invention by Humphry Davy, the mine has become accessible for human presence, even resulting in habitation and migration. An underground city has evolved. The experimental moment occurs when a girl, who has spent her entire life in this unworldly environment, is suddenly exposed to normal conditions (daylight, sea air, urban sights) so that her supervisors can experimentally determine how her body, her sense organs, her mental mood, respond to all this. She is consistently presented as a research subject, whose behaviour is closely monitored.

The Begum's Fortune (1879) describes a monstrous industrial city that is developing at an explosive pace, seriously polluting the environment. It is structured like a panopticon, around a “cyclopean” central construction, from where the evil genius Schultze permanently monitors the human resources put to work in his perfectly organised metropolis. His ingenious experiment falters in the end because one of his heavy bombs explodes prematurely, causing him to freeze to death on the spot, resulting in the inevitable collapse of the monster city. Industrialization and nationalist collisions (e.g. between France and Germany) are converging dimensions of the Faustian process. In an age of nation-building and expansion, industrialisation inevitably results in large-scale conflicts, armed confrontations between modern states, and massive killings.

Scientists are heroes in Verne's novels, but they do have a sinister side. Technology always casts its destructive shadow. Scientists know how to survive under extremely difficult circumstances, thanks to their courage, imagination and expertise, but also their accuracy and reliability. Scientific research is a *moral* vocation. Precision, reliability and disinterestedness (never taking their own petty interests into the equation), those are decisive scientific virtues. *The Adventures of three Russians and three Englishmen in South Africa* (1872) emphasises the extreme precision and meticulousness which persevering scientists manage to preserve under extreme circumstances, but the collateral damage is immense.

Machines are never an unequivocally liberating force in Verne's books. They open up new dimensions for human mobility, for migration and colonisation, but this usually results in confinement in quasi-monastic research institutes, where life is spent in celibacy. This is related to Verne's personal situation. Like his heroes, he led a comfortable and well-nourished life in a lifeworld of limited size, a room where he toiled on his interminable series of books, day after day. His imagination made him quasi-mobile, but in the end his heroes end up living in cells remarkably similar to Verne's own office: a camera obscura, a cave dwelling in which a workaholic spent his days and nights, as a manuscript spitting machine.

Besides enthusiasm for science, archetypal anxieties also play a role: fear of abandonment, claustrophobia, fear of monsters and explosions. Notably, we notice fear for the astronomical expanses of the Faustian universe, for the utterly dark, extremely cold, abiotic nothingness that extends beyond our comfortable, but extremely small and vulnerable terrestrial environment. Verne's work echoes Pascal's aphorism: "The eternal silence of these infinite spaces terrifies me" (Compère 1991). The mobile machine is a homely microcosm, a temporary dwelling, a technological cell in the middle of an inclement environment. Eventually, the machine collapses and supreme nature again takes possession of an abandoned landscape.

Not only the immensities of the natural environment are threatening. In the background, an additional threat is unmistakably noticeable, the looming threat of a massive, violent clash of competing political powers. Their Will for Power will take possession of continents, but also of scientific achievements. Scientists will be expropriated in the context of a global arms race. In Verne's novels, scientists manage to overstep nationalistic sentiments of envy and competition by working together. In *Facing the Flag* (1896), a honest scientist knows how to prevent a superbomb, developed by a scientific genius, from falling into the wrong hands, realising that avoiding the inevitable catastrophe will only be a temporary triumph. Anxiety and unease emphasise the Faustian ambiance surrounding the technological works of art produced by Verne's engineers. It is truly remarkable that Nietzsche and Verne were contemporaries, and that Nietzsche (born in 1844) was actually so much younger than Verne (born in 1828). Although allegedly a Faustian thinker, coining the adage "Will to Power", Nietzsche shunned industrial centres and preferred to dwell in tourist resorts while rereading ancient Greek texts. Verne analyses precisely those dimensions that are remarkably underrepresented in Nietzsche's writings, where the Will to Power seems to feel most at home: technology, labour, industrialisation. There is an obvious link between Nietzsche's aversion towards Gothic, late medieval monastic culture and his aversion towards the world of the Faustian machine, as the real embodiment of Faustian power.

Chapter 5. Apollonian, Magian and Faustian thinking: a comparative diagnostic

Each style of thinking style builds on its own guiding idea, which realises itself in multiple cultural domains. In the preceding chapters we have outlined the profile of three styles of thinking. The focus was primarily on the initial moment of commencement, the “birth of”, the original articulation. In this chapter we opt for a comparative approach. We will indicate how the three styles actually take shape. Next, we will focus on how these styles of thinking affect our basic categories of time, space, causality, subjectivity and objectivity. Finally, we will return to the beginnings (“vade retro”), to specific moments and locations where the genesis of a particular style first came to express itself. Following Peter Sloterdijk (2004), we will analyse these locations as “alethotopes” (ἀληθής + τόπος), places where fundamental insights were articulated for the first time.

§ 1. Domains of thinking (1): research

Mathematics – Mathematics is considered the “first science”, for it expresses, in an abstract manner, the experience of time and space entailed in a particular style of thinking. According to Spengler, we cannot meaningfully speak about *the* history of mathematics. The Apollonian number concept differs decisively from Magian conceptions, and Magian conceptions from Faustian ones. A mutual comparison reveals the contrast between these styles: a confrontation between incompatible *forms* of mathematics.

In archaic or mythical thinking, mathematics is closely linked with rituals. The mythical number is an ordinal number, indicating a sequence, a ranking, an arrangement. Geometric patterns play an important role in the staging of ritual scenes. Mythical thinking distinguishes sacred and profane, female and male numbers. The number seven is sacred, e.g. the seven Sages who were involved in the mythical beginnings of Apollonian thought. In very early Apollonian thinkers (such as Pythagoras), such mythical elements still play an undeniable role.

In Mesopotamia and Egypt, practical forms of mathematics were developed, practices of calculation and measurement, involving practical skills and techniques, suitable for solving specific issues, such as questions of distribution in the context of agriculture or inheritance (Boyer 1968). This mathematics supported administrative practices such as taxation and land distribution. The first truly scientific form of mathematics was Apollonian (Euclidian) geometry.

Apollonian mathematics is essentially geometry. It does not use numbers, but letters from the Greek alphabet. Mathematics analyses the properties and proportionalities of perfect geometric shapes, it is a systematic logic of ideal

proportions, with the regular polyhedrons and spheres as highlights of perfection. Regular polyhedrons are therefore discussed in the crowning chapter (Chapter XIII) of Euclid's *Elements*, the handbook of Apollonian geometry. Apollonian mathematics, like Apollonian ethics, thinks in terms of right measure and proportionality. Apollonian acoustics investigates optimal harmonic proportions. Apollonian mathematics only works with natural integers. The limitless, the infinite is anxiously avoided. The irrational number (the infinite decimal fraction), such as the perplexing number $\sqrt{2}$, formed an impregnable obstacle for Apollonian number thinking. There is a deep metaphysical fear of the infinite, the Dionysian abyss of limitlessness. It is no coincidence that Dionysian thinking was fascinated by the non-harmonic, the rhythms of intoxication.

The Apollonian nature of ancient Greek mathematics is also its weakness. Apollonian mathematics is not based on practical experience, but on rigorous demonstration. The mathematical proof (Q.E.D.) is an Apollonian invention. At a certain point, however, Apollonian geometry appears to be complete. Once the properties of perfect three-dimensional figures have been exhaustively described, the end has been reached. Apollonian geometry itself assumes a spherical shape: a closed system of limited size. It will not expand endlessly, for example by developing new number types. That explains why the Greeks, as Dijksterhuis phrases it, were unable to further develop a realm of inquiry "which they had for the most part created themselves, and for which they had demonstrated an exceptional talent" (1950/1989, p. 54). The Greeks were able to count, of course, but this was not regarded as genuine science: it was not something that befitted gentlemen. Making calculations was manual labour, slave labour, and was called logistics, a practical skill, a technique, something for Servants, not for Masters to pursue, and it was not seen as resulting in genuine knowledge. The use of letters as numbers impeded the development of their mathematical skills, and also deprived the Apollonian Greeks of the possibility to work with indeterminate numbers, for which we employ letters (a, b, c; x, y, z). The Greeks, according to Dijksterhuis, were curtailed by their lack of interest in practical applicability. They were not interested in addressing concrete problems arising from handling practical issues, from hands-on interaction with reality, so that they never got to study change mathematically. This lack of attention to practical issues aligns with the Apollonian aversion of the ephemeral and the diffuse.

Hellenistic Greek algebra, developed in the metropolis Alexandria, was of a completely different nature. It was Magian mathematics: number mysticism, basically. Algebra, an important product of Magian thinking, began its career as an auxiliary pursuit in service of astrology and numerology – deciphering the movements of heavenly bodies or canonical texts. Number relationships were used to decipher hidden messages in sacred scriptures, or to predict the future on the basis of the apparently meaningless constellations and apparently erratic movements of planets. The Magian number is a mystical number, but it may also be a chronological number, the numbered year, where certain years acquire

special significance. A recent revival of this was the anxiety which spread when the year 2000 was approaching, an event (the end of an aeon) which was notably expected to create havoc in computers and computer networks around the world: a mild version of similar anxieties which arose in a late-Magian ambiance when the year 1000 was at hand. Important inventions of Magian thinking are the abacus and the calendar. Magian thinking expresses the age of the cosmos in terms of millennia, and wants to capture the beginning and end of the world in a number, starting from a symbolic event, such as the founding of a city, and ending in a cataclysm. This type of algebra is basically number mysticism, while Magian astronomy is basically astrology, and Magian chemistry basically alchemy. Metaphysics becomes theology. Thinking means: ascending and spiralling towards the sublime.

Faustian mathematics is emphatically non-Euclidean. The core concept of Faustian mathematics is the function, which expresses a dynamical relationship, evolving over time, between variable quantities over which the researcher aims to acquire full control, supported by the function concept. By modifying the independent variable (along the X-axis), he is able to influence the dependent variable (a score along the Y-axis). By reducing the emission of greenhouse gases such as CO₂, climate change may be controlled through geo-engineering. Faustian thinking is convinced that it is us who determine the climate on earth. This leads to an enormous expansion of the function of conscience: we humans, equipped with mathematical equations, are suddenly responsible for everything that happens.

Faustian mathematics produced entirely new number types, or rather: number worlds, such as negative and irrational number, exponential numbers and logarithmic numbers. First and foremost, however, Faustian mathematics is fascinated and obsessed with astronomical numbers: unimaginably large, reflecting the unimaginable depth and vastness of a Faustian universe. To that end, non-Euclidean geometry was created. This fascination for the unimaginably large is complemented by a similar fascination for the extremely small.

Descartes developed a new form of geometry based on a non-Euclidean element: the point. What he described was a number world instead of a world of bodies. Apollonian mathematics repressed infinity, but Faustian mathematics discerns infinity everywhere, also in the inter-spaces between numbers. Until then, there had only been one number between 1 and 3, but for Faustian thinking, the number of numbers between the numbers 1 and 3 is infinitely large. Faustian mathematics is pre-eminently a mathematics of extremely large or extremely small numbers. Leibniz called his infinitesimal calculation a mathematical microscope. It is an active form of mathematics which thinks in terms of operations, transformations, functions and projections. The Faustian number expresses an interaction, a dynamical relationship. In the end, Faustian mathematics results in a hyper-complex and hyper-abstract form of thinking, giving rise to astonishingly complex number worlds or numberscapes.

Apollonian mathematics was practiced in broad daylight. Faustian mathematics is preferably practiced at night. Faustian mathematics transcended the confines of Apollonian spherical thinking. The Faustian universe is infinite, and, as Spengler rightly emphasizes, the infinite is was already discovered in the so-called Middle Ages, by Cusanus and others. Cusanus already understood that a circle with an infinitely large radius is an infinite straight line, and the same goes for a triangle with an angle of 180 degrees.

The Faustian sense of scale, distance and time also results in accurate clock-works. Thomas Aquinas already discusses the clockworks (*horologia*) of his era (1922, Pars 1a2ae Q XIII 2). The concept of function describes changes over time, and often requires the use of a clock. The physical experiment studies change. The boundless, expanding, icy universe is the primordial symbol of Faustian thinking, according to Spengler. Fundamental Faustian concepts are power and energy. The Faustian world is a religious world, moreover, and the Faustian God is an omnipotent sovereign. Prominent Faustian mathematicians were deeply religious. All major mathematicians (Pythagoras, Plato, Kepler, Newton, Leibniz) are religious, Spengler emphasizes, and their mathematical work expresses profound religious intuitions. What is striking in the Faustian concept of God, however, is the supra-human scale, the rigour, both in questions of morality and in question of dogma: absolute transcendence. Faustian theology is dogmatic. We are completely dependent on Divine justice, as Luther, the Faustian theologian, argued. We cannot mitigate His verdict with the help of good works or indulgences. But the most Faustian of all Faustian concepts is the exponential curve, the symbol of human responsibility for global disruption.

Physics – Apollonian physics is basically statics – a form of physics in which the temporal dimension is absent or irrelevant, and which does not include time measurements (there is no X-axis as it were). Archimedes experienced his εὐρηκα breakthrough, his epistemological euphoria, in a pre-eminently static situation: in a bath tub, in a state of immobility. His own body was a laboratory prop, and subjected to an experiment. His alethotope was a thermotope.

Core themes of Magian physics are phenomena such as magnetism and ebb and flow. Time is now millennial and cyclical. The grand idea of Magian physics is influence at a distance, *actio in distans*, invisible attraction, e.g. attraction by the moon as a phenomenon of gravity, but also elective affinities in chemistry. Magian natural science has an eye for the influence that heavenly bodies exert on each other – and on us. This interest in mysterious forms of influence also gave rise to astrology, but the same idea is retained in Newton's concept of gravity: a fascinating example of how a Magian component is integrated into a Faustian theorem (focussed on control). Faustian researchers are divided subjects, as indicated by the famous line from Goethe's *Faust*: "Two souls, alas, are dwelling in my breast". In spite of Newton's decisive contributions to Faustian thinking, he remains a Faustian ego combined with a Magian, complementary alter ego, persevering in a Magian style of thinking. His concept of gravity is a Magian "stain" or "scar" if you will on Faustian physics.

The force of gravity is just as incomprehensible to a truly Faustian mind as the forms of influence that astrology wanted to study (a Magian research field par excellence). The idea of gravity is an affront to Faustian thinking, a relapse into, a concession to, the Magian worldview it wanted to supersede.

Faustian physics is dynamics first of all, closely linked to exact time measurement and the concept of function (modifying conditions, indicated by the X-axis, and measuring the effects of these modifications, represented by the Y-axis). The primal aspect of reality that Faustian investigators must try to control is time, with the help of precision devices. Faustian physics is experimental physics, and inherently technical: dependent on technical contrivances. Nature is no longer studied in the open air or with the naked eye. Laboratories are established: settings for exerting maximal control over nature, embodying the Faustian will to power. This also applies to the particle collider at CERN, where the smallest subatomic particles, borderline cases of what might still be considered matter, are smashed and destroyed. It is a theatre of spectral, ghostly appearances, spotted at the very moment of their disappearance, leaving a misty trail in supersaturated vapour: the ultimate Faustian device, although once again some ghostly, Magian stains or remnants can be detected. On the quantum level, the behaviour of elementary particles is not completely deterministic, which, of course, constitutes another affront to Faustian thinking.

According to Carl Gustav Jung, this dual nature of Faustian physics must be considered as something inevitable (Zwart 2019; Zwart 2020a). Whereas the Faustian ego is striving for control, by making reality calculable, ensuring the triumph of determinism, there is always this ghostly shadow of unpredictable otherness or noise. Even when Faustian consciousness seems to be at the height of its dominance, the interminable struggle against pre-Faustian (Magian) ideas continues. Magian ideas may suddenly resurge at the heart of Faustian practices and theorems. According to Jung, we must remain sensitive to this chronic collision between the conscious and the unconscious, the visible and the obfuscated dimensions of scientific research. This already applies to the *scientia experimentalis* that emerged during the Gothic (early Faustian) era. While numerous scholars were still copying and studying and commenting authoritative texts, there was an intellectual undercurrent of experimental thinking. Albertus Magnus (1193 – 1280), for instance, commented on Aristotle (his official teaching assignment, his daily work), but he also practiced alchemy. In the 14th century, this undercurrent began to surface as experimental scholastics, as Gothic natural science. In modern times, alchemy gave way to chemistry – on the level of consciousness. Yet, alchemical ideas (as the unconscious of modern natural science) continued to exert considerable influence. Not only in the sense that Kepler, Newton, Boyle and other leading natural scientists secretly practiced alchemy, but especially in the sense that modern natural scientists, even in the 19th and 20th Century, were influenced by alchemical ideas.

One of Jung's pet examples is the famous dream reported by Friedrich August von Kekulé (1829-1896), who discovered the structure of benzene (C₆H₆)

after falling asleep while being immersed in this problem, and dreaming about a snake biting its own tail – a well-known alchemical symbol named Ouroboros. This led him to the understanding that benzene has a ring structure – a “late triumph”, Jung writes, of an old alchemical thought that finally reaches its scientific goal (1946, p. 179). Even in Mendel’s experiments, alchemical ideas about dominant and recessive factors were at work, adopted from Joseph Gottlieb Kölreuter (1733-1806) and others (Zwart 2008).

The relationship between alchemy and modern science was the central theme in the correspondence between Jung and Nobel Prize winner Wolfgang Pauli (Jung 1953/1974; Meier 1992; Lindorff 2004). According to Jung, the dreams produced by this prominent microphysicist, who was also a prolific dreamer, reflected a plethora of alchemical reminiscences (Zwart 2020a). Jung’s friendship with Pauli is important also for other reasons. Around 1900, Jung argues, an important mutation occurs in the history of thinking. The principle of causality is being challenged by quantum physics. Faustian determinism no longer applies on a very small scale. In the period that Freud published *Beyond the Pleasure Principle* (1920/1940), physics in the form of quantum physics moves beyond the principle of causality, or at least beyond its classical, deterministic interpretation. There is a dimension of the real, beyond the causality principle, where unpredictability must be accepted as far as the behaviour of elementary particles is concerned. For Jung, Pauli is the one who exemplifies this change. On a conscious level, he makes an important contribution to the emergence of post-deterministic physics, while his unconscious produces an impressive amount of dreams that indicate how unconscious ideas affect modern scientific thinking “from a distance” as it were. During periods of transition, when one style of thinking gives way to another, obfuscated forces resurge to the surface, Jung argues. During such an interregnum, scholars experience a short-lived moment of intellectual lucidity: an epistemological clearing. The shadowy side of the intellect, that which had been suppressed by the dominant style of thinking, now manifests itself. This happened literally in Goethe’s drama *Faust*. When the canonical wisdom of the library is about to make way for experimental science, there is a demonic interregnum, where Mephistopheles is in charge. For a period of time, scholarly consciousness is under the spell of this “medicine man”. No wonder that quantum physicists, during a famous gathering at the Research Institute of Niels Bohr in Copenhagen in April 1932, performed a Faust parody, with Pauli in the role of Mephistopheles and the “object”, the (almost weightless) neutrino particle in the role of Gretchen.

The transition from Apollonian to Magian thinking was likewise accompanied by moral and epistemological turbulence and, according to Jung, the 1920s and 1930s must be understood in similar terms. He saw National Socialism basically as a resurgence of the Wotan cult. The ancient god awoke from his millennial slumber. Archetypes that normally lead a shadowy existence may suddenly and temporarily seize power, under the influence of “medicine

man” Hitler. Such moments of euphoria inevitably end in catastrophe: the collapse of the Roman Empire, the religious wars, the collapse of Hitler’s Reich.

During his second half of his life (after his fortieth year), Jung gave in to his chronic fascination for alchemy: an obscure and mysterious tradition that had arisen in a Magian (Hellenistic) context, but continued to exert its influence (both stimulating and inhibitory) on Faustian science. At the time, alchemy was more or less completely written out of the official historiography of science. It was actually not permissible for academics to become seriously involved with such a theme. It was delisted from the scholarly agenda. Alchemy was either kept in the dark or referred to in a pejorative sense: the necromancers as an obstacle against Enlightenment, without really trying to explore this world of thought. Among the scholars who contributed to a revival of interest in alchemy was Hans-Eduard Fierz-David, professor of chemistry in Zurich and a friend of Jung, author of a history of chemistry (1945/1952) in which he paid due attention to alchemy. He dedicated his study to Jung, with whom he shared this fascination. According to Jung, dreams of modern scientists reveal that we are still familiar with this way of thinking, even when conscious familiarity is lacking. Archetypal ideas continue to be part of the context of discovery of scientific research, especially at decisive moments of crisis and transition.

An interesting case is Robert Julius Mayer (Jung 1916/1960, p. 76), a physician who, in his spare time (as an autodidact) practiced natural science and eventually became famous for discovering the law of conservation of energy, one of the most important scientific discoveries of the 19th century. He was seized by the idea that energy manifests itself in various forms (“transmutes”) but can never be destroyed, when he embarked as a young physician to the Dutch East Indies. An experienced sailor informed him that sea water is warmer after a heavy storm. This comment made him think. The critical moment followed shortly after the landing in Surabaya where he was overwhelmed by the idea that would change his life (Ostwald 1909). It was an experience of conversion, similar to the one Paul experienced on his way to Damascus. The idea which suddenly seized him resembled an intellectual intoxication, a moment of inspiration and insight, of *jouissance*. The new conviction would never let go of him. In fact, the idea destroyed his life. It became an obsession. It was an “*Anschauung*”, a fundamental view which placed everything in a different light, an intuition which proved difficult to express at first. Recognition would take a long time.

Upon returning home, Mayer continued to further explore and substantiate his idea. For example, he noted that when we fill a bottle with water and shake it firmly, the temperature of the water rises. In fact, what he had discovered was an everyday experience. When we rub our hands in times of frost, we apply the law of conservation of energy. Movement is converted into heat. After an earlier manuscript was rejected, his classic publication appeared in 1842 – but no one took notice of it. He started to worry. His wife became increasingly annoyed by the fact that he only seemed to live for his idea, stubbornly maintaining that he had made an important discovery which no one seemed

willing to acknowledge. In 1850 he jumps out of the window during a sleepless night, seriously injuring himself. He is taken to a psychiatric institution. There, he refuses to admit that the story of his important discovery is a delusion. He disappears from view and his publications are ignored. Rumour has it that he died. His discovery proved absolutely toxic.

What exactly happened to Mayer, Jung wonders. What was the origin of his idea? Why did this idea, despite the resistance Mayer encountered, continue to exert such a fatal attraction? Jung answers that it was the resurgence of a time-old idea, which had surfaced before, in the wheel of fire symbol present in many religions, but also in the Dionysian concept of energy or fire as articulated by Heraclitus (1916/1960, p. 77), who believed that an eternal fire animates the world, constantly altering in shape. For Jung, this explains the demonic power of Mayer's idea. Under Faustian conditions, the idea was brought to life again, by chance observations, assuming a new meaning. Not as item of contemplation, but as the grounding momentum of the Faustian era, intimately involved in all things Faustian: in labour, steel, machines, fossil fuel and heavy industry.

Chemistry – Building on the work of Jung, Gaston Bachelard (1884 – 1962) distinguishes three styles of thinking in the history of chemistry (Zwart 2019; Zwart 2020b). Modern (Faustian) chemistry is preceded by alchemy, its Magian predecessor, and succeeded by a new form of molecular chemistry (from 1900 onwards) based on quantum physics and new research techniques such as spectroscopy. Meanwhile, in the life-world of everyday experience, outside the laboratory, ideas from previous epochs continue to flourish. Literary authors, the spokespersons of everyday experience, make ample use of archetypal ideas. The epistemological rupture that makes Faustian chemistry possible is not only a historical, but also a biographical concept. Every chemist has to re-enact this collective conversion which historically took place in the second half of the 18th century, when chemistry became a modern, Faustian science. Nonetheless, some alchemical concepts can still be discerned in modern chemistry.

One important idea associated with chemistry is the archetype of the explosion. In novels and movies about chemists or chemistry, explosions are likely to occur. Pre-modern chemistry revolves around the idea of fire, situated in the oven: the heart of the alchemist's workshop (Bachelard 1938/1949). Fire is associated with homeliness and familiarity, but also with enthusiasm (bonfires). Archaic, primordial thinking, according to Bachelard, basically comes down to free associations (reverie) while staring at a fire.²⁴ To familiarise ourselves with pre-Faustian forms of thinking, we may travel back in time to our own archaic period, during childhood, to re-examine our own infantile experience with regard to the phenomenon of fire.

In early childhood we are confronted with a prohibition, a taboo: we should not touch the tempting flames. Starting a fire is a privilege of the father, according to Bachelard. The child wants to appropriate this privilege, wants to

²⁴ “Pour l'homme primitif, la pensée est une rêverie” (p. 44).

democratise fire, but the social order will offer firm resistance, because fire is not only fascinating, but also dangerous, for the person concerned, but also for others involved. Bachelard speaks about the Prometheus complex in this context, the chemical variant of the Oedipal complex. Fire belongs to the father, who has the exclusive right to ownership, representing the frightening aspect of humankind as a most terrible creature (δεινότατον), capable of subjugating this frightening (δεινός) element, fire. The complement of the Prometheus complex is the Empedocles complex, representing the death drive: the desire to leap into a consuming fire, preferably from the edge of a volcano, in order to be cleansed and reborn: the desire for a cosmic death, a fusion with the universe and the elements. Besides Hölderlin's *Empedocles*, the novel *She* by Rider Haggard (1887/1991) can also be regarded as a modern rendition of this idea. Fire is the spark that introduces discontinuity between humans and the rest of nature, between humans and other animals. During the archaic epoch, the process of domestication actually begins with the domestication of fire. The self-domestication of humans literally takes place around the hearth, the camp-fire. This archaic experience is never extinguished completely and continues to flare up in later historical epochs.

Another archaic association is the affinity we intuitively perceive between fire and sexuality, between generating fire and producing children: the experience of a friction that sets us on fire. In the case of sexuality too, friction results in a rise of body temperature, a moment of de-freezing. Fire and children are made in the same way, at least according to the logic of archaic thinking. Many of these core ideas are still very much alive in Magian chemistry, also known as alchemy. Here, sexuality is seen as a chemical reaction and vice versa. In both cases, selectivity is important. Humans are not aroused by anything or anybody. A mystical rapport has to come about, a secret affinity must be at work, in reaction to a triggering feature (a particular gaze, a particular gesture, etc.). The synthesis of a chemical compound *in vitro* was referred to by alchemists as a "chemical wedding", indicating that erotic desire (love as a universal force of attraction) was guiding the behaviour of chemical substances. Alchemists postulated the existence of a universal force (love, φιλία) to explain chemical processes. One particularly interesting example of this association between chemistry and sexuality is Goethe's novel *Wahlverwandtschaften* ("elective affinities"), whose title indicates that both human individuals and chemical substances have an intuitive preference to form bonds with certain individuals (or substances) rather than with others. His novel is an experimental arrangement ("Experimentalanordnung", Safranski 2013/2015, p. 508)

It wasn't until the end of the 18th century that chemistry became a Faustian science, on a par with Faustian physics. In documents written during the early 18th century, electricity is still seen as fire and as a mysterious erotic force. Bachelard quotes a French chemist who developed a sexology of electricity, describing it as an erotic substance, and the female lower abdomen as a cavity

filled with electrically charged organs. According to Bachelard, this is still a product of (Magian) associative thinking: fire = electricity = sexuality.

As indicated, the chances of success of alchemical experiments depended not only on the purity of the raw materials with which the alchemists worked, but especially on the moral purity of the alchemists themselves. Chemical operations were conducted in service of moral self-enhancement. The aim of alchemical operations was *κάθαρσις* – purification, both of the object (the chemical substance) and of the subject (the alchemist). As a Magian practice, alchemy relied on associations. The various regions of cosmos (the stellar sphere, the animal kingdom, the vegetable kingdom, the mineral kingdom) mirror each other. Stars are heavenly flowers, flowers are terrestrial stars. The earth is a body equipped with orifices and veins. The sunflower is associated with the sun.²⁵ In everyday language, but notably in poetry, such associations or correspondences are still very much alive. Poets such as Baudelaire are linguistic alchemists: they work miracles with words.

Modern Faustian science had to rigorously distance itself from this associative, intuitive style of thinking. As an epistemological psychotherapist, Bachelard wants to offer guidance to science. Scientific consciousness had to cleanse itself of all pre-Faustian associations and alchemical reminiscences. Where the Id of alchemy was, the ego of modern Faustian science shall be, that is the credo of the scientific revolution. It is certainly no coincidence that Victor Frankenstein, the main character of Mary Shelley's novel, became enthralled by alchemy (1818/1968). To become a scientist, these alchemical affinities had to be suppressed. The novel describes a failed epistemic therapy, a faltered conversion. An epistemological prohibition is required to block access to the world of Magian associations. Only then can the ego be emptied and reborn as a true scientist. Mary Shelley's novel depicts the return of the repressed. Alchemical ideas continue to work and Victor basically decides to use the new powerful instruments of Faustian chemistry to realise an alchemical idea: the fabrication of a homunculus in vitro with the help of a flash of lightning.

Meanwhile, around 1900, another scientific revolution sets in, so that the challenges are getting even bigger. The epistemic rupture between research laboratory and poetical experience intensifies. As a philosopher of science, Bachelard criticises Sartre, for instance, who referred to the wave-aspect of electrons as their "feminine" and the particle-aspect as their "masculine" dimension (Bachelard 1951, p. 192). Philosophy should put a stop to such projections, such sexualisations of quantum physics. Philosophers should not act as belated alchemists, retaining a pre-scientific way of thinking. We must surgically remove such misleading preconceptions, Bachelard argues (1953, p. 18), resulting in a reformation of the intellect.

²⁵ Cf. Michel Foucault, 1966, p. 32 ff. An attempt to revive this style of thinking is *The language of herbs* by Mellie Uydert (1961), which lists (the medicinal properties) of herbs of the sun, the moon, Mercury, Venus, Mars, Jupiter and Saturn.

Biology – Apollonian biology equals classification, while classification equals hierarchy. A perfect introduction into Apollonian classification is Plato's *Statesman* (1925/1995). As Plato explains, classification is essentially the cutting of a line into two halves, preferably intersecting the line exactly in the middle (262C, 265A) with on the one hand the category that we want to separate (higher in value), on the other hand the other, less valuable half. Classification thus means drawing a line in the sand while making a section in the middle. Subsequently, one of the halves is divided further by again dividing a section through the middle. For instance, a line representing humans may be divided into two parts, Greeks and barbarians. Along these lines, we may divide living from non-living entities by cutting a line right through the middle. Similarly, the class of biped animals can be divided into featherless and feathered bipeds (with humans being featherless bipeds), and so forth. Aristotle was a master in classification, but always on the basis of criteria that nature herself provided. An auxiliary science of classification was anatomy. Apollonian researchers are not inclined to conduct research on live animals. The concept of an experiment is alien to Apollonian thinking. This geometric method differs from Faustian classification: ordering chaos by introducing criteria adopted by the researchers themselves (e.g. the number of stamens in flowers), while contrivances (microscopes, etc.) are often required to determine these characteristics.

The Magian animal is a fabulous animal. Paradise is populated by such animals, e.g. friendly lions, while the unicorn is perhaps the most typical product of Magian fabulation. We encounter such animals in mythology, but also in heraldry. *Moby-Dick* is a Magian animal, resurging in and disrupting a world where whaling had evolved into a Faustian industry, with whaleships serving as mobile slaughterhouses. The maniacal captain who hunts the white whale is a Faustian hero who embodies the nihilism and negativity of Faustian thinking and wants to destroy (annihilate) the object of his fascination and aversion, namely *Moby-Dick* as a Magian relic: that is his mission and duty, even if this results in self-destruction. Melville's novel depicts the merciless struggle between Faustian civilization and Magian ideas, under Faustian conditions: a brutish struggle for survival, resulting in exploitation and decimation of both humans and whales, until only nothingness remains.

Faustian biology is vivisection. A guilty conscience on the side of the researcher is an inevitable aspect of the constellation, for the experimentalist is a divided subject, torn between the will to know and a rigorous sense of personal responsibility for animal suffering. In order to acquire knowledge, he is forced to do something which is inherently evil, resulting in a conflict between epistemological demands and the voice of conscience (Zwart 2016). In order to really understand the animal, the latter must become a research animal. Performing an experiment inevitably means damaging the animal, killing it even. The laboratory animal is completely in the hands of the researcher. The animal lab is a sadistic universe. But increasingly, humans are turned into lab rats as well. Foucault (1975) describes how thousands of human bodies were brought together

in army barracks, factories and prisons, where they were to be transformed into a reliable, productive work force in support of the industrial revolution. These settings became laboratories of power, where individuals functioned as research subjects, exposed to the gaze of surveillance, to examinations and measurements, to training programs and dietary regimes: technologies developed for the purpose of producing useful, accountable, employable human beings. Georg Büchner's drama *Woyzeck* (written in 1836) stages for the very first time a completely new type of role played by human beings, namely that of an experimental research subject participating in a trial explicitly designed to demonstrate a theory, to systematically examine a hypothesis (Zwart 2013a). The ultimate aim of this theory is to predict and control human behaviour. Büchner was a biologist who conducted research on cranial nerves, and in his literary drama he envisioned the emerging arena of experimental psychological inquiry.

Faustian biology is an active form of thinking. But Faustian biology also means thinking on a grand scale, seeing living nature as an evolutionary process spanning billions of years. And like human history, this natural process is driven by struggle: the struggle for existence. Human history is an intensification of this struggle for existence, and this intensification and acceleration is due to the disruptive development of technology. Technology allows the Faustian will to know to overcome the recalcitrance of the real. Faustian biology is inherently technical, is biotechnology.

§ 2. Domains of thinking (2): faith, hope and love

Religion – The Apollonian God is an architect, a demiurge who turns chaos into cosmos: a harmonious paradigm for human architects and politicians, for mathematically trained aristocrats. When Plato visited the oracle at Delphi, what was whispered into his ears was a mathematical problem he was able to solve. The oracle had converted to Apollonian thinking.

The Magian God is a transcendent God who already determined, at the beginning of time, when the existing world will vanish, to give way to something completely different: the Kingdom of Heaven. He is also the God of grace, on whom we completely depend. The Magian attitude to life introduces an unbridgeable gap between the exterior person (the citizen, dwelling in the mundane realm) and the interior, spiritual person, devoted God. The gospel of Luke begins with a census. The initiative is taken by the Emperor. Joseph and Mary are obedient, but at the same time completely indifferent. They are not interested in the Emperor at all, they place their trust in God. The census does not interest them in any way, it is an event bereft of purpose, and only meant to create optimal conditions so that God's Will be done (they are transported to the right location). Precisely at the moment in time when the powers of this world seem at the height of their power, expressing itself in intimidating buildings, the light shines into the world and Magian faith begins to spread: the message that the

advent of the Kingdom of Heaven is imminent. For the Magian subject, worldly powers are meaningless. The worldly kingdom may destroy the human body, but this body will be resurrected, by the grace of God, and awake in a glorified state. Jesus' message is a very simple one: the kingdom of heaven is at hand, it is within you. Anyone who understands what this means, has understood the logic of Magian thinking. This new empire is not of this world. It is a spiritual community of like-minded people, silently yearning for something which is radically different. Magian subjects will rejoice upon hearing this message, which is sheer folly to the wisdom of this world, and it is bad news for the powers of this world. The star observed by the Magi (Mt 2: 2), did not announce the birth of a king, but the birth of a style of thinking. They used Magian techniques to announce the time and place of this dawning moment as accurately as possible.

The Faustian God is defined by dogmas. Unbelievers are heretics. Faustian theology is essentially dogmatic. The Faustian credo is: *Credo quia absurdum*. The Faustian subject is willing to abandon rationalism on the basis of a Faustian wager: the gamble that God exists. Apollonian gods are gods of the day: light gods. Faustian gods are forces of darkness. They represent what Hegel calls the night of the world. The *Summa Theologica* by Thomas Aquinas has the structure of a cathedral, not only because of its size and its heavy content matter, but also because of the vertical orientation, the architecture at work: the central nave, with side aisles, the strong dogmatic pillars on which it rests. The Faustian believer is defined by nocturnal yearning: Saint John of the Cross, author of the spiritual poem *Dark Night of the Soul*, describing a path through darkness towards an unknown destiny. We ourselves *are* this darkness, when we see each other in the eyes. God dwells in nothingness, and atheism is unmistakably a motif of Faustian thinking (Hegel, 1807/1970, p. 172), for notwithstanding the triumphal proclamation that God does not exist, the atheist sooner or later realises that God is omnipresent, so that he unintentionally but inevitably becomes *obsessed* with the God he denies. God becomes his symptom. The Faustian atheist wants to convert, but his texts continue to be tainted by the name of God, as an ineradicable stain, a secret symptom of chronic doubt. The Epicurean gay atheist is a figure which belongs to the Apollonian past.

Architecture – Architecture, according to Spengler, provides an optimal mirror for studying a style of thinking. Great architectural artworks capture the spirit of the time (its grounding concept) in stone. A style of thinking is made tangible when it becomes incorporated in architecture. The archetype of Apollonian architecture is the Greek temple: Euclidean mathematics immortalised in stone. The Pantheon is the ultimate Apollonian structure, a temple that is actually no longer a temple but a mystical, Magian space: a temple which is at the same time Mosque. The Pantheon is a boundary: an attempt to capture and reconcile two basic ideas, the Apollonian and the Magian experience

of space.²⁶ The archetype of Magian architecture is the grand Dome (Christianity), the grand Mosque (Islam). The Pantheon is the Ω of Apollonian and the A of Magian architecture. When Jesus of Nazareth went about preaching, a Magian architectonic style did not yet exist. He travelled through a landscape where Apollonian buildings had arisen, the kind of architecture he detested, and his verdict was a negative, antithetical one. And yet, he discerned in Peter the “rock” on which the edifice of a new faith would be erected. Even the Jewish temple in Jerusalem was essentially an Apollonian structure. Therefore, Jesus predicted that this immense building would soon collapse. The Magian Al-Aqsa mosque would replace it, creating optimal cavernous conditions for a new type of religious experience.

The archetype of Faustian architecture is the cathedral: a forest of stone in which the Faustian desire for height manifests itself. The Magian house of prayer is cave-like, but Faustian pillars resemble immense tree trunks with branches. Light enters through stained glass windows, as if filtered by foliage. In comparison with the Gothic (that is, Faustian) cathedral, Saint Peter’s is a hybrid construct, a partial return of Apollonian and Magian ideas, but precisely in its powerful immensity it is unmistakably Faustian – apparently without wanting to be like that. Saint Peter’s Dome is a style conflict in stone. A truly Faustian desire expresses itself in the intimidating height and immensity of this building. Even though the Dome was intended to be spherical, there is a Faustian desire for height, so that the dome is supra-spherical. Saint Peter is a synthesis if you will of Magian and Faustian drives, but radiates a Faustian Will to Power. That is why Paul Rée insisted on writing his anti-encyclicals inside this building, as Lou Andreas-Salomé informs us in her *Lebensrückblick* (1968).

A typical Faustian building is the lighthouse, preferably erected on a gloomy coast, a key element in Verne novels. Faustian architecture expresses a desire for height, of which structures such as the Eiffel Tower are emblematic icons. The emphasis is on verticality, on social mobility. Ibsen’s play *Master-builder Solness* is a Faustian drama about desire and anxiety concerning height, climbing the social ladder by designing tall buildings (Zwart 2014b). Perhaps the most Faustian of all buildings is the skyscraper, the supreme symbol of corporate capitalism, of America itself: the Finger of God (Glynn 2001/2011). Manhattan has always been a skyscraper utopia and in 1989, eight of the ten tallest buildings were still located in the United States. Yet, today, all of the world’s tallest buildings have been built elsewhere. Alfred Speer’s art deco Berlin would have been ultra-Faustian, but remained a Faustian dreamscape.

Politics – Apollonian politics established a polis, a city-state, of Apollonian proportions. The Roman Empire (Apollonian civilization) aimed to include the whole world inside its sphere of influence. In the cold, barbaric regions of the Germanic North, very little could be gained. Germanic visitors of

²⁶ Peter Sloterdijk speaks about architecture as “[Eine Kraft] die nicht so sehr ihre Zeit in Gedanken fast, sondern die Gedanken der Zeit in Bauwerke” (1999, p. 438).

ancient Rome, astounded by the city's wealth, wondered what the murderous Roman legions came looking for in their dreary regions. The desire of the Empire was to expand its limits, to increase the radius of its sphere of influence, but this was not necessarily motivated by considerations of economic gain. It was fuelled by a basic conviction that could not be called into question.

The basic idea of Magian politics is the Two Kingdoms theorem. The interior person or interior castle, as Teresa of Ávila phrased it, belongs to another Empire. The dawning of this Empire is an event that overcomes us, happens to us – we are completely unable to *make* it happen. Magian believers are waiting for and preparing themselves for the demise of the existing and the coming of a completely different world. In the meantime, Magian believers may do good deeds, but they cannot bring the great event closer, nor accelerate it. We are not *entitled* to the coming of the new dawn. Virtuousness merely increases our own preparedness for the arrival of the New Jerusalem. This means that Magian individuals are divided subjects: they are part of two incompatible realms: the visible realm (doomed to ruin) and the realm of God: the community of true believers, awaiting what is upcoming: waiting for...

The materialization of the Faustian principle in the political domain is the Nation State, which became increasingly powerful, centralised and nationalistic in the 19th century and increasingly began to dominate the daily lives of citizens via “biopolitics” (Foucault 1976). The state is an immense machinery for mobilising populations for economic and military purposes. It entails the nationalisation of education and health care, of art and government, even of science and religion. Internally, the state becomes a pervasive force and externally, the state becomes imperialistic. Faustian unrest unleashes mobility, while fossil fuel machines make new forms of mobility possible. Studies that Michel Foucault published in the 1970s constitute a genealogy of the Faustian state. *Discipline and Punish* (1975), for instance, analyses the technologies of power that nation states developed to discipline, nationalise and educate the population via schools, the army and the psychiatric ward (Zwart 2013a). Foucault meticulously describes multiple techniques for exerting Faustian power in barracks, factories and classrooms. He describes how Faustian discipline refashions the bodily movements and motor skills of the individuals involved. The state even appropriates and redefines basic existential categories such as time. In coalition with big industry, the nation state determines when the working day starts and the retirement age sets in. State power proliferates via supervisory bodies and evolves into bio-power: a set of population policies that considers humankind as an economic resource, – although the Faustian logic will often only partially realize itself and will continue to face stubborn populist resistance in various social practices (Achterhuis 1998, p. 27).

Even language becomes nationalised. Martin Luther embodies (as an obedient rebel) a paradoxical boundary zone. On the one hand, he represents resistance and was responsible for introducing the language and vocabularies of the lower social strata into written and printed discourse, including a plethora

of obscene elements. At the same time, he created a unified German language, thereby unifying Germany in a cultural sense (although political unification in the case of Germany would be considerably belated). Luther's intervention is driven by a Faustian impetus, but at the same time his theology incorporates Magian components, such as the anthropological theorem of humans entailing two personae: a worldly (political) subject and a spiritual (converted) one.

Something similar can be noticed in Communism many centuries later by the way. On the one hand, Communism seems hyper-Faustian, and the Socialist State aims to determine, pervade and refurbish all aspect of life. At the same time, there are some Magian moments at work, such as the idea that the state will wither away once the paradise of justice and salvation has dawned, and the idea that revolution will be a spontaneous event, especially endorsed by the more radical branches of communism, e.g. council communism. According to council communism, the revolution is not something which is actively brought about in a voluntarist manner by a communist party (as an avant-garde of professional revolutionaries), as Lenin argued. Rather, it should be envisioned as an emerging event for which the workers of all countries must prepare themselves, but which cannot be enforced top-down. It will be brought about by inner necessity. Political interventions can neither cause nor prevent the coming of the revolution. Workers employed in Faustian factories are called upon to prepare themselves for this inevitable event. Therefore, Friedrich Engels was quite right to emphasise the congruence between Socialism and early Christianity, in his rereading of the *Book of Revelation* (Engels 1883/1962). Although techniques for calculating and predicting Judgement Day have now become obsolete, Engels argues, the relevance of this book for nineteenth-century readers consists in that it shows how Christianity took hold of the masses as a spiritual epidemic, just as modern socialism did. It also indicates how early socialism still retained some traces of Magian thinking, which became increasingly obfuscated in later, increasingly technocratic (i.e. Faustian) versions of State Communism and Social Democracy.

Economy – The most decisive invention of Apollonian economics was the metal coin. Coins tend to have a perfect geometric shape and the Roman Empire would have been unthinkable without the use of coins. Once minted, they spread across the empire, as the emblem of imperial power, and a tangible testimony of the Pax Romana. Coins symbolised imperial politics, which is why mendicant teachers such as Jesus of Nazareth detested them. For Jesus, the coin is a worthless object: render unto Caesar what is Caesar's, and unto God what is God's. Jesus spread the word, the Roman Empire spread the coin.

Do not collect treasures on earth, Jesus tells His followers, but Christian churches and monasteries later became treasuries, because the treasure is the archetype, the basic symbol of Magian economic thinking. The Apollonian coin circulates, but the Magian treasure results from secret accumulation of sublimated entities in consecrated spaces, with the Holy Grail as ultimate showpiece. Magian fairy tales (*Thousand and One Nights*) inevitably lead the way to treasures,

hidden in Sesame-like cavities. “Talents” are buried in fields. All things of value are part of a treasure. The Faustian archaeologist who develops a fascination for Magian cultures, is a treasure hunter. In the Magian archaeological stratum, treasures are waiting to be found. The Faustian desire is to bring these hidden, frozen treasures into circulation once again, even if this requires theft.

An important Faustian innovation in the domain of economics is double-entry bookkeeping: debit and credit, the economic variant of the function concept in Faustian experimental physics. Here too, numbers express relationships and operations. The treasure becomes capital, is liberated as it were, so that it can be circulated and invested. From a Faustian perspective, hidden treasures are worthless. Capital materialises in ways that reveal its Faustian nature: in the form of factories and machines. Treasures grow steadily or freeze, but capital increases exponentially: doubling every so often. The exponential curve or function symbolises the Faustian thirst for spectacular growth. Karl Marx and Friedrich Engels revealed the Faustian nature of capital, which expresses itself not only in relentless exploitation of human resources, but also in various other historical phenomena, from gold rush up to large-scale environmental pollution. Exponential curves reflect how capital intensifies the metabolism between humans and nature.

Medicine – Apollonian medicine urges us to live in harmony with nature: in accordance with nature, because nature means order, a state of balance and health that we must also seek to realise in our own physical existence. Apollonian medicine is exemplified by the doctrine of the temperaments, striving for balance.

The core element of Magian medicine is the search for a panacea: the substance that heals all ailments. Magian medicine relies on suggestion. Jesus heals by laying his hand on someone, perhaps after spitting in it, or by uttering a phrase. Jesus says it, literally: Your faith has healed you.

Faustian medicine aims to dominate the body, healing it by controlling it. Faustian surgical interventions always lead to damage, causing detrimental side effects. Faustian medicine exerts medical power. Driven by the Will to Power, Faustian medicine develops powerful contrivances, such as X-ray devices, resulting in a full disclosure of the body, making it transparent as it were. When Nietzsche speaks about philosophising with a hammer, he means: thinking by using a reflex hammer and a stethoscope: devices for asking questions, enforcing the body to respond to diagnostic queries.

These differences can also be found in medical ethics. Apollonian ethics is Hippocratic: an ethic of prudence and restraint. Nature must do the work. In case of doubt (and this is mostly the case, of course), refrain from action (*in dubio, abstine*). Above all: do no harm. It is a passive form of medicine, advising patients to go on a pilgrimage, or to follow an optimal diet, or to find the right climate.

The Magian doctor is a charismatic benefactor, and the core concept of medical ethics is *caritas*. The virtuous patient is someone who can wait patiently, entrusting his health to caring hands and experiencing suffering as a test of faith.

Faustian ethics wants to control life at all costs. If death is inevitable, there is the Faustian will to determine the moment of death ourselves (euthanasia). The backdrop of medical interventions is a pervasive struggle between physician and nature. Nature is no longer the source of balance and health, but the cause of the disease, the enemy (Zwart 1994). The Faustian doctor wants to act, wants to take risks, assuming the role of a medical hero who dares to cross boundaries. Faustian ethics must curb the medical Will to Power.

Ethics – Apollonian ethics seeks the good measure: temperance, the golden mean. Enjoy with moderation. Courage is the middle position between cowardice and recklessness, while generosity is the middle between thrift and waste. Justice means a proportional distribution of goods: the wealth of an individual must be in proportion to his value for the polis. Equity can be geometrically determined, as Aristotle demonstrates.

The core moral attitude of the Magian style of thinking, however, is resignation. Christians are expected to imitate Christ. Human existence is an exercise in resignation. Good deeds and an ascetic lifestyle do not hasten the advent of the Kingdom of God in any way, that is up to God the almighty to decide. Asceticism means that the individuals involved are preparing themselves for the inevitable event, the coming of the Kingdom.

A key characteristic of Faustian ethics is the interminable struggle between duty and inclination, between responsibility and desire. The Faustian Über-Ich is extremely demanding and harsh. Faustian ethics is an active form of ethics, focussed on what we actually do. The crucial question is “what should I do?”, – with an emphasis on both “I” and “do”. The moral subject is supposed to act. Even indecision counts as a form of action. It is impossible to fully live up to a Faustian sense of duty. We cannot realise the categorical imperative in practice. Faustian ethics entails a struggle for recognition in a competitive arena. The Faustian subject really wants to make a difference.

Love – Apollonian love is symmetrical. The beloved is our other half, our alter ego. Beauty is proportional, adheres to the golden ratio as a mathematical idea, and the fusion with the other puts the phantasm of completion into practice. Discussions about desire in ancient culture refer to this model. According to Lacan, this sexual practice (this *ars erotica*) assumes a pre-established harmony between what lovers want and what the beloved has to offer (1994, p. 15). By subjecting ourselves to a training program, by managing our drives, happiness can in principle be achieved. According to Lacan, what ancient ethics teaches is that we should moderate, cultivate and manage our drives. Ancient practices of παιδεία sculpt the natural drives into perfection and entail auto-plasticity, adapting oneself to the demands of culture, modelling desire, enabling individuals to function optimally and happily (Lacan 1978, p. 107), a kind of dressage (Lacan 1966, p. 588). Certain segments of body and soul were subjected to special training programs, much like learning to play a musical instrument. The Apollonian subject was an ethical virtuoso. Perhaps we still see this in top pianists

for whom, as Nietzsche phrases it, virtue consists in painstakingly educating each and every finger: dactylic ethics (1980, KSA2, I, § 196).

Magian love entails the willingness to wait, waiting for a sign of love, even if this means waiting in vain. The purpose of desire is the *unio mystica* or spiritual ecstasy. Magian love has the structure of an endless foreplay and is similar to alchemy in that it entails a sublimation of the object. To the extent that the object is impossible to reach, its value, its power of attraction increases. Magian love requires a lifelong attitude of servitude, but the outcome remains uncertain, and cannot be enforced, as waiting means waiting for a sign of benevolence or mercy. Love is an exercise, a test, a “trial” (“épreuve”) allowing the lover to prove the exceptional qualities of his love (Foucault 1994a). The other is invisible, exalted, always at a distance: a fabulous, mystical object. The medium of love is poetry. In each and every poem, this type of love is enacted. We love the one whom we would not dare to touch. Due to the trial of abstinence, the beloved Other is transubstantiated into something that is both inviolable and irresistible. From a distance, the Other exerts a very strong attraction on the craving subject. Magian love is a spiritualised form of craving for what gradually becomes unspeakable and unimaginable.

In Faustian love, the physiological dimension is placed upfront, albeit coupled with a sense of responsibility, with ethical imperatives, so that the Faustian lover is a divided subject, always in a state of conflict: an artist for instance who has to choose between his art and his muse. Art is erotic art, and highly competitive. Wagner’s *Tannhäuser* stages a contest between Magian (courtly) and Faustian (physiological) love. The former is represented by Wolfram von Eschenbach, who sings his hymn of praise to the Evening Star, while Faustian love erupts in the song that is performed by Tannhäuser himself. His love is restless and insatiable. During his sojourn in Venus’ Cave, he is too close to the Thing, and the proximity becomes claustrophobic, but the Magian ethos of patience and distance is likewise unbearable. The advice is to try a Magian technique: a pilgrimage, penitence at a distance, but in the end, he cannot resolve the conflict.

Apollonian love is an exercise in self-restraint, as we have seen, but the Faustian lover wants to control the beloved Other. Desire inevitably results in a struggle for recognition, a battle between the sexes. And while the Magian object is untouchable, the Faustian object is like a laboratory animal, subjected to physical erotic experiments. Turgenev’s novel *Fathers and Sons* describes an erotic “regression”. When the Faustian scientist Yevgeny Bazarov, who subjected large numbers of frogs to vivisection, for the first time faces the woman with whom he is destined to fall in love, he exclaims: “What a magnificent body ... Shouldn’t I like to see it on the dissecting-table!” (1861/1965, p. 155). What this prototypical vivisectionist does not say, but what he probably wanted to say, is: during coitus. Gradually, however, despite Bazarov’s Faustian ethos, he falls completely under the spell of this alluring object. The woman hypnotizes him and drives him into frenzy. The moment of coitus is postponed again and again and

finally does not happen at all. The integrity of her body forbids it, her body becomes sublimated, acquiring a value that is beyond comparison with the bodily features of other mortals.

A telling chapter in the genesis of Faustian love is Shakespeare's *Hamlet*. Both Jacques Lacan (2013) and Jan Hendrik van den Berg (2003) point to Hamlet's puritanism, his aversion to sexuality, his negative attitude towards women. Freud (1900/1942) also has an eye for this Puritan moment, framing it as Hamlet's *Sexualabneigung*. Hamlet, Lacan says, is not a rebellious teenager, but remarkably docile (Lacan 2013). He does as he is told, does what others expect from him. His obedience is feigned, however. In reality, he is waiting for an opportunity to act. Both Claudius and Hamlet try to restore the symbolic order, which is temporarily facing a state of crisis after the death of the king. In the early career of monarchs, there is a precarious moment: the symbolic order has to be reset, and the young prince is not yet acknowledged as the one who has the power. Initially, the new monarch looks unreal. A Prince must pass over corpses to become a legal sovereign. Hamlet will have to kill if he wants to become king (and the questionable justification of this act of violence is that he is prompted to do so by a ghost). Princes must commit a crime before they can do good. This is the political setting.

Hamlet studied in Wittenberg, the cradle of European Protestantism. Hamlet is not the Renaissance Prince people often take him to be, quite the contrary, – in Wittenberg, Hamlet became a puritan. The problem is not Hamlet's 'oedipal' desires towards his mother. Rather, Hamlet has problems with his mother's desire as such. He wants her to moderate herself. Hamlet preaches abstinence, imploring her to give up her desires. That is what he tells his mother, a worldly, Renaissance aristocrat for whom life means pleasure. His mother still wants to enjoy life for a while. Her son, however, spoils palace parties with offensive remarks. He hates beer drinking, sex, partying, all things mundane – and knows only one desire, he is obsessed with death. The following quote clearly indicates how insultingly he treats his all too worldly mother:

Good night, but go not to my uncle's bed,
Assume a virtue, if you have it not,
Refrain tonight...
And that shall lend a kind of easiness
To the next abstinence... (III 4)

Thus, the young puritan Hamlet addresses his Renaissance mother. Claudius is likewise a Renaissance figure, but Hamlet is a completely different type. Not a feudal wolf who wants to kill a rival. Quite the contrary, he tries to put an end to feudal games. His desire is to establish a completely different type of power.

Another author to consult when it comes to understanding the logic of Faustian thinking in issues of love and marriage is Immanuel Kant, who made two quite telling comments in this respect. First of all, he defined sexual

intercourse as the reciprocal use of the sexual organs and capacities of another, thereby reframing marriage (which, from a Magian perspective, is considered a sacred union) as a transaction. As to erotic desire, Kant argues as follows. Suppose that someone claims to experience a craving for sexual pleasure of such intensity that he cannot possibly resist the temptation. Yet, if gallows were erected outside the bedroom where intercourse is supposed to take place, and if it is pointed out to him that he will be hanged immediately after satiating his passions, would he not be able to control his sexual urge? We need not long doubt what would be his answer, Kant argues, in his *Critique of Practical Reason* (1788/1971, A54). Lacan, however, rightly observes that Kant apparently fails to notice something very important. Why would this lady, this “object”, trigger such a strong desire in the first place? Isn’t it precisely *because* the gallows are there (1986, p. 131)? Isn’t it precisely the prospect of capital punishment which triggers such a Faustian, self-destructive drive? Whereas the Magian subject respects the inviolability of the object, Faustian desire is precisely a longing for excess. Faustian love craves for dangerous liaisons.

Civil marriage, i.e. Faustian love as civilisation, is a synthesis of both dimensions: of the formal, contractual dimension (as defined by Kant) with Faustian desire which, without this domestication, would be disruptive or even life-threatening for both parties involved, as enacted in the story of Faust and Gretchen. This disruptive dimension is also convincingly articulated by Oscar Wilde in his *Ballad of Reading Goal*: “each man kills the thing he loves”. Civil marriage is based on mutual consent by craving and divided subjects, a dialectical unity of struggle (for power) and recognition (of each other’s autonomy). The other is a real other, with a desire of his or her own, so that this marriage results in a life-long process of conversation and negotiation, a struggle between duty (responsibility, the stabilising factor) and “inclination” (Faustian desire, the disruptive factor): a combination of attraction (bonding) and the strive towards disentanglement. This explains why the dialectic of bourgeois marital existence is such an inexhaustible source for drama and novels. Ibsen and Tolstoy were born in 1828, just like Jules Verne. They analysed civil marriage in all its finesses. In their eyes, marriage is literally a drama. In Ibsen’s female characters, there is a secret desire for a completely different type of existence. Whereas she seems able and willing to adapt herself to her bourgeois, Victorian environment, there is a latent, hidden, “other” other, who tries to liberate herself from these Victorian restrictions, longing for a completely different type of lover, a completely different style of life. The turning point is a moment of confession. The bourgeois drama starts with a situation of discontent and culminates in remarkable frankness. Marriages tend to be unhappy because it seems impossible to live up to the other’s desires.

Verne is the photographic negative of Tolstoy and Ibsen as it were. With the possible exception of Van Mitten's unfortunate marriage (1883/1885),²⁷ he has never been able to describe a credible marriage. In Verne, marriage is either completely absent (in the sense that his main characters are bachelors) or extremely cold-blooded (in the sense that the desire seems to be completely absent). In short, marriage appears to him as an impossible situation.

Psychoanalysis starts with a series of bourgeois love histories: Breuer and Anna O, the Dora case. The marriage situation raises ambivalence, and is not wholeheartedly endorsed by the unconscious. Consciously or unconsciously, the marriage partners continue to crave for a completely different kind of partner, an unknown possibility that suddenly reveals itself. The manifest position of the conscientious ego is secretly undermined by unconscious desire.

Foucault (1976) distinguishes two types of discourse concerning sexuality, namely *ars erotica* and *scientia sexualis*. Whereas the former flourished in Ancient and Oriental (Apollonian and Magian) societies, the latter is typical of the West. *Ars erotica* does not distinguish between what is prohibited or allowed, but rather strives to increase the intensity of pleasure through stylisation of desire. Modern Western culture, on the other hand, has produced a *scientia sexualis* with confession as its main technique. This technique was developed in a Gothic monastic context and optimised to perfection by the Jesuits. Later, in the 19th century, it was adapted to the demands of modern scientific discourse. The psychoanalytic technique of free association is an intensification of the requirement to tell everything about sex. Freud himself agrees that analysis is a radicalisation of confessional practice, as patients are not merely expected to confess what they know about their own desire (avowing their sins), they must even give away what they do not yet know or do not want to know about themselves (Freud 1926/1950). In these two models, as fleshed out by Foucault, we easily recognise the profile of Apollonian and Magian sexuality (moderation, ascetic exercise, stylisation) versus Faustian sexuality. Apollonian sexuality is all about measure and moderation: a harmonious use of pleasure, Magian desire is about rituals, Faustian desire is disruptive.

An important moment in the genesis of Faustian sexuality is the fourth Lateran Council (in 1215) that turned confession into a general practice. According to Foucault, it marked the beginning of a sexuality discourse, as a monastic confessional practice was transferred from monastic culture into Faustian civilisation. The issue was discussed in close relation with the struggle against the Albigenses or Cathars, who adhered to Magian ideas, both in theological and in sexual matters. There is a clear affinity, in terms of style of thinking, between Cathars and troubadours (spokesmen of courtly love), two movements that caused havoc in the same region, in Southern France, more or less at the same time. In other words, during this crucial council, the Church

²⁷ "Look here Van Mitten, frankly now, I think you are very cool about your wife".
"Cool! The expression is even too warm, if applied to my regard in that quarter".

unleashed a polemic against Magian rivals while endorsing a Faustian version of the true faith. Confession became an instrument in the struggle for self-control, a technique for disciplining human desire. Confessional practice introduced the figure of the Faustian priest. While the power of the Magian priest was based on suggestion (silent forms of influence, involving concise phrases), the power of the Faustian priest is based on excessive verbalisation of desire by the speaking subject. When Freud later replaces hypnosis with his famous talking cure, the Faustian style of thinking had evolved into Victorian civilisation.

§ 3. Categories of thinking

Time – A key characteristic of the Apollonian experience of time, as Spengler explains, is that it is focussed on the present. In comparison with Magian and Faustian time, the Apollonian temporal dimension seems under-developed. Sundials do not lend themselves to exact time measurement, nor do water clocks (a rarity, by the way, a technical curiosum). Events are dated in terms of the years in which the Olympic Games took place. A person's age is indicated in cyclical terms, in terms of stages of life. When we are able to mention a Greek author's date of birth at all, this often required quite some expert research, meticulous reconstructions by modern historians based on vague indications. Apollonian historians describe recent events. The past that lies further away is already mythological. Events that are worth preserving for posterity, are memorised, but clad in narratives. What applied to the Apollonian dimension of space also applied to the temporal dimension: it is a world on a human scale. The focus is primarily on the present. Past and future do not extend into infinity. The cosmos turns in circles and sooner or later, all celestial bodies will return to their position. Plato speaks in his *Timaeus* about the "Platonian" year: the period of time it takes for celestial bodies to complete their movements in concordance. It may take thousands of years for celestial bodies (sun, moon, planets) to arrive at the same positions as they are today (36.000 years, according to Plato: an enormous expanse of time, for Apollonian thinkers), but it is still a circular movement back to the beginning. There is no precise timing. In Plato's dialogues, philosophers of different generations are presented as contemporaries. Academic activity involves competition between local schools, but it is never a race against the clock as is the case in Faustian scientific competitions.

The difference with the Magian experience of time is quite significant. The present has little meaning for the Magian frame of mind. Past and future are more important. The temporal horizon stretches from the moment of commencement (genesis) to the moment of fulfilment (judgement day). The time dimension is dramatized, moreover. The future is coming towards us, as the dawning of a new world. Time as we know it will come to an end, will be abolished. The present is under the sway of preparedness, it is a preparation for the coming of a major transition. The present is of interest only insofar as certain

signs announce the coming of the Kingdom of God. The perfection that Apollonian thinkers aimed to realise in the present is projected onto the future. A craving for perfection and sublimation is at work, but to exist means to await salvation. The world is anticipating a divine intervention, a moment of grace. Alchemists try to accelerate the time-consuming process of sublimation in their laboratories. Their desire is to compress the time dimension, to make a leap towards perfection.

The Faustian time dimension is immense. Space and time have now expanded into infinity. Faustian thinking experiences time as a logarithmic scale: a process of acceleration is discernible, both in natural and in human history, and the Faustian symbol par excellence is the exponential curve, reflecting unsettling growth and growing unrest. The present is a moment of crisis and we are constantly on the eve of collapse. Magian historians are hagiographers, but Faustian historiography entails an objective, detailed, meticulous description of the past, an effort to strengthen our grip on the past through accuracy and precision. The dramatic increase in scale that characterizes Faustian spatial experience is also reflected in the Faustian concept of time. Faustian biology is not only biotechnology (active thinking, producing knowledge via interventions), but also evolutionary biology. The epistemic condition of possibility for the concept of evolution is the Faustian sense of time. Human time, the time of human history, would be insufficient for evolution to be plausible. Evolutionary processes require incredible amounts of deep time. Compared to evolutionary time, human time (measurable in years, decades or centuries) is insignificant.

Space – The Apollonian world is a world on a human scale. Distances between celestial bodies can be expressed in terms of thousands of kilometres. For the Magian mind-set, the magnitude of the world already increased dramatically. Precisely in this astonishing magnitude, God's magnificence stands out. Notably the vertical dimension of spatiality has increased, as Magian thinking tends to put less emphasis on the horizontal (worldly) dimension. God is "in excelsis", in the heights, and one can be a Christian, Jew or Muslim anywhere on earth. The Mormons who founded Salt Lake City were looking for a place so desolate that no one would be interested in claiming it: no man's land — anywhere. It is there that the city of God descends from above. The mind of believers is oriented upwards, along the spiritual axis. This is exemplified by the position of the stylite (from *στῦλος*, pillar) or pillar saint, who has already begun to move upwards, like a human cursor, along the vertical axis (Sloterdijk 1993).

The spherical concept was not undisputed in ancient times. Atomists saw the universe as a centreless void, in which particles wandered aimlessly about and clumped together. After Magian thinking had expanded the universe notably in the vertical direction, the spherical cosmos was finally shattered to give way to the Faustian concept of an infinite universe. The great globe was dead and the "Irrfahrt der Punkte" began, as Sloterdijk phrases it (1999, p. 134). The seclusion of the spherical world gave way to frightening emptiness: *das Ungeheure*. On Planet Earth as a concrete terrestrial environment, relentless struggle rages, not

only between species, but also between camps, between Reformation and Contra-Reformation, between a modernist (rationalist) conception of nature (as a reservoir of resources) and a romantic conception of nature (as a sublimely expanded natural landscape). Nature is constantly both protected and damaged. Faustian nature is a battleground in all respects, also between *visions* of nature.

According to Sloterdijk, the current environmental catastrophe must be seen in the light of this fundamental transition. Humankind had left the protective sphere and we now create our own climatic conditions. In a Faustian environment, we are no longer at the centre, no longer “im Mittelpunkt eines Kreises” (Freud 1917/1942, p. 133). According to Sloterdijk, discontent in civilisation originates in the decline of spherical spatiality and the collective experience of “stress” to which this gives rise, as we find ourselves confronted with a dark, silent, uncanny, aimless universe: a Faustian universe adrift. Lacan considered “cosmonauts” (Russian space travellers) a misnomer because the cosmos no longer exists: spacecraft is launched into a decidedly Faustian space (Roudinesco 1993). Faustian experience entails a dramatic up-scaling of all dimensions of experience, notably space and time. The universe has become immensely large. Faustian imperialism goes much further than the Pax Romana, the desire to include the whole inhabited world into one political sphere of influence. Faustian imperialism also, or even preferably, appropriates the unexplored realms. According to the heroes in the novels of Jules Verne, there are no uninhabitable areas, only uninhabited ones, as yet. Faustian desire wants to populate the apparently uninhabitable. It is a quest for a Newfoundland, preferably uninhabited.²⁸

Causality – Archaic thinking does not yet think in terms of cause and effect, according to Hegel (1969). Nature and consciousness did not segregate as yet. Nature is not yet “other”. During Archaic prehistory, humans developed techniques to influence nature, but these were not based on insights into causal relationships. By means of certain phrases and gestures, shamans conjured the unfathomable powers of nature. They interacted with nature via songs and music, creating an acoustic ambience in which a dialogue unfolded. Hegel speaks of an imaginary powerless power over nature. The difference between sorcery and

²⁸ As Doctor Clawbonny phrases it: “I can’t believe any land uninhabitable; man, by many sacrifices, and for generations using all the resources of science, might finally fertilize such a country ... Without doubt! If you were to go to the celebrated countries of the world, to Thebes, Nineveh, or Babylon, in the fertile valleys of our ancestors, it would seem impossible that men should ever have lived there; the air itself has grown bad since the disappearance of human beings. It is the general law of nature which makes those countries in which we do not live unhealthy and sterile, like those out of which life has died. In fact, man himself makes his own country by his presence, his habits, his industry, and, I might add, by his breath; he gradually modifies the exhalations of the soil and the atmospheric conditions, and he makes the air he breathes wholesome. So, there are uninhabited lands, I grant, but none uninhabitable.” (Verne 1866)

superstition is that in the latter case, consciousness is already modern insofar as it tends to interpret reality in terms of cause and effect. For indeed, superstitious consciousness perceives causality everywhere. Random events become connected with each other. Where rationality fails, superstitious consciousness relies on fantasy and associations.

In Jung's writings we encounter a like-minded analysis of archaic thinking. He describes the human psyche as a nocturnal landscape and consciousness as a cone of light illuminating parts of it. Worlds light up in this darkness that we left behind without completely renouncing them. At times, we venture into the twilight. He also compares the human psyche with a house. Each floor accommodates its own world of thinking. We dwell on the floor of contemporary thinking, but may descend. The lowest, subterranean floor is the world of archaic thinking. The archaic mind perceived other connections in reality than we do, using different methods to fathom the real. When the archaic mind wonders whether a certain plant is edible or inedible, healthy or unhealthy, this style of thinking relies on correspondences: "sun plants are healthy". Archaic thinking is geared to nature as a wilderness – it is "the science of the jungle" (Jung 1932). Wilderness encourages this type of thinking. Causal or experimental thinking only works when we have acquired sufficient technical power over nature. As an archaic explorer, the shaman is an expert of chance events, an archivist who wants to predict future events on the basis of an extensive data collection. He discovers hidden patterns in seemingly coincidental events and circumstances. Another characteristic of archaic thinking is that thoughts and experiences are projected on the outside world, as powers or demons. Archaic psychology is demonology.

For Apollonian thinkers, the principle of causality entails that every change has a natural cause: Apollonian thinking is *a priori* convinced of that. However, the main form of causality is of a teleological nature. The perfect order is implicitly already there and wants to realise itself. The perfection that already manifests itself in reality, has to achieve its true fulfilment. Things may not yet have found their natural place. The final state is a situation of stillness and rest, of circling forever. This situation has yet to arrive, but the world is underway to balance. Beyond balance, there is no future. This also applies to thinking itself. The dynamic that emerges in thinking is a desire for a state of contemplation and completion, of fulfilment and wisdom: epistemic stasis.

Magian thinking acknowledges only one cause for everything, God, the all-cause. All other forms of causality are illusory. Even our own subjective actions cannot count as cause, for the central category is divine grace. There is only one true cause, namely God, who controls everything. From a great distance, He exerts his decisive influence. And our thoughts, to the extent that they are meaningful, are the thoughts of an immense pneuma in which we participate.

Faustian thinking is extremely causal, and causation has become a pervasive force. Faustian causality is deterministic. That is why the will to power manifests itself as the will to know: whoever knows the laws of the universe has

real effective power. Laplace's statement that if we know the laws of nature and the initial positions of a system, we can predict all future states, is an omnipotence fantasy. Determinism makes reality manageable and predictable. It is in quantum physics, in the uncertainty principle and the insight concerning the unpredictability of reality on an extremely small scale, that a post-Faustian style of thinking announces itself. In early 20th century physics, Faustian thinking has reached its boundaries.

Subjectivity – For Apollonian thinking, the subject is a microcosm: a reflection of the cosmos, but on a small scale. Ideally, the microcosm as well as the macrocosm are in a state of equilibrium: wisdom, peace of mind. Just like falling bodies, the soul strives for a natural state of rest, whereby the circular movement is seen as a perfect final state – also for the subject. Contemplation means circling. Thinking in this sense is not an activity and should not be seen as “work”, or as individual achievements of autonomous subjects.

Magian thinking is participation. Only the cosmic spirit really thinks, in the genuine sense of the word, circling around its own centre. Human individuals can only participate in this thinking. A thought lights up within us, but this is actually part of the circular thinking by the cosmic spirit. Not “I” think, but thinking thinks, in me. Thinking is not an individual achievement. Only the God of Aristotle really thinks. We think, insofar as we think, his thoughts. The cosmic spirit thinks in us. And this spirit can only generate consistent thoughts. Our thoughts are ephemeral moments in the self-contemplation of the cosmic mind.

The birth of the Magian moral subject is the experience of being summoned. Before that moment, humans are caught up in a cyclical way of life, focused on production and reproduction: nothing new under the sun, although some individuals are exempted: the aristocratic elite of contemplative thinkers. A new dimension of subjectivity opens up in this experience of being addressed. The typical answer of the Magian subject is: “Here I am, Lord.” Such persons experience themselves as elected, their calling is an act of grace. And they become monks, priests or hermits in response. An overpowering awareness takes hold of them. This idea will henceforth dominate their lives, regardless of whether this results in benefit or misery.

The starting point of Faustian thinking is the category of the autonomous subject. Freedom means having the capacity to do your duty, in compliance with obligations. In Hegel's philosophy, the activities and achievements of thinking individuals are actually part of a dialectic of the spirit. Ultimately, only the world spirit really thinks. Yet, this dialectical process entails hard work in the direction of progress. Our thinking represents a particular station of thinking that will sooner or later become outdated. We are temporary voices articulating large-scale transformative processes. The world spirit is not a circling celestial body (the “highest sphere”), but realizes itself through arduous intellectual and practical activities, in which struggle prevails and only the most robust ideas manage to maintain themselves.

Objectivity – An apollonian thing is a Grecian temple, proportional and compete. A Magian thing is a jug, a spherical cavernous cavity, brought into being in order to collect and preserve precious gifts. In Magian thinking, such everyday items become sublimated into a Grail, with a capital letter: an elusive, fabulous thing, a lost object of desire. Magian things light up (*omnia quae sunt sunt lumina*), they speak out to us, summon us into reverence, gratitude and repentance. Thinking (λόγος) does not solely belong to humans, because λόγος is inherent in being. The things of Creation speak to us, conveying the awareness that God created them.

The Faustian urge objectifies things, making them calculable. Things have lost their glamour and voice. The object is a product from now on. For Faustian thinking, the language of nature is a molecular language. The Faustian gaze reduces natural phenomena to elementary components such as genes: biomolecular στοιχεῖα that can be represented as letters from the alphabet, as dominant or recessive genetic factors (Aa, Bb, Cc), as nucleotides (A, C, G and T) or as elementary particles (e-, P+, H+, Ho, μ). Things no longer speak on their own accord. Molecules are laboratory entities. Faustian thinking reduces nature to elementary components with the help of technicity. Meanwhile, it produces its own kind of thing, the Faustian machine, which ignores, exploits and transforms nature. Gradually, the earth becomes transformed into a machine park. The technosphere absorbs the biosphere. Machines spread exponentially. Faustian technology is disruptive and pervasive. Faustian ontology becomes philosophy of technology, the ontology of manufactured neo-things. They are what we try to understand and control. Now that technology had domesticated nature, the question arises: how to domesticate technology?

§ 4. Sites of truth

An inquiry into styles of thinking tends to focus on the context of discovery, on the locality where truth originates. An important characteristic of initial situations is that those involved consciously create optimal conditions for truth to appear. Heidegger uses the term “clearing” here: an open space which is at the same time a place of seclusion. Sloterdijk (2004) uses the term alethotope, a site of truth, a place where humans are exposed to a new experience, suddenly brought to light (p. 427 ff.). A halo of clarity in a world of darkness, where truth can suddenly be discerned, where new insights manifest themselves for the first time and where those involved develop a special sensitivity for this unprecedented event. It is not a completely spontaneous phenomenon, as its emergence is enabled by particular practices in particular settings.

The genesis of Apollonian culture in ancient Greece was due not only to the intellectual competences of Plato and other pioneers, but also to the genius loci: the ambiance, the gathering site as a condition of possibility. Building on

Sloterdijk (2004), we will outline several truth-sites: localities where Apollonian, Magian and Faustian logic came into being; brewing grounds of infection.

A truth-site is a place where a new truth is articulated, a new language is being forged, and mainstream information is filtered out. It is a place of silence and seclusion where a new mood settles itself, where epistemic purification can be practiced, where a new language game can be played and tested relatively undisturbed, where those involved can practice themselves in their new style of thinking. It is a fold in the established logic of thinking, where receptivity can arise for new possibilities of interpretation of key concepts such as “truth” or “world”. A truth-site is an epistemic clearing. Access is discouraged in the case of outsiders (Ἀγεωμέτρητος μηδεὶς εἰσίτω, “Let no one ignorant of geometry enter here”, the words written over the entrance door to Plato’s academy). Silence is an important precondition for truth to appear. In *Phaedrus*, Socrates and his student retreat to a cool and quiet environment. The cenacle room rented by Jesus and His followers was a location where a new religious dialect could develop, where it was possible to listen to Jesus without Him raising His voice, and to exchange fragile thoughts among the initiated. We can compare darkness with noise, silence with light. The truth-site is a dwelling of silence, a *camera silens* (Sloterdijk 2004, p. 384), where those involved could escape the dictatorship of “das Man” (Heidegger), i.e. endless talk and chatter (“Gerede”).

The alethotope is also a “thermotope”, a cool and comfortable place. Plato’s Academy was a garden where athletes could cool themselves. Archimedes’ bath was likewise a site of clearing and cleansing, so that clear thoughts could emerge. The favourite locality of Jesus and his followers, the Garden of Olives, was also known as a cool place of relaxation, away from the heat and bustle. An antithetical site, a contra-place, opposite Jerusalem. In the upper room, Jesus washed the feet of His disciples, also in a metaphorical sense, removing the tainted ideas they had acquired along the way through public spaces. Augustine read Paul’s letters in a garden, the place where Magian enlightenment took hold of him, where a new type of experience seized him, without having to compete with other sounds.

Nietzsche’s hypersensitivity to localities, to atmospheric and meteorological circumstances, his emphasis on issues of clean air and absence of noise, can be explained as paying due attention to alethotopology, but on closer inspection something seems to be missing, for an alethotope is also an ergotope, where those involved devote themselves to common tasks, as guardians of a message, for instance. This may include addressing specific questions, as a communal practice. Academics were athletes of logical reasoning, the Stoics athletes of morality. This could involve games or contests. Those dwelling in a truth-site were expected to collectively perform certain actions (“Do this to remember me”). The truth-site makes it possible for those involved to withdraw temporarily, or for a longer period, from the real world (which remains focussed on survival and reproduction), to temporarily devote themselves to loftier tasks.

Truth can survive without biological reproduction, it lives on in books, thoughts and intellectual or spiritual practices.

Finally, an alethotope is also an erototope, in which new erotic practices may flourish. In an Apollonian truth-site, the relationship between pupil and teacher entailed an epistemic-erotic relationship. In the Magian cenacle, where the gospel of love was preached, a new form of love developed that differed from worldly love (aimed at reproduction): a shift from eros to caritas. The truth-site is not a village community, but a brother- or sisterhood, such as the monastery of Hildegard in Rudesheim, mapping the cosmic ambiance via music and colourful illuminations, in order to *know the ways* of the Lord (*scivias*). It is a place of love in the sense of care, collaboration and comfort, where new concepts become the object of contemplation and devotion, such as Hildegard's concept of *viriditas* ("greenness") as a symbol for life, health, harmony and divine creation (Zwart et al 2015); places where new distinctions between true and false manifest themselves: novel practices of correction, clarification and revelation, places of gathering for coalitions of the willing, e.g. communities of individuals who seek out epistemic or spiritual challenges that others (outsiders) prefer to avoid. They may be guardians of a secret, such as the Magian Cathars, the purified ones – a name with an alchemical ring to it. Their truth-site excelled in world hostility. But the truth-site may also be a base-camp, from where a recently retrieved truth is being proclaimed (as in the case of the Dominicans, for whom the monastery served as a strategic assembly point preparing the ground for expansion).

Multiple truth-sites can be identified in history, from Archimedes' bath via the stove-heated room of Descartes and the divan of Freud to Heidegger's *Hütte*, and although iconic representations may suggest solitary intellectual activity, these pioneering individuals actually personified emerging epistemological practices. Apollonian truth sites are connected with physical exercise, Magian sites entail intimacy and mutual support in facing trials and tribulations, while in Faustian sites experiments are conducted by teams, and where research equals education, involving students and trainees. The truth-site of Faustian thinking par excellence is the laboratory, a place of concentration and precision, where optimal conditions for producing and reproducing knowledge can be created, and where the idea may arise that, through methodical interaction, reality may be controlled.

Chapter 6. Metropolitan dawn

§ 1. Visible and less visible events

Apollo 11 was launched on July 16, 1969 from the Cape Canaveral launch site in Florida. The operational management was in the hands of Mission control, Houston. When looking at images from the control centre (“Houston”), all eyes are usually focused on the “object” (the astronauts, the moon capsule, the moon), the focus of public attention and enthusiasm. A philosophical gaze, however, will opt for an oblique perspective, drawing attention to the scientists sitting behind their computers. By adopting a tilted perspective, mission control itself comes into view. Rather than in gravitation as such, we are interested in the way in which Newton discovered and formulated his law, and this also applies to the moon landing, one of the most appealing events in the history of recent technoscience. Our eyes and ears are not so much focussed on the astronauts, not even on Armstrong’s famous phrase (“One small step for man, one giant leap for mankind”), but primarily at the control centre itself. Because that is where novelty is situated, of which the moon voyage is one result among many others.

Bringing this novelty into view requires triangulation involving the moon, the present and the past. In 1969, humanity was already familiar with the idea that, one day, human beings would set foot on the moon. Already in 1865, Jules Verne published his novel about a moon voyage. His novel, based on extensive research, was a literary thought experiment. Yet, the technology of the launch as such is the least convincing moment in Verne’s extraordinary voyage. A giant cannon fires a capsule into space with unimaginable force – a Faustian climax in the display of power, an incredible amplification of expansion, but the critical reader inevitably wonders how the moon travellers inside the capsule could have possibly survived such an event. A launch with such force and at such a speed must have been accompanied by excessive heat and an enormous shock. How could they breath and relax in their comfortable capsule during take-off?

More than a hundred years later, the Apollo 11 landed on the moon. There are remarkable similarities concerning the extent to which Verne’s novel predicted the future: the shape of the lunar capsule, the material from which the capsule was made (aluminium), the number of occupants (three), the fact that the launch took place in Florida (remarkably close to the spot Verne had chosen), the return voyage towards the Pacific (again: improbably close to where Verne’s moon capsule also landed), the Americans as winners in the race for the moon, and so forth. Without denying the importance of these similarities, we should also pay attention to differences, or rather: *the* difference. In 1969, Verne’s Faustian machines (the giant cannon, the giant observatory) had given way to a decidedly post-Faustian contrivance of a completely different calibre: the computer – the device that made the lunar journey possible, but also precisely the device that was absent in Verne’s fictitious version. The heroes who designed Verne’s moon

voyage were arithmetic geniuses, who could handle complicated equations with ease, but in the computer age this type of expertise had become redundant.

This is underlined by the fact that the moon landing, as a manifest event, and as a very visible scientific highlight, was accompanied by a more or less invisible counter-event, occurring exactly in the same year 1969, the invisible shadow event as it were, which ultimately would prove much more important than the moon landing itself. Really important events take place inconspicuously. In the same year 1969, supercomputers at four universities in the Southwest of the United States (UCLA, Stanford, University of Utah, UC Santa Barbara) were connected to each other via a network: the birth of the Internet, initially called ARPANET. While in Verne's novel the moon expedition was the work of military engineers, of cannon builders, suddenly unemployed as the Civil War had ended, ARPANET was financed by the United States Department of Defence. The eventual impact of this event was much greater than that of the Apollo project. Prophets foretold that the Apollo 11 capsule heralded the fact that, 20 years later, in 1989, the Cold War would be decided in favour of the United States, thereby ending modern (Faustian) warfare between nation states. Since then, we live in a global world where military conflicts have changed dramatically. The original ARPANET network was a silent moment of commencement, an *Anfang*, where a phenomenon was born that would quickly spread and would drastically and irreversibly change the world.

Anyone who wants to know what it means to live in the computer age may pay a visit to a university campus. Probably, there are hundreds of staff and students working in university buildings, but almost everyone is sitting behind a computer screen. In fact, when we enter scientific laboratories, it is often extremely difficult to tell exactly what kind of discipline is being practiced there. Mathematicians, physicists, chemists, biologists, historians, philosophers, linguists, psychologists, management studies experts – they all work behind a computer screen, but this also applies to the janitor, the head of the human resources department and the Dean. Computers evolved into generic research and communication tools. The way in which scientific research is conducted, in all scientific disciplines, has been affected dramatically by the advent of ICT. Book shelves and racks of test tubes will not altogether disappear, of course, but they become marginalized and the practices in which they function have undergone spectacular transitions. Just as mechanical machines such as steam-engines once symbolised the dominance of the Faustian style, the computer is the symbol of a post-Faustian style of thinking. A device that was initially developed to function as a calculator, for which Leibniz and Pascal prepared the ground, became transformed into a communication device (Licklider and Taylor 1968). The computer is not a stand-alone entity, of course, but an element in global electronic networks. The computer indicates how the present world has transformed into a planetary network, a global metropolis.

§ 2. The issue of scale

If the claim that we have entered a new, post-Faustian, Metropolitan era is valid, this must also be reflected in a dramatic expansion of scale. The introduction of a new thinking style is accompanied by a drastic upscaling of the world as we know it. In the Apollonian world, the cosmos was experienced as a world on human scale. Although Apollonian thinking produced fairly accurate estimates of the size of the Earth, the distance to the stars was measurable in thousands of kilometres. The Magian universe already extended into a majestic sense of space, and the Faustian universe was experienced as infinitely large. The post-Faustian universe has dramatically extended once again. Space as such became dauntingly complex. The optical telescope became an instrument for amateurs, as technoscientific instruments now gather terabytes of data. The question what “observation” means in contemporary astronomy is not that easy to answer. We “see” the post-Faustian universe mainly thanks to spectacular computer simulations and visualisations, based on terabytes of computer-generated data, analysed and interpreted by robots on the basis of algorithms. Galileo could still invite sceptical cardinals to peer through his telescope, but that is history now. The new universe is a dynamic universe that bends and expands and is dotted with black holes.

We notice a comparable change in the realm of the very small. Apollonian thinkers could only speculate about the world in miniature. Their science of the naked eye had no access to it, except through speculative thinking. Faustian thinking revealed molecules, atoms and micro-organisms. In the post-Faustian era, attention has shifted to the subatomic level, the nanoworld. Nanoscience differs from Faustian science primarily, as the name already implies, because of the scale on which the research evolves. It is about building devices able to move molecular objects and position them with atomic precision (Drexler 1986). Nanotech is an intervention that is able to play the game of very small things. The theory of relativity concerns a world on a very large scale, in which distance is expressed in light-years. Quantum physics, on the other hand, concerns a world on a very small scale, the realm of photons and electrons. The history of elementary particle physics (high-energy physics) in the 20th century is in fact a voyage of discovery in which smaller and smaller “particles” are spotted and traced, but increasingly this raises the ontological question to what extent we can still talk about particles or matter. The discovery, first theoretically (Paul Dirac) and then empirically (Walter Oelert, CERN) of a post-Faustian mirror world of antimatter (Fraser 2000) is the physics version of Heidegger’s phrase “das Nichts nichtet”. In other words, we see a drastic change in scale, both large and small. Making observations has become a completely different kind of praxis. In CERN’s particle collider, the moment of observation is reduced to a minimum: a tiny fraction of a second, providing crucial input for long-term research projects. The rest is computer work. This also applies to life sciences research. Molecular biology and biotechnology (since 1975) focus directly (rather than indirectly, via

macroscopic organisms) on genes, genomes and molecular mechanisms such as CRISPR-Cas9. Miniaturization is rampant also here.

The increase in scale not only affects the object, but also the subject pole of the knowledge production process. Here we see the emergence of large-scale, interdisciplinary research programs (the Manhattan project, CERN, the Human Genome Project, etc.). Computer-based research results in anonymisation of the researcher-as-author, not only in the sense that terminology, design and methodology of publications are highly standardized, but also in the sense that the number of authors per article increased dramatically (multiple authorship). In many fields of science, publications with hundreds of authors can be found, in high-energy physics for instance, but also in genomics (Venter et al 2001).

Authorship is a function of thinking style (Zwart 2001a). Apollonian authors were reluctant to entrust their thoughts to paper: they preferred not to write at all and opted for an esoteric style of communication, practiced among initiates. The Magian author was an authority, a privileged medium who acquired profound insights. The author's name functioned as a guarantee of truth, a mark of quality and reliability: Aristotle *dixit*. All other authors, all normal authors, were mere commentators, students of Aristotle, the Master. Faustian authors, however, want to make a name for themselves as individuals. Writing becomes a struggle for recognition. The Faustian author no longer wants to remain anonymous, but is hypersensitive to plagiarism. Prominent Faustian authors such as Newton or Darwin were drawn into priority conflicts. The drive towards productivity and the need to make impact, resulted in Faustian inventions such as the scholarly journal and the printing press.

Post-Faustian authorship generates new forms of anonymity. Author names now assume purely technical functions in the context of information retrieval, evaluations of research groups and university rankings. In many scientific domains, the author, if not "dead" (Foucault 1994b) is reduced to a pure signifier (browsed by robots looking for citations). Post-Faustian authorship does not affect all fields of science at the same time, however. The epidemic is spreading from one research domain to another. Quantum physics not only discovered a reality beyond Faustian determinism, but also stimulated multiple authorship. In other scholarly fields, the post-Faustian revolution is just arriving. Instead of post-Faustian, I will adopt the term "Metropolitan" in this study to refer to the contemporary style of thinking, emerging in all scientific and cultural domains. Grounding characteristics of this way of thinking (publishing, communicating, interacting, etc.) are complexity and convergence.

§ 3. Complexity: the year 1989

To some extent, biotechnology, resulting from the biotechnological revolution (circa 1975), could still be seen as Faustian. Scientists involved aimed to modify model organisms, more effectively and targeted than ever before. By adding or

switching off genes, the aim was to adapt the properties of particular organisms to human requirements. In this way, biotechnology would allow us to re-shape the world at will, and to adapt organisms to our (exponentially increasing) needs and demands. The will to know entailed a will to improve. And yet, a new element is added, namely the fact that the biotechnologies employed are developed *by nature herself*, so that gene knock-outs mimic mutations, for instance, while CRISPR-cas9 employs a protective molecular device developed by microbes millions of years ago. The microbes are the real bio-engineers, and human engineers merely mimic the solutions they developed.

This also applies to human self-knowledge. On November 9 1989, as citizens from East-Berlin flooded into the Western parts of a divided city, *Nature* published an article on the *Human Genome Project* (HGP), announcing that scientists were developing a joint data-base where they could deposit their sequencing materials, flanked by an article about societal issues to be addressed. The final preparations for launching the HGP coincided with the collapse of the Berlin Wall and the subsequent reunification of Germany and, to some extent, of Europe as a whole. Convergence was in the air, first and foremost between research fields, for genomics was a converging enterprise, absorbing expertise from physics, chemistry, biology, biotechnology, cybernetics, computer science and multiple other fields to understand complexity (to envision living entities as complex systems). The HGP wanted to map the human genome in a comprehensive manner based on the idea that, if only we would know our genes, we would finally know ourselves.

The HGP resulted in a remarkable experience however (Zwart 2009). Initially, the scientists involved assumed that the human genome would contain at least one hundred, but probably more than three hundred thousand genes. The uniqueness and complexity of humankind as an intelligent and hyper-creative species, capable of building its own (hyper-complex) environment and able to survive in a technotope of its own making, should be reflected in our genome. Step by step, however, the number of genes decreased until something like 22,500. The human genome is modest in size. This “narcissistic offense”, this “negative” result, had a positive effect as well: apparently, the complexity and uniqueness of humans is to be found elsewhere, in culture and history. Paradoxically perhaps, the HGP marked the end of genetic reductionism and Faustian determinism. Intelligence and creativity are emergent features that cannot be reduced to a limited number of genes, to a fictitious “factor X” that makes us human. Human characteristics are the result of a long history of interactions. We are to a considerable extent self-made, the product of evolving ways of interaction with the environment, developed long ago, based on language and tool-use, and now transmuting at a dramatic pace.

In other academic fields, Faustian research strategies likewise gave way to more holistic approaches, trying to understand reality in terms of complex processes and systems. The computer is the enabling technology that made this shift from reductionism (Faustian) to complexity possible. Similar to how Jules

Verne gave voice to the Faustian era, Metropolitan technoscience also found its literary representatives in literary authors such as Michael Crichton (Zwart 2015b). A comparative anatomy between the works of Verne and Crichton would be an interesting exercise. Like Verne, Crichton wrote a series of novels that constitute a literary encyclopaedia of contemporary technoscience, covering all the major technoscientific areas of the computer age, such as genomics and molecular biology in *Jurassic Park* (1990/1991), where paleontological species are transformed into research animals, kept in an open-air laboratory, a science park, intended as a tourist attraction of the Metropolitan era. Under Metropolitan conditions, technoscience becomes a global enterprise. Crichton not only focuses on computer-based DNA techniques and security systems, but also on the dynamics of technological innovation, the challenges of acquiring massive research funding and the role of governments such as the U.S. Department of Defence. Disciplines which tended to evolve slowly and incrementally, such as palaeontology and archaeology (Zwart 2009), suddenly experience a dramatic increase in pace and scale, due to the advent of new informational machines, acquiring societal relevance in the context of large-scale research programs addressing complex issues such as climate change, biodiversity and extinction. Under Metropolitan conditions, palaeontology radically changes, like every other research field.²⁹

The epidemiological pathway of the new way of thinking usually starts in areas such as mathematics, before moving on to physics and from there to other fields. A versatile protagonist of complexity thinking in physics was Gell-Mann (1994) for instance. The beginning of complexity thinking is chaos theory – post-Faustian mathematics par excellence (Gleick 1987). In Crichton’s books, chaos theorist Ian Malcolm functions as a critic of Faustian thinking. For complex systems, containment is impossible. Crichton breaks with the age-old stereotype of the Faustian mathematician as a hyper-intelligent hermit who practices his craft of handling astronomical numbers exclusively with pen and paper. Malcolm’s mathematics is computer-dependent and he himself is remarkably extravert, outgoing and communicative.³⁰

²⁹ “Grant knew that palaeontology, the study of extinct life, had in recent years taken on an unexpected relevance to the modern world. The modern world was changing fast, and urgent questions about the weather, deforestation, global warming, or the ozone layer often seemed answerable, at least in part, with information from the past. Information that palaeontologists could provide. He had been called as an expert witness twice in the past few years” (p. 32); “[If] dinosaurs could be cloned – why, Grant’s field of study was going to change instantly. The paleontological study of dinosaurs was finished. The whole enterprise - the museum halls with their giant skeletons and flocks of echoing school children, the university laboratories with their bone trays, the research papers, the journals - all of it was going to end” (Crichton 1990/1991, p. 84).

³⁰ “Ian Malcolm was one of the most famous of the new generation of mathematicians who were openly interested in ‘how the real world works’. These scholars broke with

This shift is also discernable in our interaction with nature. For Faustian thinking, nature is a resource: raw materials, exploited by humans in a non-sustainable fashion. This disruptive use of raw materials increases exponentially, resulting in unsettling, exponential growth curves. It is the job of the Faustian engineer to transform nature into something that is useful and useable, systematically manipulating living nature in laboratories, where biology becomes biotechnology (Pauly 1987). The Metropolitan bio-engineer, however, is aware of the complexity of nature, which we should use in a much more intelligent manner, more attuned to nature. Sloterdijk (2001) speaks of homeo-technology, compatible with nature, taking the place of Faustian allo-technology, hostile to nature (Lemmens 2005). One may think of developments in the field of biomaterials and bioremediation, the greening of industry, using micro-organisms to run industrial processes with less energy and less waste (Zwart et al 2015). Biotechnological miniaturization makes it possible to interact with natural processes and systems in a more intimate and considerate way. Faustian medicine poisons the body, but Metropolitan medicine aims to interact with bodily processes in more intelligent ways, using nanoscience for drug delivery for instance, while Metropolitan prosthetics produces embedded protheses, fully integrated into and compatible with their bio-environment.

The year 1989 was preceded by other important turning points, such as the year 1969, as we have seen, but also the year 1953, when James Watson and Francis Crick discovered the molecular structure of DNA, composed of strands of nucleotides. These nucleotides actually constitute a minimal alphabet consisting of four letters (A, C, G and T) and these four signifiers were seen as constitutive of the quintessence of life. The elementary particles of life now seemed under our control. In that same year 1953, Jacques Lacan launched his famous seminar to elaborate the idea that the unconscious was structured like a language, and that life and human desire could be linguistically explained in terms of symbolic networks of signifiers. Speaking of desire, the Kinsey report *Sexual Behaviour in the human Female* was also published in 1953, and the first colour television went on sale. While 1953 was still saturated with events pertaining to the Cold War – Stalin's death, the end of the Korean War, the *Volksaufstand* in the German Democratic Republic (DDR), the arrival in West Germany of a first wave of released prisoners of War (Gulag Archipelago survivors), President Harry S. Truman announcement that the U.S. had successfully developed a hydrogen bomb, the awarding of the Nobel Prize for

the cloistered tradition of mathematics in several important ways. For one thing, they used computers constantly, a practice traditional mathematicians frowned on. For another, they worked almost exclusively with nonlinear equations, in the emerging field called chaos theory. For a third, they appeared to care that their mathematics described something that actually existed in the real world. And finally, as if to emphasize their emergence from the academia into the world, they dressed and spoke with what one senior mathematician called 'a deplorable excess of personality'. In fact, they often behaved like rock stars." (1991, p. 72).

Literature to Winston Churchill – the year 1989 not only seemed to mark the end of the Cold War as a global Faustian conflict, but even the “end of history” (Fukuyama 1992) as such, giving rise to globalisation (the one-world concept) and the hegemony of neo-liberalism.

§ 4. Globalisation

The world became hyper-complex in other respects as well. The manifestation of Faustian thinking in the political domain was the nation state as we have seen. Although national sovereignty is formally still in place (citizens are still expected to pay their taxes, albeit electronically – via the computer – and in Europe in a new, transnational currency called Euro), its power has been severely thwarted. Politically, we are entering the Metropolitan era, where all countries become interconnected and new constellations of power define the scene, not only the United States and China (and to a somewhat lesser extent Russia and the EU), but also big global, Metropolitan tech companies, or hyper-companies, such as Microsoft, Apple, Google, Facebook, Amazon and others, complemented to some extent by the power of global NGOs and global charities. Such entities tend to be wealthier, more powerful and more advanced than most nation states can claim to be. A crisis of representation prevails, as citizens no longer consider politicians as their representatives. The prestige and influence of the latter has dramatically decreased, although female politicians (e.g. Angela Merkel, Ursula von der Leyen) are notable exceptions and prove more professional leaders than their (often remarkably bizarre or even obscene) male counterparts, e.g. Donald Trump or Boris Johnson. Most national governments are actors of little import in the emerging Metropolitan force field. The idea that developments can be directed by politicians is becoming increasingly questionable, and maybe Trump’s years in office were one desperate attempt to prove the opposite. In China, however, the development apparently moves in a juxtaposed direction. Here we witness a strengthening of central government, an imposing presence of the state, embodied by an Imperial father figure.

The Faustian nation state was first and foremost a mobilization machine in times of war. However, warfare has also undergone dramatic changes. Wars are determined by computers and electronic devices such as drones. Wars are fought with the help of computer-controlled precision bombardments, but on closer inspection such victories are often unreal. While civilians pay the prize, the enemy often diffuses into the background, awaiting a return of the repressed, through acts of terror if needs be. The supremacy of the United States is an effect of the computer, of modern communication technologies, but there is a fatal weakness in this reliance on high-tech prowess, namely the American inability to “deal with” socio-cultural ambiance. Moreover, ICT is spreading, and China is superseding the West as the ICT-based superpower. While American intelligence is pervading the global environment, the U.S. are increasingly targeted by foreign

disruptive ICT-based offences themselves, while its cynical international policies (forming a strategic axis with Israel for instance in rolling out a domino strategy of disruption in the Middle East: Palestine, Lebanon, Syria, Iraq, Iran) have irreversibly undermined its moral leadership.

§ 5. Sexuality and religion

Faustian marriage was a struggle between formal responsibilities and latent desire. What is happening to sexuality and desire under Metropolitan conditions? One possible starting point is the question raised by Michel Foucault (1976): why do we so vehemently claim that we should liberate our repressed desires, while in fact human discourse on sexuality has proliferated during the Faustian era, and scientists examined sexuality in a prolific manner, encouraging individuals to confess and express their sexual feelings and identities? Why do we so persistently claim our sexuality to be subject to repression? What he envisioned was an alternative way of speaking about and practicing eroticism, namely in terms of lifestyle and practices of the self. The Freudian interpretation (as the “highest stage” of Victorianism) continued to emphasise the importance of repressed desires (homoerotic and otherwise). Lacan represents a Metropolitan turn, zooming in on the fascination (artistic, cinematic and otherwise) for the phallus (male or female) as an enigmatic “object *a*” (Zwart 2019).

In the Metropolitan era, perversions are reframed as “fascinations”, as part of a lifestyle. Myriads of websites are available for sharing and cultivating digitised cravings. During the Victorian era, the obscene was located elsewhere, had to withdraw into specific locations such as brothels, where “aberrations” were practiced. Or they were projected upon distant historical eras (say, the court of emperor Nero). The Metropolitan ideal is the inclusive equivalence of all options, celebrating non-mainstream otherness as LGBT and “queer”. Insofar as traditional values connected with marriage are still acknowledged by neoliberalist ideologies, this is motivated by economic, pragmatic or pedagogic arguments. The family structure has certain economic and psychic advantages and disadvantages, according to the experts.

What is traditionally referred to as the “emancipation of women” is reframed as inclusiveness and diversity. In principle all professions are open to both sexes, including those of professional soldiers or professional boxers. Statistics indicate a steady growth of women in managerial positions, although the pace of progress in the direction of gender equality remains an issue of concern. The heroine of Michael Crichton’s novel *Disclosure* (1993/1994) is a female manager who harasses a male subordinate. Patriarchal physicians are replaced by teamwork. The vast majority of medical students are women, and male gynaecologists seem increasingly oxymoronic. The real heroes and heroines of the Metropolitan era are transgenders. Whereas cross-dressing transvestites may still be regarded a Faustian phenomenon, playing a dangerous game,

challenging and trespassing boundaries, – an *ars erotica* which relies on and therefore continues to endorse those boundaries –, transgenders stretch the dichotomy into a non-binary continuum where individuals freely position and recreate themselves, using surgical and endocrinological means to make their body makeable.

Faustian religion was dogmatic. Doctrinal issues became intertwined with armed conflicts between emerging powers. Atheism, as a creed and as a negation, is a dogmatic Faustian position. Atheists armed themselves against religious temptations – although in some cases dramatic regressions could take place. The collapse of the Catholic Church, repeatedly predicted by friend and foe, never materialised. We may even conclude that the Church, as a decidedly global organisation, has much better prospects than social democracy or even the nation state, forces which tried to undermine the power of the Church, for instance by enforcing the separation of church and state. During the early modern period, churches were nationalised (the Reformation must also be viewed from this perspective) while the internationalism of the Jesuits (whose organisation represented an impressive power machine, independent of nation states) aroused suspicion. Now, the Catholic Church represents global perseverance. The religious “crisis” is a Western phenomenon. From a global perspective, Planet Earth is inhabited by billions of religious people. A large majority of the world population consists of more or less sincere believers. Empty churches are more than compensated by mass support elsewhere. The Church has often been considered an “anachronism”, but this did not prevent Pope John Paul II from contributing to the demise of Communism in Eastern Europe and the Soviet Union, nor did it prevent Pope Francis from becoming a figure of international standing, for instance when addressing issues of sustainability or global crises (from the Syria crisis down to COVID-19). Popes are global “players”, their voices reach out to global audiences. The remarkable endurance of the Church relies on her tendency *not* to adapt too much to the ideologies in vogue. It is not difficult to draw parallels between the present world and ancient Rome. The violence of the arenas has shifted to televisions and computer screens, where “good” and “bad” characters literally shatter each other to pieces in front of a mass audience (the action movie as an electronic amphitheatre). The erotic body, carefully hidden from view in oriental cultures, is emphatically present, emphasised rather than camouflaged in Western commercials. There’s obviously a role for the Church to play in such a boisterous media environment.

This may explain the aversion which Catholicism continues to instil among allegedly “left-wing” protagonists of neo-liberalism: notably newspaper columnists, the preachers of the neo-liberal creed, specialised in spelling out what is “left” (“good”) and “right” (“bad”) for faithful devotees of ideologies which were once considered avant-garde (during the 1960s and 1970s) but who are now perplexed by a rapidly changing world. Especially the role of the Church in its combat against the sexual revolution, preaching monogamy as prevention, while at the same time being unable to prevent sex scandals in its own ranks, has been

heavily criticised. Any sexual restrictions became themselves taboo, although the sexual revolution is currently counter-acted by the #MeToo movement as its inevitable recoil. Meanwhile, freedom of expression has eroded into “the right to insult”. Notably, we are encouraged to insult the devotees of religious creeds. Thus, paradoxically perhaps, the plea for inclusivity and tolerance reveals itself to be non-inclusive and intolerant of otherness in the end, as the endorsement of the principles of neoliberalism becomes a condition for admittance to the debate. The styles-of-thinking approach may help us to come to terms with this polarising debate by pointing out that what we are actually facing is a collision between cultures (trying to redefine themselves in a quickly evolving global environment) and the nihilistic tendencies of a late-Faustian (neo-liberal) civilisation bent on eliminating all ideological rivals.

§ 6. The year 2000

The year 2000, also referred to as MM or Y2K, was a remarkable year for various reasons, first of all because, in terms of the Anno Domini calendar, it constituted the turning point between the second and third millennium. But the year 2000 proved to be more than just a nice round figure.

Interestingly, a quite remarkable and exceptional astronomical event occurred in Y2K, namely the alignment of six planets (Mercury, Venus, Earth, Mars, Jupiter, and Saturn) on May 5, 2000. On that day, these planets found themselves positioned in a line with the Sun, suggesting that the year 2000 actually marked an epochal divide in the sense that a cultural wave was coming to an end. To understand the significance of this year, we must first of all take a step backwards, to the remarkable year – *annus mirabilis* – 1900, when several ground-breaking events took place, in physics and biology, but also in philosophy and psychology. To begin with, Max Planck introduced the quantum concept, and the work of Gregor Mendel was rediscovered. Sigmund Freud published *The Interpretation of Dreams* (although the actual publication date was 1899), while Edmund Husserl announced the birth of phenomenology, publishing his philosophy classic *Philosophical Investigations*. Several other events can be added to the list, but the four just mentioned already signal the emergence of completely new areas of scientific inquiry, all of which greatly affected the intellectual landscape of the 20th century (Zwart 2013b). They herald the birth of intellectual movements such as quantum physics (inaugurated by Planck), genetics (inaugurated by the rediscovery of the work of Mendel), psychoanalysis (inaugurated by Freud) and phenomenology (inaugurated by Husserl).

The year 1900 can be regarded as the new beginning – the *Anfang* – of what would be brought to completion in (or around) the year 2000. Mendel, for instance, had published his ideas (which anticipated the *Zeitgeist* of the 20th century) somewhat too early (Foucault 1971; Zwart 2008), namely in the 1860s, so that they were more or less ignored. The sudden rediscovery of his work, in

the spring of 1900, by three different scholars, simultaneously, but independently from one another, inaugurated the birth of what later came to be known as genetics and the gene concept, thereby also setting the scene for the rise of molecular biology in the second half of the 20th century, culminating in the discovery of the molecular structure of DNA (in 1953, during the nadir of the Cold War) and the sequencing of the human genome (1989-2003), a project whose beginning coincided with the collapse of the Berlin Wall in 1989 a we have seen. The symbolic near-completion of the HGP was the Press Conference organised in the year 2000 (June 26 to be exact). During a carefully orchestrated event, the draft version of the human genome sequence was proudly presented at the White House in Washington, before a live audience, while simultaneously reaching out to a global audience (*Urbi et Orbi*) by President Bill Clinton and two prominent scientists, Francis Collins and Craig Venter (Zwart 2018).

In a similar vein, the quantum concept paved the way for the emergence of elementary particle physics, the discovery of anti-matter and the Large Hadron Collider (LHC) at CERN, where the epic of quantum physics reached its completion in the hunt for the illusive Higgs-boson. In synchrony with the HGP, this hunt likewise began in the late 1980s at CERN, with the help of a very big machine, the Large Electron-Positron (LEP) collider. In 2000, however, the final episode set in. In that year, the LEP was shut down to make way for the LHC, an even bigger machine, but located in the same subterranean tunnel. By now, the project finally seems to have achieved its goal, as the spectral Higgs-Boson has finally been detected.

Psychoanalysis, grounded in, but at the same time distancing itself from late nineteenth-century neurophysiology, also had a significant impact, not only on psychotherapy, but on the humanities as such, from philosophy up to literature studies, as well as on human culture and human self-understanding at large. For decades, psychoanalysis and high-tech neuro-centric experimentalism seemed worlds apart, but currently we notice the emergence of research programs which aim to connect psychoanalytic concepts (the unconscious, repression, resistance) with brain research, cybernetics and linguistics.

The year 1900 represented the resurgence of the *discontinuity principle* (Van den Berg 1977; Zwart 2002). The previous epoch (from 1700 to 1900 A.D.) had been under the sway of the *continuity principle*, indicating that nature makes no leaps: *Natura non facit saltus*, a phrase coined by Leibniz but repeatedly quoted by Darwin in *The Origin of Species*. Now, however, scientists discovered that nature *does* evolve through leap-like changes. This was notably exemplified by the quantum leap concept in physics and the mutation concept in biology. As Erwin Schrödinger phrased it in *What is life?* (1944/1967), mutations (jump-like, discontinuous changes in the genomes of living organisms) are remarkably reminiscent of the quantum jumps studied in quantum physics. Mutations are leap-like changes in the molecular structure of a gene. Therefore, mutation theory is the “quantum theory of biology” in a more than figurative way (Schrödinger 1944/1967, p. 36). Both theories (quantum physics and genetics), he argued, not

only coincide in time (p. 51), but also convey the same basic idea (Zwart 2013b). In neurophysiology, discontinuity is discernible in the all-or-none principle (first recognized in the late 19th century) which states that neurons discharge as soon as (and only if) a certain threshold is reached (regardless of the strength of the current stimulus). It represents an either/or event: the neuron either discharges or not (1 or 0; the trigger is either pulled or not).

Dialectically speaking, if the continuity principle is considered the *first moment* (the thesis, i.e. the birth of modern rational thinking), then the year 1900 constitutes the emergence of the *second moment*: the “*negation*” of the continuity principle, i.e. the *discontinuity* principle. And this implies that the year 2000 must be the third moment, the *negation of the negation*, seeing both principles as complementary rather than as contradictory, reconciling them on a higher level of complexity and comprehensiveness. A perfect example of this dialectical “third moment” is the punctuated equilibrium theory of evolution, which combines the Darwinian idea of gradual, incremental change with the post-Darwinian concept of sudden, leap-like transitions. Both continuity and discontinuity can be discerned in nature, as *moments* of complex systems. In genomics, a similar “third moment” is discernible in the conviction that the meaning of a mutation for an organism will depend on the cellular, organismal and ecological environment in which it occurs, a viewpoint which acknowledges complexity and interaction, and takes us beyond genetic determinism.

This development emphasises an important ingredient of the Y2K Zeitgeist, namely “complexity”. The 20th century is a transition process from the *rediscovery of discontinuous change* (in 1900) towards the *appreciation of complexity* (in 2000). And this transition is visible both at the object-pole and at the subject-pole of the knowledge relationship. At the object pole, the development between 1900 and 2000 can indeed be regarded as a research route leading from *basic constituents* (e.g. genes, quanta, the basic constituents of phenomenological experience, etc.) towards *complex interacting systems*. We see this in the shift of focus from “genes” to “genomes”, and from genetics to genomics and similar -omics fields, but we also see it in the shift from energy quanta (Planck’s discovery) to elementary particle physics (exemplified by CERN and other big science research settings) where worlds of astounding complexity (far beyond the reach of human comprehension, and only accessible via big computers, operated by very large research teams) are disclosed.

A similar development can be discerned at the subject pole, moreover, namely from discrete discoveries made by *individuals* (Planck, Mendel, De Vries, Husserl, Freud, etc.) towards a dramatic increase of scale, involving distributed intelligence, global collaboration, multiple authorship and world-wide networking, resulting in scientific knowledge production at a very high pace (Zwart 2009; Zwart 2013c). This is even evident at the humanities side of the spectrum, where phenomenology and psychoanalysis have evolved into large-scale areas of research and praxis. Although research is often still framed as being the work of Faustian geniuses, this obfuscates the extent to which research

actually became the work of large-size consortia involving multiple research institutes (both public and private) and countless, more or less anonymous experts (bench-workers, often early stage researchers) distributed across the globe. The emergence of multiple authorship and citation indexes, even in philosophy, is symptomatic of this trend.

Let us now consider some remarkable events occurring in Y2K. For the sake of brevity (for 2000 is indeed an extremely rich and complex year) I will focus on just three events, although many more could be added to this list. First of all, on January 6 2000, the last individual belonging to the species Pyrenean ibex (a mountain goat of the Pyrenees) was found dead, apparently killed by a falling tree. Secondly, the birth of five cloned piglets was announced on March 5, 2000 at PPL Therapeutics in Edinburgh, named Milly, Christa, Alexis, Carrel and Dotcom. Finally, on May 5 2000, a computer virus or worm named ILOVEYOU began to infect and attack millions of Windows personal computers around the globe, spreading quickly through electronic networks and invoking serious damage (far more damage than was caused by the anxiously anticipated, but eventually harmless Millennium bug). Do these seemingly unrelated events have something in common? Can they be seen as part of a meaningful *Gesamtbild*? I believe this is the case. And indeed, by seeing them as meaningfully related, this will help us to mutually elucidate their meaning. All three events. I will argue, reflect a common mood or *Zeitgeist*.

As to the first event, it is important to point out that the extinction of this wild mammal was not the end of the animal's tragic story. The last of the Pyrenean ibexes became the target of a research project, namely the endeavour to resurrect this extinct species on the basis of its genome. A biotechnology company announced (on October 8, 2000) its intention to use nuclear transfer cloning technology in order to clone the Pyrenean ibex back into existence (a process currently known as de-extinction). And indeed, on July 30 2003, a clone was born alive, but died several minutes later due to lung defects. Although the project failed to bring the species back, it did show that, in the era of genomics and biotechnology, extinction has now become a relative concept. Somewhere in the future it may work. In fact, Siberian Mammoths are the next species on the list (Zwart and Penders 2011), while novelist Michael Crichton had already extended the concept to include Jurassic fauna (1990/1991). De-extinction became closely connected with genome sequencing, moreover, a research practice exemplified by the HGP discussed above. Via genomics and other life sciences research areas, the sway of contemporary technoscience over living nature has increased dramatically. At the same time, it is clear that the astounding complexity of living systems still represents a challenge for the technology-driven will to control.

A similar message is entailed in the second example. Genomics-oriented technologies for cloning are used to make living nature more makeable and modifiable. The idea is that in the nearby future, cloned animals (notably piglets) may become available as resources for procuring organs (xenotransplantation).

The piglets' names were symptomatic as well. While *Alexis* and *Carrel* referred to a transplantation pioneer and Nobel laureate named Alexis Carrel (Zwart 2001b), *Dotcom* evidently refers to Internet and the WWW.

This choice of names again indicates that a connection can be discerned between simultaneous events in different realms (life sciences and computer sciences specifically). Although organisms and computers initially may seem completely different things, or opposites even (organisms versus artefacts), they have become intimately interconnected (a phenomenon known in dialectics as the interpenetration of opposites). The genome is basically regarded as a program or code, functionally comparable to computer code. And this is exemplified by the phenomenon (again typical of the 21st century) of the computer virus, inaugurated by the launch of the ILOVEYOU virus in 2000. Both organisms and computers can be infected by viruses: entities which are basically nothing more than packaged pieces of potentially detrimental and quickly replicating code. Moreover, computer viruses also exemplify the complexity of the contemporary world: the interconnectedness of everything via computer networks. A similar eco-systemic connectedness is discernible in nature. We ourselves are ecosystems (for our microbiome) dwelling within and interacting with other eco-systems, and the whole world is basically one interconnected ecosystem of ecosystems, one cycle of cycles, as Hegel once phrased it.

This, I would argue, is the meaning of the year 2000. A new style of thinking is emerging. Humans evolved into a planetary species and the world became a global web (a noosphere) of networks and circuits, of intelligent systems, increasingly consisting of smart machines, while laboratories function as local nodes in these globalised and computerised networks. Such global trends at the same time remain connected with the doings and experiences of concrete individuals. For instance, although science has become a large-scale phenomenon, involving huge numbers of researchers worldwide, concrete individuals (research celebrities or managers of large-scale institutes or programs, e.g. Francis Collins, Craig Venter, Bill Gates, Steve Jobs, Jennifer Doudna, Emmanuelle Charpentier, etc.) give these converging research practices a *face* (literally). We should continue to pay due attention to details. I already referred to the playful names given to the cloned piglets (*Dotcom*) and the name of the computer virus (*ILOVEYOU*), suggesting a connection between eroticism and digital infections (computer sterility). Producers of computer viruses act in accordance with Freud's dictum *Acheronta movebo*: these entities enter the system via subliminal channels, often using trespassers into the no-go areas of the Internet as carriers of infection.

§ 7. The metropolis and its inhabitants

Anyone approaching a city like New York, Shanghai, Singapore or Los Angeles from the air will be hugely impressed by the extraordinary size and complexity

of the urban phenomenon below: a metropolis on a scale that dwarfs the Faustian monster cities of the 19th century: forms of urbanity which exceed our comprehension and which can only be monitored by hyper-computers. How to oversee, understand or control such complex networks, such hyperobjects (Morton 2013)? At first sight it is incomprehensible that cities of this size can function at all. They are the emergent result of myriads of interpenetrating processes. Without highways, airports and airplanes, such urban networks would be completely unthinkable (Crichton 1996/1997), which makes the COVID-19 paralysis such a remarkable disruptive event (Zwart 2020c). The metropolis is an environment whose resilience is continuously challenged by disruptive events, and this places high demands on its residents. They will have to be mobile and flexible, willing to accept the credo of life-long learning, constantly acquiring new skills, new communication techniques, new professions, new forms of technology. Who can successfully inhabit such “mother cities”? Who is the metropolitan “we”?

Schelling once argued that peoples are taking turns in playing the leading role in the drama of history (e.g. the Egyptians, the Persians, the Greek, the Romans, the Goths, etc.). One by one, they all experienced their Golden Age as chosen people and as carriers of culture. At the beginning of the 20th century, Germany, France and England violently competed to assume this role. After the catastrophic mega-conflicts that heralded the demise of the nation state, this idea is no longer credible. First of all, because of the awareness (voiced by Spengler, among many others) that history is multi-centred, so that various groups may take a leading role in various regions on various continents. For instance, during the centuries when the Greeks experienced “their” historical moment and the Roman Empire came into being, the Bantu speaking people in Africa were engaged in their southward expansion, reaching KwaZulu-Natal and Transvaal somewhere between 300 and 500 A.D., while in China the Han dynasty reigned (202 B.C.–220 A.D.). In modernity, Protestants (notably the more radical branches, such as the Latter-day Saints or Mormons) considered themselves as chosen people, allegedly replacing the Jews on the basis of a new covenant, while in Marxist theory, the working classes were chosen to play the role of the transformative avant-garde. Should we adopt this line of reasoning, the question would be which actor will take the lead in the Metropolitan era? Should we think of a megastate such as China? Or rather of global tech giants such as Microsoft and Google?

In addition, the crucial question emerges who will be admitted and included in this emerging “we”. Advocates of neoliberal ideologies are not the only voices prone to obfuscate the mechanisms of exclusion they actually support. Hegel (1970) already set the stage when his fascinating dialectics of convergence derailed and failed to supersede his Eurocentric bias when discussing the African continent, so that notably these (un-dialectical) sections of his philosophy of history deserve to be drastically rewritten. While some groups are insistently invited to join the Ark of history, others are pushed back into reservations (from Native Americans up to Palestinians living in Gaza or the

West-Bank) or into metropolitan slums. How to address this challenge? While Magian thinking implied an ethos of patience (waiting for a divine intervention), Faustian thinking entailed an ethos of activism and mobilisation. Urban settings were a harsh industrial environment where struggle for survival reigned, but they also operated as emancipation machines, while other fantastic machines swerved like glittering capsules through oceans and landscapes to escape the industrial miasma. Now, we dwell in a different world.

Some voices suggest that we have arrived at our destination, that we are *there*, that history has ended and that the world has become *one*. But precisely now we seem to have lost all sense of orientation. We inhabit a global “mother city” in the literal sense of the word: μήτηρ πόλις, under the sway of unstoppable communication and hyper-connectivity. The metropolitan ambiance is no longer an inhospitable environment, but rather a world of unprecedented luxury and comfort, from a historical perspective. The conditions under which metropolitan residents exist, are allegedly human-friendly and historically speaking without precedent. In terms of human husbandry: we are well-protected and well-fed. This does not mean that we are free from diseases or the consequences of ageing (we are not beyond biology). A litany of laments can still be heard, but that, of course, is part of the condition. The Faustian slogan of progress gave way to technocratic efforts to optimise the quality of life.

This does not mean, however, that everyone is equally connected to the emerging networks, or that global innovation is as inclusive as advocates of neoliberalism purport it to be. Quite the contrary, the multiple dichotomies between participants and non-participants, between adopters and non-adopters are evidently increasing. Many commentators (journalists, etc.) are still looking for contradictions of the Faustian type, e.g. between the bourgeoisie and the proletariat, to explain why the global metropolis is not able to allow everyone to profit, but this still presupposes the Faustian idea of progress towards a situation of completion (i.e. the end of history). Somehow, on the political level, such commentators failed to internalise the implications of the entropy concept, namely that every increase of productivity and order (e.g. the creation of interconnected megacities) inevitably results in massive disruption elsewhere, notably at the outskirts. Thus, globalisation and connectivity gave rise to large-scale deforestation, ecological destruction, military conflicts and the emergence of novel viral threats. While economists continue to believe in growth and the “good tidings” of a global market, the jungles of the Amazon are destroyed, the ice-caps of the Arctic are melting, and children in Yemen are starving. Faustian slave trade has been replaced by a very lucrative immigrant market: human trafficking, humans as commodity, either involving refugees seeking asylum or young people looking for a better future, as their countries of origin fall victim to erosion and disruption, while greedy metropolises keep growing. This is, in short, the challenge: co-creating a metropolitan world which does not result in massive exclusion and uprooting.

In short, we are facing a paradoxical situation. Inside the metropolis, the technocracies of optimisation go hand in hand with burn-out and fatigue. At the outskirts, we see destruction and degradation. On the one hand, affluent elderly and millions of spoiled millionaires, on the other hand viral threats and the ongoing erosion of education of the young. On the hand, campaigns on behalf of the rights of LGBT (lesbians, gay people, bisexuals and transgenders), on the other hand burka's and segregation between the sexes. Increasingly, the privileged and the underprivileged seem to live in separate worlds. According to the view from inside, not everyone is willing to accept the invitation and to endorse the Metropolitan values, but outsiders rather arrive at the conclusion that biases and obstacles are endemic. From an insider (elitist) perspective, populist leaders are considered an obstacle. From a styles-of-thinking perspective, however, labels such as "populism" and "fundamentalism" are symptomatic of the inability to grasp what is at stake here, namely the erosion of culture by an aggressive and expansive global civilisation, adorning itself with epithets such as "tolerance", "inclusion" and "diversity", – slogans which actually obfuscate global processes of homogenisation and cultural annihilation, quite detrimental of course for genuine diversity. Besides biological mass extinction, languages, traditional skills and indigenous knowledge forms are quickly disappearing as well ("epistemicide"). While cultures, traditions and religions are discarded as outdated or even as suspect ("intolerant", etc.), or exploited as tourist attractions (as thematised by Dan Brown's novels), all humans are expected to convert to a new ideology (alleged "neutral", but remarkably thin in content) and to become speakers of this new, but in many ways quite toxic and corrosive language.

As to nature as the "backdrop" of the Metropolitan ambiance, exponential (Faustian) growth has unleashed global disasters, notably in the form of mass extinction and climate change, resulting in what is seen as a new geological era, the Anthropocene (Crutzen and Stoermer 2000; Crutzen 2002). According to this diagnosis, humans still place themselves in the centre as an all-powerful, hyper-responsible actor, instigator of exponential growth curves. Climate change, however, is a complex process, while a global, institutional form of agency to counteract the threat is lacking. Can "we" still turn the tide? As a rule, metropolises are built in vulnerable coastal areas, where the impacts of climate change are immediately felt. On the basis of the synchronicity principle, it is inevitable that a change in style of thinking is accompanied by meteorological and climatic turbulence. Joint hyper-initiatives are needed to foster resilience in the face of disruption. Besides technoscientific expertise, however, this requires a deeper understanding of the historical and socio-economic factors at work. In other words, what is required is convergence, not only in the sense of collaboration between political actors, but also in the sense of convergence among research fields. The styles-of-thinking approach aims to contribute to this from a humanities perspective, seeing current collisions as clashes between local cultures and global civilisation, and as instances of uneven development (Zwart

2020c). On the global political level, however, we are currently steering away from convergence rather than towards it.

A fascinating window into the Metropolitan present is provided by Dan Brown's (allegedly "low-brow") novels. While *Inferno* addresses the disruptive consequence of global mobility, exponential population growth and mass tourism (giving rise to viral threats), *Origin* (Brown 2017) zooms in on the clash between technoscientific, ideological globalisation and religious culture (Zwart 2020d). Iconoclastic hero Edmond Kirsch developed an ultrafast quantum computer to simulate the origin of life on earth, so as to exterminate the remnants of religious beliefs about creation. In the prologue of the novel, Edmond pays a visit to the monastery of Montserrat – about 45 kilometres northwest of Barcelona, famous for its statue of the Black Virgin, but also for serving as the Grail Castle in Wagner's *Parsifal* – to meet with representatives of world religions. Eventually, however, it becomes clear that the novel's main character is actually a building, namely Antoni Gaudí's *Sagrada Família*. On the one hand, it is a cathedral, a catholic church, the tallest one in Europe, the last of the cathedrals, a psychedelic forest, a jungle of columns, coloured glass and symbols and, like all cathedrals, a *Gesamtkunstwerk*, a total work of art. It is also a syncretic collage, symbolising the current convergence of spirituality and science, of nature and technology. Thus, the *Sagrada Família* symbolises something new, namely biomimetic architecture with a biological quality. With its cell-like structures, the ceiling resembles a complex organism viewed through a microscope (Brown 2017, p. 454). The pillars seem to grow out of the earth and Gaudí's tiles seem to resemble a primordial sea. It is an evolving building, symbolising technologies of the future, reconnected with nature (p. 455).

From a styles-of-thinking viewpoint, what is especially noteworthy is that *Sagrada Família* is presented as "a flashpoint for transition" and as the counterpart of the Pantheon of Rome, since both are "buildings with one foot in the past and one in the future, a physical bridge between a dying faith and an emerging one" (p. 455). *Sagrada Família* creates a spatial ambiance where the Metropolitan attitude can already be experienced: the imminent convergence of technology and nature, and of science and religion, to supersede the current crisis of global disruption. Although the novel sets off with the (Faustian) *conflict* between religion and science, towards the end (during the denouement stage) most protagonists seem aware that the contemporary world will *need* religion, represented here by Christianity, to come to terms with emerging challenges of technoscience. Christianity "will survive the coming age of science, using its vast experience – millennia of philosophy, personal inquiry, meditation, soul-searching – to help humanity build a moral framework and ensure that the coming technologies will unify, illuminate, and raise us up, rather than destroy us" (p. 455). Indeed, it is as if, "in the struggle between science and religion, a tipping point has been reached", as if both antagonists are now circling back from the farthest reaches of its orbit (p. 456).

The styles-of-thinking concept implies that basic convictions “work” in a convincing manner for an extended period of time, encouraging those involved to be open to the world in a particular manner, cultivating a particular way of thinking, speaking and perceiving, and seeing this as a common human endeavour. The Faustian idea that knowledge equals control is currently being replaced by Metropolitan ideas with a different morphology, including convergence, interconnectivity and complexity as key aspects. The identification and characterization of a particular style is not a matter of empirical “induction”, however, but rather an encouragement to see emerging developments from this perspective. The focus is on particular things (e.g. buildings) or events (e.g. the rise and fall of, say, Donald Trump) that exemplify the current condition. Notably, we zoom in on moments of commencement, so that Silicon Valley becomes the Metropolitan counterpart of the park of Academus or the Mount of Olives, while Gregor Mendel, working in a monastery garden, becomes for Metropolitan thinking what the pre-Socratics were for the Apollonian style. Ultimately, however, the ambition of the styles-of-thinking concept is to develop a diagnostic of the present and a prognostic of the future (as Hegel put it: to capture one’s own time in thoughts, or rather: to capture the *grounding idea* which is energetically realising itself right now). While the identification and reconstruction of grounding ideas of the past is already a risky task, producing a diagnostic of the present and a prognostic of the future is even more hazardous. Thinking, however, is no longer envisioned as the work of solitary heroes (with Spengler serving as one of the last of the Mohicans as it were), but rather as “distributed reflection”. The idea that we are currently migrating, more or less abruptly, into a new style of thinking, is a concept that must realise itself *via* collaborative research by multiple scholars across the globe, and this study aspires to contribute to this emerging task. Spengler’s book articulated a pessimistic view. Now that we are experiencing a new daybreak, we are again facing grave concerns. The conviction that a new grounding idea (a new, pervasive philosopheme) has already presented itself, entails fascinating opportunities for scholarly work, but eventually needs to prove itself in real life, rapidly evolving on a metropolitan scale.

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