A Summary of Bernard Stiegler,

Technics and Time, 1: The Fault of Epimetheus

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Technics and Time, 1: The Fault of Epimetheus (French: *La technique et le temps 1: La faute d'Épiméthée*) is a book by the French philosopher Bernard Stiegler, first published by Galilée in 1994. The English translation by George Collins and Richard Beardsworth was published by Stanford University Press in 1998.

Overview

Technics and Time argues that "technics" forms the horizon of human existence. This fact has been suppressed throughout the history of philosophy, which has never ceased to operate on the basis of a distinction between *epistēmē* and *tekhnē*. The thesis of the book is that the genesis of technics corresponds not only to the genesis of what is called "human" but of temporality as such, and that this is the clue toward understanding the

future of the dynamic process in which the human and the technical consists.

- **Part I** conducts a reading of approaches to the history of technology and the origin of hominisation, in particular by André Leroi-Gourhan, Gilbert Simondon, and Bertrand Gille. The outcome of this reading is the thought that history cannot be thought according to the idea that humanity is the "subject" of this history and technology simply the object. When it comes to the relation between the human and the technical, the "who" and the "what" are in an undecidable relation.

- **Part II** is largely a reading of the work of Martin Heidegger in terms of the above consideration. Stiegler argues that Heidegger's philosophy fails adequately to grasp that if there is such a thing as authentic temporality, access to it can occur only via objects, artefacts and, in general, technics. Without this intermediary, access to the past and future is impossible as such. Crucial to Stiegler's formulation of his understanding of humanity, technology, and time is his reading of the myth of Prometheus.

General Introduction

The book opens by taking note of the separation between *tekhnē* and *epistēmē*, between technical and empirical knowledge, which has characterised the entire history of philosophy. This begins with the political struggle between the sophist and the philosopher who accuses the sophist of instrumentalising *logos*.[1] Stiegler notes that Karl Marx was the first to think that the dynamic of technical evolution required a theory of its own, separate from the theory of the dynamism of biological evolution.[2]

Stiegler introduces the thought that the temporality of human existence is irreducibly technical via the philosophy of Martin Heidegger. For Heidegger's *Dasein*, temporality is a question of inheritance, of drawing upon a past I have not lived casting me into an indeterminate future. But for Stiegler, it is crucial that my *access* to this non-lived past will always be technical and inscriptive. The technicity of the world reveals the world in

its facticity. For Heidegger, however, this then becomes the ambiguity of modern technology: technics as both the obstacle and the chance of thought. And what makes technics such an obstacle is the violence it does to nature, to *phusis*.[3] Despite the fact that technics should be in the service of humanity, therefore, it ends up doing humanity a disservice.[4]

Stiegler derives from Bertrand Gille the argument that technics has entered into a state of permanent innovation. There is an ongoing divorce between the rhythms of cultural and technical evolution, symptomatic of the fact that today technics evolves more quickly than culture. It is as though we are today "breaking the time barrier," something that seems to suggest that speed is older than time.[5]

Stiegler concludes that the conjunction of technics and time, today, a conjunction indicated by the problematic of speed, calls for a new consideration of technicity. Technical objects, he argues, are inorganic organised beings, possessing their own dynamic, irreducible to either physics or biology. Such inorganic organised beings are constitutive of both temporality and spatiality, these being the derivative decompositions of speed. If life is the conquest of mobility, technics, as a process of exteriorisation, is the pursuit of life by means other than life. What Heidegger cannot think is the constitutive role of technicity for authentic temporality. What Gilbert Simondon, with his thought of individuation, will therefore make it possible to think (even though he does not himself think it, no more than does Heidegger) is the originarily techno-logical constitutivity of temporality.[6]

Part I: The Invention of the Human

Stiegler's task is to investigate and explain the interrelation between technics and time, firstly by analysing technics *in* time, that is, by examining theories of technical evolution. This question is important today because technics has become difficult to understand, and it is unclear whether we can predict or orient the evolution of the technical dynamic.[7]

Simondon observed that the human being was hitherto the bearer of tools, and thus himself a technical individual, but that today this is no longer the case, and machines have become the tool-bearers, so that the human is no longer a technical individual. Heidegger attempted to understand something similar through his analysis of *Gestell*, his name for the fact that technics rather than humanity now commands nature. The human has been reduced to the assistant of the machine, of technics *qua* system.[8]

There is nevertheless nothing new in the fact that technics is systematic, which is something that Gille tries to think with the concept of programming. Programming as overall planification is the specific feature of modern technics, effecting a rupture in technical evolution. But this rupture then has its own unplanned consequences, threatening general disequilibrium. The question becomes: can the other systems, the cultural systems, still be programmed, or have they and, in fact, the technical system itself, now become chronically unstable? This question is posed by Leroi-Gourhan as that of the relation between the ethnic and the technical.[9]

Stiegler will pursue this question via that of the dynamic of invention. Gille will contribute the thought of the technical system as a play of stable interdependencies. Leroi-Gourhan will add the concept of technical tendency, making it possible to conceive of the uprooting produced by technical evolution. With the thought of technical tendency, it becomes necessary to understand the technical *system* as a process of concretisation. Simondon will then theorise the technical system itself in terms of the relationship between individual and object, and thereby enable the recognition that technics is not *in* time but rather constitutes time as such.[10]

Chapter 1. Theories of technical evolution

Bertrand Gille

Gille formulates a synchronic principle for understanding the technical system, on the basis of which he intends to explain the diachrony of ruptures. A "system," for Gille, is a temporal unity, composed of interdependent elements, and stabilised around a point

of equilibrium. The progressive complexity of this interrelation leads to globalisation and deterritorialisation, as well as to a planetary technics and worldwide interdependence.[11]

Today, the question of the relation between the technical system and the social system has become the problem of consumption, and the need for consumers to ever more rapidly adapt their attitudes and behaviour. This is the basis of the uprooting effect characteristic of the contemporary world.[12]

For Gille, the evolution from one system to another occurs when the *limit* of that system is reached. The catalyst for this evolution, for Gille, is technical invention, which is not reducible to scientific discovery. If this is, in a way, a form of technical determinism, it is nevertheless a loose form, insofar as it remains impossible to *anticipate* technical evolution.[13]

The industrial revolution brought on a conjugated development of technical and economic systems, with innovation increasingly likely to become a political imperative of the state. Today, "development" means perpetual modernisation and innovation, a global process that incites and programs invention. Anticipation falls under the command of the calculation of investment: a constant organisation and re-organisation of the future, bringing forth an age of perpetual transformation.[14]

André Leroi-Gourhan

Leroi-Gourhan thinks in terms of "technical tendencies." These tendencies are independent of ethnic groupings, but they become concrete within such groupings as "technical facts." For Leroi-Gourhan, technical evolution results from the coupling of the human and matter, and he conceives of anthropogenesis as corresponding to technogenesis. His methodological question is whether it is possible to distinguish the technical tendency from the play of technical facts.[15]

With the advent of the technical, the history of life continues according to new laws, laws other than those of biology. Whereas technical facts are contingent or accidental, for Leroi-Gourhan technical tendencies are essentially a form of universality. Thinking the human is less a question of the opposition of the technical and the ethnic than of their interplay.[16]

The unity of the ethnic group is governed by time and by relation to the collective future in the Heideggerian sense. Originally, the ethnic (the interior milieu) was overdetermined by its relation to physical geography (the exterior milieu), a relation constituted by the "interposed membrane" or the "curtain of objects" in which the technical system exists. Leroi-Gourhan wishes to understand the interrelation between the interior milieu and the exterior milieu, and, in particular, the conditions by which the latter transforms the former, "freeing" the potential of a technical tendency.[17]

But if the ethnic is the interior milieu from which the technical intention emerges, the technical then also tends to detach itself from the ethnic, and to constitute itself as a "technical milieu." The technical group gains an "advance" with respect to the ethnic group, to the point where it must be asked if, today, they do not form an opposition. Today, each ethnic group is more or less in constant contact with all the others, and there is no longer any exterior milieu, in the sense that the entirety of physical geography has become saturated with human (i.e., technical) penetrations. Stiegler posits that in such conditions the separation between interior and exterior becomes problematic. Leroi-Gourhan approaches this question via his conception of the mega-ethnic group, but the question remains whether the tendency today is towards difference and diversity (thus towards the maintenance of ethnicity, however "mega") or whether difference and diversity tend to be eliminated, which would imply the waning of ethnicity.[18]

Gilbert Simondon

Simondon grants even less place to human intentionality than does Leroi-Gourhan, arguing that the human is not the intentional actor of the dynamic of technical evolution so much as its operator. Simondon observes that contemporary culture is set up as a kind of defence against technics, and argues that this is based on a misunderstanding of the essence of the technical. Simondon sets out to conceive of a new place for the human in relation to the technical. Doing so means acknowledging that the technical dynamic both precedes and imposes itself on the social dynamic. Simondon calls this new formulation of the human in relation to the technical "mechanology."[19]

For Simondon, the autonomy of the machine is the autonomy of its genesis. The inherent inventiveness of the technical object stems from the fact that it is a process of concretisation harbouring a genetic logic. In other words, the tendency of the technical

object towards the attainment of individuality lies in its passage from an abstract to a concrete phase, a passage overdetermined by functionality. Because this functionality is independent of particular human usages, adaptability and *in*determination may actually be the drivers of the process. The dynamic process by which the computer has evolved is driven by the indetermination and flexibility of its functioning, not by any particular use conceived on its behalf. Various tendencies converge in what then becomes the more or less "individual" form of the computer.[20]

Although the process of concretisation is a process of individuation, it should not be mistaken for a human process. But if this is the case for an individual technical object such as a computer, then this dynamic can play itself out only in relation to the individuation of the technical system as a whole (into which particular objects, such as the computer, have been inserted). There is, therefore, a general tendency towards the individuation of the technical system, that is, for the technical system generally to individuate itself as a unity. There is a maieutic between the object and the system in which the human inventor merely "listens" to the cues, reading from the text of matter.[21]

Nevertheless, Simondon speaks of the "driving principle" of the technical tendency as the living being, without which the unfolding of this tendency would not be possible. In this way, the question of the relation between the living and the technical returns. The technical object creates its own milieu – it "frames" nature. This is visible in the generalised performativity of the informational dimension of technics today. To create one's own milieu is to build. Although this building is not of human construction, Simondon maintains that it depends on a human intelligence capable of anticipation. What Stiegler intends to show in subsequent chapters, however, is that this anticipation *presupposes* rather than precedes the technical object.[22]

Chapter 2. Technology and anthropology

Technics as time

In the previous chapter Stiegler looked at theories of the dynamic of invention in relation to the technical object. But he now asks: cannot the entirety of the technical system be thought as itself an object, with its own dynamic process of concretisation? With contemporary technics, for example, in which the process seems to evolve beyond any overall human anticipation, the human is alienated from its technological destiny. Stiegler's question is no longer a matter of technics *in* time, but rather of technics *as* time, as the constitution of time. Rather than simply asking about theories of technical evolution, Stiegler returns to the work of Leroi-Gourhan in order to ask about the evolution of human being itself, but an evolution that, it will turn out, has always already been technical. At the same time, the chapter will argue that contemporary technics is at once human power and the power for humanity to destroy itself.[23]

Stiegler notes that in *Gesture and Speech* Leroi-Gourhan undertakes his work on the back of a critique of the transcendentalism of Jean-Jacques Rousseau's disquisition on the origin of humanity. Leroi-Gourhan, according to Stiegler, questions the divide between the empirical and the transcendental through which Rousseau authorises himself to "get behind the facts," yet Leroi-Gourhan ends up restoring and repeating Rousseau's gesture.[24]

After listing many of the technological problems the world currently faces, Stiegler writes that the question of technics is first of all the question that technics addresses to us. He quotes Maurice Blanchot, who, in the context of the human acquisition of nuclear power, speaks of the "becoming astral" of humankind. For Stiegler, this is a figure of the strange fact that, at this moment when humanity's power increases in an unprecedented and incalculable way, the world appears to be becoming more dehumanised, destructive, and denaturalised. Hence the question becomes, once again: What is the human? What is the human insofar as it has always already been technicity and technical power?[25]

The question of the origin

Philosophy has always been and continues to be constituted by the denunciation of the sophistic instrumentalisation of *logos*, a denunciation finding expression in the concept of "theory" and founded on the separation of the sensible and the intelligible. Historically, this separation has been essentially grounded in the thought of the realm of the "fixed stars," as the realm of being in opposition to becoming. The anthropology of Leroi-Gourhan, according to Stiegler, undermines these oppositions and renders them obsolete. And if it does so, this is not unrelated to the becoming-astral of humanity itself, as well as the potential obsolescence of the concept of humanity itself. If this is a question of "disaster," this must be heard in its etymological sense: the loss of the guidance of the asters, the stars. At stake is the question of a loss of nature, and, first of all, human nature. Leroi-Gourhan's anthropology is therefore relevant precisely to the extent that he understands anthropology as techno-logy.[26]

If techno-logy is the discourse on technics, what is technics itself? It refers, firstly, to all the domains of skill, including not just cooking or dance but, for example, politeness, elegance or poetry, even language itself. All human action has something to do with *tekhnē*. Such techniques are usually specialised, not possessed equally by all. But is specialisation crucial to the definition of technique? Perhaps not, but the paradox remains that it is the differentiation involved in specialisation that makes possible the emergence of technical milieus, ultimately leading to the so-called "technoscientific" milieu, where the latter seems to intensify human specialisation while at the same time eliminating the very possibility of human action.[27]

Asking about the origin of the human means asking about the origin as such. Plato's *Meno* is the oldest philosophical statement on the question of origins. Socrates shows that the definition of virtue cannot be pursued through examples, and then argues that what Meno has argued implies that one can never learn anything one does not already know – knowledge is impossible. The solution, according to Socrates, is that all knowledge is remembrance. Knowledge is the recollection of originary knowledge (a question that in Kant becomes that of transcendental knowledge preceding experience). But such recollection depends on the soul's immortality, on its access to the realm of the fixed stars, to being, in opposition to becoming and the contingency of mortality.[28]

Jean-Jacques Rousseau

Jean-Jacques Rousseau inherits this problematic. The problem will always be that of distinguishing the origin from the fall (into technicity). The task is to think this distinction as something other than an opposition. Such a thought of origin takes us to the work of Friedrich Nietzsche, but the question asked by Nietzsche is not just "Who is man?" but also "Who overcomes man?" Through this question Nietzsche took aim at Rousseau, and at the presumptuousness that finds the evidence for knowing who man is from the examination of who he has been for the last four millennia, as though this were an eternity. Instead, Nietzsche demands a form of historicised philosophising, or, in other words, a thinking of becoming.[29]

In his *Discourse on the Origin of Inequality* Rousseau wishes to ask about the origin of the human, about the "nature" of humanity prior to artifice. But his way of asking this question is to "suspend" the historical facts in order to construct the fiction of an origin prior to the facts, which he nevertheless bases on a kind of evidence, a transcendental evidence. Pure nature: man prior to creation.[30]

Stiegler then presents his critique of Rousseau, amounting to the fact that Rousseau is unable to achieve his wish to think the human prior to prostheticity, to think the fall as exteriorisation. Rousseau tries to think a double origin, but the second origin ends up being both the actual origin and the absence of origin, a merely accidental originality. Nevertheless, Rousseau does make clear that everything we think of as originarily human is so only in the mode of default, as supplementarity. It thus becomes a question of thinking the relation of being and time as a technological relation, since this relation only develops within the originary horizon of technics, even if this is equally an absence of origin.[31]

Chapter 3. Who? What? The invention of the human

The *who* and the *what*

This chapter begins by complicating the question of the genetic relation of the human and the technical. Does the human invent technology or could it be the other way around? But if technics invents the human, would technics not then be the "who" and the human the "what"? This is the problematic of invention and it sets us on a path beyond the difference between the "who" and the "what." And if it is legitimate to refer to a closure of the cortical evolution of the human, then we can describe technics as the pursuit of life by means other than life. What Stiegler intends to show in this chapter is the technological rooting of all relation to time, a question that Leroi-Gourhan approached via the problem of anticipation implied in all fabricating acts.[32]

Différance

Stiegler then enters into a dialogue with Jacques Derrida, whose concept of *différance* was in part a mobilisation of Leroi-Gourhan's thought of life as exteriorisation. To oppose writing to speech is always to oppose the human and the animal, yet at the same time it opposes the human and the technical. With his thought that the *grammē* is older than human writing, Derrida contests the opposition between nature and culture. Yet what are the conditions of emergence of the *grammē*? What takes place in the passage from the genetic to the nongenetic? This is the question of an absolute past, of the first man to have died, or "believed to be dead," who will be the first man of the present.[33]

There is, Stiegler maintains, an indecision around Derrida's mobilisation of *différance*: it amounts to the history of life in general, according to *Of Grammatology*, yet, in the essay on "Différance," Derrida refers to it as all the *supplements* to life, the difference and deferral of (human) life. This indecision marks the question of the origin of "existence," in the Heideggerian sense, the question of anticipation. What Heidegger calls the already-there, constitutive of temporality, is the question of a past I have never lived but that is nevertheless mine. This is the presupposition that the epigenetic layer is not lost but sedimented and conserved – Stiegler names this *epiphylogenesis*. This is a break

with pure life, bestowing upon the human individual his accents, his styles, the force of his gestures and the unity of his world.[34]

The question of the human is thus that of the passage from *différance* in life to the *différance* of *différance* – *différance* as the composition of the "who" and the "what." For Leroi-Gourhan, hominisation is a rupture in the process of freeing or mobilisation that is characteristic of life in general. The tool invents the human, or the human invents himself by inventing the tool, through techno-logical exteriorisation. But this exteriorisation is in fact the co-constitution of interior and exterior, according to a technological maieutic. This maieutic produces the illusion of a succession from interior to exterior, this illusion coming (to anticipate a later chapter) from originary forgetting, from the fault of Epimetheus.[35]

Feet and hands

Leroi-Gourhan considers Rousseau's methodological presupposition – that human beings have always walked on two legs, and used their hands as we do – to be guilty of "cerebralism." In fact, the "mental" is not grafted upon the "animal." The human body is functionally different from that of other primates, and this implies that what is in question is a process of evolution. For Leroi-Gourhan this process begins with the feet: erect posture "frees" the hand from the requirements of locomotion, thereby freeing the face from the requirements of grasping. Hence the hand will "call" for the tool, and the face for language. The brain has a role, but not a directive role, being one element in the overall apparatus.[36]

If it is the hand that frees up the possibility of speech, then this implies that language and technicity cannot be dissociated. And it is the conquest of mobility (*qua* speed) rather than intelligence that is the really significant feature of the path towards human evolution. The brain is not the cause but the beneficiary of locomotive adaptation. Space and time must be thought on the basis of speed, as its decompositions, rather than conversely. *Différance* too is such a conjunction of space and time, one that is more originary than their separation, and thus it too will need to be thought in terms of speed.[37]

Evolution, then, takes on an "extra-organic sense." Is this spirit? It must be seen in the

context of extremely long evolutionary processes. The skeleton advances beyond the nervous system (just as technics advances beyond society), and the process unfolds as a relationship of advance and delay, and as the play of tension between these relationships. In the movement from walkers to graspers, this plays out as an ever more open functional indetermination, preparing the terrain for what will become technicity. If the Neanderthal brain is as large as our own, then what matters is its distribution – the fact that the cortical fan, enabling the "technicity" of grasping and speech, has not yet opened out to the extent it will in the case of human beings. The question becomes what scientific apparatus is necessary to apprehend the advent of technics: zoology, sociology or some other discipline? What indissociably links body and brain is the tool, organised inorganic matter.[38]

Technics and spirituality

The evolution of tool-fabrication may lead to "stereotypes," but this occurs so slowly as to appear to depend on the rhythms of neurological evolution rather than on "creative consciousness." Yet this must nevertheless somehow involve anticipation. Technical consciousness means anticipation without creative consciousness, where anticipation means the realisation of a possibility not determined by biological programming. Once this no longer seems to be of zoological origin, then Leroi-Gourhan will speak of spirituality. It is in this way that the aporia that Leroi-Gourhan locates in Rousseau is shifted to a *second* origin. For Leroi-Gourhan the question becomes that of the shift from technical to spiritual intelligence, becoming the question of death for archaic humanity.[39]

In the movement from the flaked pebble (requiring one striking gesture) to the Archanthropian stereotype (requiring more than one) Leroi-Gourhan speaks of an addition of foresight. But anticipation must already have been involved, because a gesture is a gesture by virtue of being affected with anticipation. And there is no gesture without tools, artificial memory, prostheticity. If anticipation means the constitution of temporality via exteriorisation, nevertheless this cannot be opposed to interiority. The exterior does not precede the interior any more than the interior precedes the exterior – at stake is an originary complex through which they compose. A prosthesis does not supplement for a loss; through it, something is *added*. *Pros-thesis* means: set in front, *spatialisation*, set in advance, already there, anticipation, that is, *temporalisation*.[40]

Interior and exterior

"Interiority" sounds like a potentiality of which exteriorisation would (in Aristotelian terms) be the act, the actualisation – the expectation or promise of, the tendency to, exteriorisation. But expectation already means projection and future – anticipation. Hence the problem is that the tool appears to be both the result and the condition of anticipation. The tool is like a mirror, a place of recording and inscription but also a surface of reflection, the reflection that time *is*, as if the human were reading and linking his future in the technical. There are two sides to anticipation: the anticipation without which tool-making would be impossible and the anticipation implied by the fact that tool-making is not *only* stereotypical – the process of making tools itself evolves, transforms, becomes. But can these two aspects of anticipation be separated? And if this technical becoming is not simply directed by the "who," then does the "what" have a return effect on the "who," governing its differentiation? The "who" would then be differentiated by the non-living, by the "what." This is the question of the emergence of time, but also of mortality (anticipation of the end).[41]

Leroi-Gourhan's problem is that he never quite faces the fact that, if the evolution of (technical) stereotypes occurs at the rhythm of cortical evolution, then the latter might itself be determined by the emergence of the tool. It is therefore a double emergence, a double *différance*, abysmally mirrored. For human beings, the memory of the group is "external." But *as* external this memory is no longer species-specific but rather technological. As soon as there is exteriorisation, there is a process of differentiation between groups governed by techno-logical and idiomatic laws.[42]

Instrumental maieutics

For Leroi-Gourhan, ethnic difference is the specifically human trait, but what we are witnessing today is, perhaps, a process of deterritorialisation that suggests that ethnic differentiation may be diminishing. Hence it may be preferable to refer to *idiomatic* rather than ethnic differentiation. Leroi-Gourhan speaks of a technical and a non-technical intelligence because he believes in "universal technical types" that cut across cultures: such universal technical types would not yet be ethnically differentiated while

nevertheless being non-natural. But are they still not differentiations even if they remain idiomatic rather than ethnic? Because Leroi-Gourhan wishes to deny any "creative consciousness" at the archaic origin of humanity, he is forced to reintroduce the "second origin" in the form of non-technical, spiritual intelligence, thereby opposing two types of anticipation – and thereby undermining his own refusal of Rousseau's aporia. To this extent, Leroi-Gourhan fails to think through the structural coupling of the evolution of cortex and equipment. Stiegler calls this an "instrumental maieutics," a mirror effect whereby one, looking at itself in the other, is deformed and formed in the process.[43]

This maieutics operates through the fact that the stereotype, the tool, itself constitutes a non-genetic memory. If the lithic tool enables a type of anticipation, it does so on the basis of the memory of an already-there, a past that is mine but that I have nevertheless not lived. The memory of the existence of previous generations is bequeathed through technical supports. This makes the appropriation of this past possible, a maieutics of exappropriation. Time is thus the process of modification of the industrial stereotype.[44]

Tool and symbol

When Leroi-Gourhan adds the concept of "spiritual intelligence" to "technical intelligence," he does so by introducing the "symbolic," the "faculty of symbolisation," but he fails to explain its provenance. Leroi-Gourhan seems to understand spirit here as that which is unrelated to mere survival, freedom from the instinct of conservation, and thus as a *real* exteriorisation, the technical tendency remaining *within* natural movement. Technical reflexivity is followed by symbolic reflexivity. The symbolic, for Leroi-Gourhan, begins with the cortical development that means the corpse may no longer be left to decompose – thus as the beginning of aesthetics and mortality.[45]

But in fact, reflective intellectuality must already have been the ground of technical intelligence, even if it is a process that without doubt takes time. The threshold from which anticipation and reflexivity deploy themselves is in both cases exteriorisation – where exteriorisation is less a rupture with nature than a new organisation of life. The evolution of techniques cannot be imagined without a degree of play, of latitude, within the general behavioural stereotypes implementing the instinct of conservation. And yet Leroi-Gourhan himself maintained that the emergence of tools and symbols formed

parts of a single process, just as he further acknowledged that both tool and word involved anticipation, in the form of being retained for further use.[46] Expression, Stiegler argues, must always already be the possibility of generalisation, that is, of anticipation *qua* intellectualisation.[47]

Epiphylogenetic memory

If the human fact is "grouping" and "tradition," then the rupture in which exteriorisation consists must be understood as the emergence of a new organisation of memory. By freeing itself from genetic inscription, memory pursues the process of liberation. Whereas instinct involves the highest degree of genetic predetermination, "intelligence" seems completely freed from this predetermination. At stake is a new mode of programming. It is a question of increases in the capacity to choose (the vertebrate "chooses" more than the ant), culminating in the rupture of exteriorisation in humans, whose behaviour nonetheless retains a large instinctual component. But, for the human being, intelligence has three levels: species-related, socioethnic, and individual. Yet there is an ambiguity about the relation between the final two levels: if language evolves over time through being used by many individuals, it nevertheless escapes the will of the individuals effecting this change, and this fact is generalisable to all collective realms, that can all, in general, be described in terms of processes of idiomatic differentiation. Exteriorisation makes it possible to break the link between the species and memory made possible by exteriorisation, as Leroi-Gourhan says. Only on this basis can there arise a form of intelligence particular to the individual, that is, a shift by which differentiation occurs at the level of the individual, who thus becomes to some extent undetermined in its behavioural possibilities.[48]

The question is time: becoming as the bringing into play of the non-programmed, the im-probable, destiny as non-predestination. This presupposes prostheticity, the artificiality of memory. Being human means inheriting the entire past. Leroi-Gourhan, with his distinction between technical and non-technical intelligence, wishes to date the emergence of the human (that is, of the social) *after* the emergence of technics as such. But everything must be there at a single stroke, in which the essential element is the inorganic organisation of memory.[49]

The hypothesis advanced by Stiegler is that the evolution of knapped flint and

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corticalisation involves a process of mutual influence. This implies a concept of artificial selection. For non-artificial life, the entire summation of epigenetic events (of individual memory) is lost with the death of the individual. In the human case, life conserves and accumulates these events. This affects the whole process of selection. Hence epigenesis (the events in the life of the individual) exerts a powerful influence on the reproduction of the species. Such is epiphylogenesis – a new relation of organism to environment and a new state of matter. It is in this way, first of all, that the "what" invents the "who" as much as the converse.[50]

Why does asking about the birth of the human mean asking about the birth of death? If the central concept is epiphylogenetic memory, this does not seem to have any equivalent in grammatological deconstruction, which is thereby unable to specify what happens in the shift from the *différance* of life to the *différance* of this *différance*. Leroi-Gourhan avoids the question of *différance* by opposing technical intelligence to the faculty of symbolisation opening onto the feeling of mortality. These questions recur in the existential analytic of Heidegger. In a manner similar to the way Leroi-Gourhan opposes technicity to the relation to death, Heidegger opposes the time of calculation to authentic time as the relation to death. What the analysis of Leroi-Gourhan suggests is the possibility of an existential analytic of time, but an analytic of the history of *prosthetic Dasein*, an analytic in which technicity opens up the relation to time rather than constituting its denaturalisation.[51]

Part II: The Fault of Epimetheus

The previous chapter asked how the temporality of the "who" is constituted in the actuality of the "what." And the point reached in that chapter consisted of two conclusions: firstly, the acknowledgment that nothing can be said of temporalisation that does not relate to the epiphylogenetic structure of already-existing memory supports in the successive organisation of human epochs; secondly, the recognition that this presupposes an understanding of the possibility of anticipation. This is the understanding striven for in Heidegger's existential analytic, which should accordingly

be reinterpreted in terms of the question of prostheticity. But Stiegler's approach to this interpretation will be *via* the myth of Prometheus and Epimetheus.[52]

Chapter 1. Prometheus's liver

Epimetheus

Prometheia and *epimetheia* are ideas organised into elements of a quasi-existential analytic, in a context where the tragic is still experienced in terms of (astonishment at the fact that there is) technicity. The tragic Greek understanding of technics will not, unlike metaphysics, oppose two worlds (e.g., *logos* and *tekhnē*, *physis* and *nomos*) but compose *topoi* that are constitutive of mortality: on the one hand, immortal; on the other hand, without knowledge of death (animality). Between these lies technical life, that is, dying.[53]

Epimetheus is not only the figure of forgetfulness – he is himself forgotten. Yet Prometheus makes no sense on his own: he *must* be doubled by Epimetheus, who not only commits the fault of forgetting but reflects on this fault, but does so *too late*. It is striking that these figures do not appear in Heidegger, given that they yield the major elements of the structure of temporality. But they do so by rooting this in technicity, thereby undermining the opposition between authentic and calculative time.[54]

Non-immortals

Stiegler then cites the Prometheus myth, as recounted in Plato's dialogue, *Protagoras*, noting that it is by deviating from the equilibrium of animals, a departure engendered by Epimetheus's mistake, that mortals come into being. Fruit of a double fault – of forgetting (to distribute a quality to human beings), then theft (of fire from Zeus) – human beings are naked and defenceless, lacking (as yet) the art of the political. This is not a fall but a default of origin, occurring at a single stroke.[55]

Before interpreting this version further, however, Stiegler turns to the Hesiodic version

and to its interpretation by Jean-Pierre Vernant. Once again this version begins with humans banqueting with the gods, that is, before the advent of humanity as mortality. If the Prometheus myth is an anthropogony, it is so as a thanatology. Mortals come to be through obtaining their condition of dying, a condition arising as a result of the deceptive gifts of Prometheus. Sacrifice places mortals between beasts and gods and this opens the (political) question of community as the originary departure from all origins. Prometheus's failure confers upon the separation of mortals and immortals the character of a fall. This fall, dying, is the origin of *eris* (contest, jealousy) – and this implies the threat of *stasis* (war) but it also amounts to the dynamic factor of the community, emulation (imitation and competition). But with the end of the golden age, human beings are yoked to labour and to handling instruments.[56]

Returning to the Protagorean version, the forgetfulness of Epimetheus is doubled by the thievery of Prometheus. The result, for human beings, consists in the advance of their prematurity that is their eternal delay. Religion, speech, politics and invention all arise from this default of origin. Human beings invent and imagine, and *realise* (that is, make) what they imagine, and they do so because they are endowed with reason, *logos*. Or: because human beings realise what they imagine (as technics), they are endowed with reason and language. The being of human being is to be outside itself.[57]

Elpis

Sophia and *tekhnē* are nothing without duplicitous fire. Fire: not a power *of* mortals, but a domesticated power always threatening to become wild, exposing the powerlessness of mortals. Animals perish; humanity is mortal. The difference is the relation to the immortals, which means that to be human is to endure one's mortality. As a consequence of Prometheus's theft Zeus sends Pandora, that is, all the problems of difference.[58]

Pandora brings not only the awareness of mortality but all the problems of birth and sexual difference, yet her ultimate significance is contained in her jar – *elpis*, which means anticipation, expectation, thus temporality. *Elpis* means presumption and foresight, hope as much as fear, and Vernant questions whether this should simply be considered an ill: rather, it conveys a radical dimension of uncertainty. Lacking prescience, it implies credulity, the potential for blind hope (in the face of death), less foresight than an

antidote to foresight. As in Heidegger: knowledge of the end in the form of a non-knowing; the relation to the indeterminate, that is, the (anticipation of the) future.[59]

Technics, art, facticity: these can harbour madness, constitute a danger, and are frightening. For these reasons, being technical is accompanied by a constitutive blindness, by forgetting and idiocy. *Epimetheia* constitutes this carelessness and primordial idiocy, but also the carefulness that comes too late. This is felt in the life of the group as the dangers of becoming atomised or becoming a herd. Mortals are those who are not simply together but must be brought together, in a feeling of having-to-be.[60]

This political question is formed in the Protagorean but not the Hesiodic version of the myth. The duplicity of language has revealed itself, in the eyes of philosophy, as writing. Hence the appearance of Hermes in the myth, which also means the opening of History. The bad side of *eris* appears, requiring another *tekhnē*, but one shared equally by all (unlike the arts). This togetherness is brought about through the feeling of *aidōs* (modesty, shame, humility, reserve). Politics is an art imprinted in every mortal as the originary feeling of the blow of technicity itself, the feeling of the default of origin. But *dikē* and *aidōs* are also forms of knowledge, requiring interpretation and translation. Their meaning must constantly be invented. And this requires *prometheia*, anticipation, worry in advance, as well as *epimetheia*, a sort of delayed wisdom, arriving after the event – together, these constitute reflection, reflection in time. Prometheus's liver is a clock as much as a torment, the ceaseless process of *différance* in which time is constituted through the coup of technicity. The liver: that through which a divinatory hermeneutics is practised; seat of the feeling of situation; mirror of mortality; mirage of the spirit; concealing stones (*calculs*) that secrete bile.[61]

Chapter 2. Already there

The Concept of Time

In *The Concept of Time* (1924), Heidegger elaborates *Dasein* – a being that *has to be*, a

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historial being immersed in *hermeneia* – as the articulation of the "who" and the "what," and he does so via the thematic of the clock. This thematic will be discarded in the later existential analytic, leaving the question of the already-there shrouded in ambiguity. Despite the fact that the facticity of *Dasein* ensues from the already-there, from the fact that the past of *Dasein* always precedes it, Heidegger will end up denying any constitutive character to prosthetic facticity. To this extent his thought remains inscribed within the opposition between *tekhnē* and *logos*. Later he will denounce "instrumental" interpretations of technics conducted in terms of "ends" and "means," but he will not question the determination of an instrument *as* a means. He denounces the instrumentalisation of language without seeing that this possibility stems from the instrumentality inherent in language. What must be resisted is not instrumentalisation but the reduction of an instrument to a means. The issue is, rather, to address the modalities of instrumentality.[62]

Stiegler considers the etymology of Epimetheus. He relates *metheia* to *manthano*, hence to *mathesis*, about which Heidegger writes that the mathematical is a fundamental taking of a position towards things, a presuppositional knowledge of things, a pro-posing. *Epi* means accidentality or artificial factuality. Hence *epimetheia* means the accumulation of knowledge marked by accidentality: heritage. And this corresponds as well to the account of *Dasein* in *Being and Time*, according to which *Dasein is* its past without having *lived* this past. But if this is the relation between technicity and tradition, does that mean that ethnicity co-originates with technicity or that ethnicity is merely one modality of an essentially deterritorialisable idiomatic difference? This question haunts Heidegger's thought (and his political adventure).[63]

Nevertheless, Stiegler in no way considers Heidegger's fault as consisting in harbouring a traditional metaphysical position in relation to technics. Hence, for example, it is critical to Heidegger's account that facticity and thrownness are an irreducible element of existence. Understanding arises as a possibility from the same ground as does falling, and this existential structure is very close to Stiegler's (Promethean-Epimethean) being-through-de-fault. Contrary to the reading of Hubert Dreyfus, Heidegger neither opposes nor promotes technology but calls for an opening towards it. The real ambiguity in Heidegger lies in the question of the already-there. The history of philosophy is the knowledge of the de-fault as a history of mistakes – mistakes that had to be, or rather, that "will have had to be."[64]

The Concept of Time does not simply concern phenomenological time but the hypothesis of a technological time constitutive of the temporality of the "who." *Dasein* has knowledge of a non-knowledge: of the indeterminacy of its end. Tradition, the transmission of knowledge, occurs via forms of recording that provide access to it. These forms of recording are today being transformed, affecting knowledge itself. But what is knowledge if it is transformable in this way? *The Concept of Time* offers a way into this question through its consideration of knowledge as the articulation of the "who" and the "what," of *Dasein* and the clock. In this early text it is not yet a question of the knowledge of ontological difference, but rather knowledge of a *différance*.[65]

Thinking about time *begins* with thinking about the clock. The clock refers to a cyclical system, to which is added a calendrical system presupposing datability. All this requires the entire setup of mnemotechnics, and it is inscribed in the movement of the planets and the system of the seasons. The clock is the "durable fixing" of the now. But what is the now? Heidegger asks: "Am I the now?" And would that mean the "what" is constitutive of the "who"? Or does it just provide the occasion for access to a "who" determined before all clocks, before any "what"? Is the alternation between day and night itself a "what"? Could it then be considered a cosmological program, a program today covered over by the program industries responsible for what Paul Virilio calls "false light"? Does this not suggest a "proxying" of the clock before all "natural" programmatic systems, a proxying always already calling forth a historial programmability? What relation to technics enables Heidegger to say that *Dasein* is time?[66]

Dasein

Dasein is mortal, perpetually incomplete, which is why it cannot be understood through the categories of the ready-to-hand or the present-at-hand, but only from out of the phenomenon of care. *Dasein* is improbable, that is, unprogrammable, incalculable, untranslatable. But if the "what" is programmability, does this rule out that the "what" constitutes the "who"? Rather, Stiegler will show that the improbable is entirely programmatically destined, that the elementary is supplementary, according to the structure of the *après-coup*. I can never experience my own death, nor even represent it – this is the ground of the very principle of individuation, of differentiation. Because there is deferral (of my end), there is differentiation. This is the very structure of

différance. Dasein is becoming, not as a maturing fruit (coming to completion), but as perpetually incomplete yet always *already* its end, already its not-yet. The end precedes *Dasein*. This is its possibility and its impossibility – hence its improbability.[67]

Dasein's knowledge of its end is of an originary certainty that nevertheless remains utterly indeterminate. From where does this knowledge come? *Dasein* shrinks back from knowing death, and in 1924 Heidegger already thinks this in terms of withdrawal, a forgetfulness of mortality. This withdrawal is *différance*: temporalisation, spacing, datability, falling, publicness, putting into reserve. Having to be lies in this withdrawal through which *Dasein* disappears, through which it is susceptible to not-being-there or being-there by de-fault – to being programmed. It is on the basis of an originary programmability that there is an originary improbability. It is the uniqueness of *Dasein*'s being-past – hence the loneliness of *Dasein* that stands by itself, its uncanny idiocy and idiomaticity – that grants *Dasein* its possibility of existing. *Dasein* can anticipate, can project itself futurally, run ahead of itself, only on the basis of the already-there of its inherited past. But, Stiegler asks, must this not be grounded in the concrete, historico-technical possibility of a *repetition* of the past that enables *access* to this already-there?[68]

The question of repetition *is* the question of *tekhnē*, of prostheses. The *unheimlich* character of all prostheses derives from the fact that to look at a prosthesis amounts to staring at the fact of one's own mortality. Anticipation amounts to an immersion in the knowledge of non-knowing. Time both deploys prostheticity in its concrete effectivity and deploys *itself* within this prostheticity.[69]

No future

The necessary question is the following: if the futurity of *Dasein* is constituted in the "authentic" repetition of a having-been, and if this is what grants *Dasein*'s difference, its idiomaticity and its consistency, then what would be the effect of a dynamic of the "what" that short-circuits the work of *différance*? Today's generation says: *no future*. Does this mean that there is no longer any *différance*, that in the world of "real time" transmission there can be no future? To answer this question affirmatively would not simply be to say that *tekhnē* produces falling, because *tekhne* was already what gave *différance*, gave time.[70]

In *The Concept of Time*, Heidegger argues that a clock can show us the now, but that no clock ever shows the past or the future. With this argument Heidegger intends to privilege the "who" over the "what," but the question is to know what one means by a clock. Is not the clock that which constitutes the possibility of being futural? Does the time without time of *no future* translate the error of technics, or rather the techno-logical fate of *Dasein* itself? When Heidegger later thinks "being without beings," does he not acknowledge the disappearance of time? Heidegger's work from 1924 onwards aims at the question of "real time" (as in "live" broadcast, without delay).[71]

"To fix" does not mean to determine but to establish. In other words, fixing also establishes the possibility of the indetermination of multiple determinations. Heidegger mistakenly identifies fixing and determination in relation to the clock. For Heidegger, the fundamental phenomenon of time is the future, whereas *measuring* time is attempting to determine the indeterminate, hence a form of evading the end. But, Stiegler asks, is measuring the *only* thing a clock does, or that fixing does? Writing in general was firstly a site of measurement, so could one not say that writing is a clock? For Heidegger, concealment lies in wanting to calculate the incalculable, or to prove the improbable, rather than *experiencing* these. But if writing is both technical and a clock (an objective memory) through which *différance* opens, then the Heideggerian themes of authenticity and falling make sense only from a non-metaphysical understanding of technics that Heidegger never finally achieves.

"Direct" democracy, as non-deferred, "live" democracy – as for instance in televisually-conducted opinion polls – is an example of the *speed* with which the "living present" is today synthesised. Hence the problem is not simply that it is calculative. Calculation *gives* the possibility of fixing durably, opening up difference and deferral. The meaning of "fixing" is not exhausted by the concept of calculation. Calculation is also the possibility of the tradition, as that which is recorded and passed on, and thus *das Man*, the "one" or the "they," refers both to tradition and to what today we call the "media." The historiality of *Dasein* is the question of its individuation, which is constituted in repetition. At stake today is the loss of the sense of historiality, the elimination of the *différance* of history, the elimination of repetition as return not to the same but to the other, and the feeling that we live today in a perpetual "present." It is a matter of knowing the causes of this tendency.[73]

Individuation and *différance*

Stiegler notes that *The Concept of Time* makes four points in relation to "individuation":

(1) time is *Dasein*, and temporality means non-identical actuality, deferred and thereby differentiated;
(2) time is therefore the principle of individuation;
(3) *Dasein* is time insofar as it is being-futural – anticipation, improbability, *différance*;
(4) individuation belongs in the same movement to a community – of mortals.

Thus the "individual" is less a subject than an instantiated idiomatic difference, instantiated in a relation (through *logos*) with "the community of a de-fault." Stiegler thus prefers to speak not of a subject but of a citizen, where citizenship consists in belonging to an isonomy in and through which an autonomy is affirmed. This is the opening to historiality, where the opening is made possible through a form of writing. Alphabetical writing enables a "literal synthesis." Today this literal synthesis is being replaced by analogical and now digital syntheses, oriented by a tendency towards a kind of atemporality.[74]

Dasein differs and defers. Deferral means anticipation, putting off till later. *Dasein* is what it *will* be; it knows its end, but the knowledge of the end always withdraws. Its end is indeterminate – this is what it knows, but what can neither be calculated nor proven. *Dasein* projects its end as *its* end, thus its anticipation is the basis of its differentiation. *Dasein* is as not-yet, but also prosthetically, that is, always already in the world, notably as a being with others, being traditional, being a One. Mostly, *Dasein* exists "programmatically," that is, within modes of facticity that are banal, that wish to determine the indeterminate, calculate the incalculable, thereby concealing individuation and the improbability of its end.[75]

Dasein anticipates through returning to its past, yet this is not in fact *its* past, hence it is a pros-thetic return. The past is outside *Dasein*, yet Dasein is *only* this past, by differing from and deferring it, by being improbably what it still only is programmatically – hence by *doubling up* on its program (just as the Promethean error doubles up the error of Epimetheus). *Dasein*'s being-at-fault is never only its fault, yet it is always its fault.[76]

History of being

What Heidegger calls the "history of being" is *Dasein*'s past that is not its past, and that it must double up on: the authentic transmission of the question of being and the metaphysical transmission of the concealment and forgetting of that question. This forms the historiality of *Dasein*. But how is tradition transmitted? It is transmitted as the durably fixed *historio-graphy* that *Dasein* has to interpret. If this is the way in which *Dasein* can access its historiality, how is this historiality itself essential to *Dasein*'s temporality? If *Dasein*'s past is outside it (yet it is nothing but this past), then it can do nothing but put itself outside itself, ek-sist, prosthetically. It can only put itself in front of itself, can only test its improbability pro-grammatically. In terms of the history of being, it is *recording* that realises differing and deferring identity, the simultaneous positing of identity and difference. Hence, for example, it is by identifying the text read letter for letter, unequivocally and exactly, *ortho-graphically*, that the reader is produced as *différance*. Writing ex-poses (and conceals) *différance*.[77]

That "time is *Dasein*" means that time is the relation to time. But this relation is techno-logically determined. Every epoch is characterised by the technical conditions of access to the already-there that constitute it as an epoch, and that harbour its possibilities of différ*a*ntiation and individuation: for instance, political citizenship. There is time only as the deferral that generates differences, through a reflection of the "who" in the "what" and vice versa. Heidegger maintains that the principle of individuation is constituted outside the publicity of the One (*das Man*, "the they"). In fact, the gift of *différance* is technological because the individual constitutes itself from out of the possibilities of the One, from the relation with one another enabled by the particular setup. In the history of being, calculation is what effectively gives access to any *différance*. Through the mirror of a "what," the "who" gains access to "tality," to as-ness as the work of *différance*. Textualised ortho-graphically, what happens with the opening of the book of history ends up being more *indeterminate*, even though more certain. Any exact, ortho-thetic memorisation engenders a disorientation in which the straight is always becoming crooked, which is the price (and prize) of epochal doubling-up.[78]

Chapter 3. The disengagement of the *what*

According to Heidegger's analysis in *Being and Time*, the "voice" of conscience that is heard in *Dasein*'s being-at-fault is what leads to the doubling-up of *Dasein*'s having been. This chapter examines this doubling-up in terms of:

(1) the analysis of everydayness with regard to its "disengagement" of the "what";
(2) the structure of being-at-fault as "engagement" of the "what";
(3) the question of the historical constitution of historiality as a new configuration of the "what."[79]

The analysis of everydayness

That it is impossible to question the meaning of being without a prior understanding of it (mediated through everydayness) is nothing but a resurgence of the question of Meno. Being is given only in the delay of an *après-coup*. Common to Meno, Epimetheus and *Dasein* is the theme of knowing as originarily forgetting. Overcoming this forgetting means taking up the question of the ontological difference, itself passing in turn through a difference between the "who" and the "what," that is, through "being-ready-to-hand," itself distinct from "being-present-at-hand" (the latter considering the "what" in a way that misses it). Being is always the being of a being: this means that there is no way through to the question of being other than through an exemplary being (one that does not reduce being to a being). This exemplary being, for Heidegger, is the "who" – *Dasein* – radically distinguished from the "what." The having-to-be of the "who" determines its mineness, its individuation, its idiomaticity or its idiocy. But the idiot is caught up in the "what," constituted in the "what," whereas for Heidegger the advent of *Dasein* is possible only through tearing itself away from the "what." Heidegger is mistaken when he excludes the hypothesis that the means of access to the already-there are constitutive, are the means of acceding to the "who." For Heidegger, these means, these instrumental possibilities of access, are banal with regard to authentic temporality. Is not "making the past our own," however, affected by the possibilities there are for accessing this past?[80]

Tradition is what makes *Dasein* fall, but also what releases its having-to-be. This is the Epimethean structure: the experience of accumulated faults that are forgotten as such. *Being and Time* states that every being is either a "who" or a "what," the question being the connection between these two – it is the formulation of this question that Stiegler contests. The destiny of the "who" is tied to the "what." If the "what," structured in the world and constituting the already-there, is what gives access to *Dasein* in the first place, should one not ask whether a dynamic of the "what" determines the most originary sphere? The existential analytic is incapable of taking proper account of the organised inorganic being.[81]

Everyday being-in-the-world is a matter of "use." Use encounters tools that are always "in order to" – they *refer*. This referral is firstly to other equipment, to a system of "whats." In being used, the tool disappears. Being ready-to-hand and being present-to-hand are the forms relating the "who" and the "what," and thus it is the "hand" that articulates the "what" upon the "who." The "who" itself is what opposes the "what" in having hands. But even though all the "whats" together make up a (technical) system (*Gestell*), Heidegger will never think that this system possesses any *properly* unconcealing quality.[82]

Being ready-to-hand can go missing, be in default. This is a disturbance that suspends the execution of a program, making the system of references explicit, through which the world comes to the fore. This break in *prometheia* (foresight) is possible only because foresight is originarily lacking, because it has not foreseen everything. This is the initial (Epimethean) act of forgetting that incessantly returns, the already-there that is always not-yet-there. Not only does Heidegger think the instrument, therefore, he thinks on the basis of it. Yet he fails to see in the instrument the originary and originarily-deficient horizon of any discovery, any temporality, any futurity. He thinks tools as merely useful, and instruments as merely tools, rather than as ordering the world (an artistic tool, for example).[83]

Heidegger analyses the "sign" as an exemplary case of a tool that refers. As a way into the critique of this analysis, Stiegler turns to Edmund Husserl's account of temporality. Husserl argues, through the example of the melody, that each present moment has attached to it a constitutive retention and protention, what Gérard Granel calls a "large now." That retention which is attached to the now of a temporal phenomenon is called *primary retention*, and it is neither perception nor imagination. Nor is it *secondary retention*,

which is a recollection of a past temporal phenomenon. Nor is it the consciousness of an image (a "reproduction"), which is an example of what Stiegler calls *tertiary retention*. Heidegger's critique of this schema *ought* to have been that presence is constituted by the already-there that is not lived but inherited, which means that temporality cannot be thought on the basis of the "now," and that the oppositions between primary, secondary, and tertiary retention require radical revision.[84]

Returning to Heidegger's account of the sign, Stiegler argues that Heidegger's example (a car's indicator) empties the sign of all "thickness," and that the subsequent placing of "documents" under this emptied-out category of sign affects the understanding of everything that Stiegler calls epiphylogenesis. Heidegger wishes to show that the sign's "publicity" is always already a kind of non-relation, that it is always on the side of falling. According to Heidegger, for all being-ready-to-hand the world must already be there, and the instrument "refers" to a totality of involvements, a "finality." But this finality, this ultimate end, cannot for Heidegger be revealed through being ready-to-hand, but only through being a "who," thus preceding the already-there of all "whats." This is what Stiegler contests. Finality (being-towards-the-end) and the facticity of the already-there are in fact inextricable. Heidegger himself admits that *Dasein*'s understanding of its end is delivered only by a "what" that is already there. *Dasein*'s finality is an understanding pro-posed by the play of relations that make up the world, the totality of which forms the significance that makes the meanings of words possible. This thought means that (Husserlian) intentionality must be thought on the basis of being-towards-the-end, and makes it possible to think the genesis of the idiomatic, which could not be thought within Husserlian phenomenology.[85]

Heidegger argues that spatiality is constituted as ready-to-hand, as "closeness," the hand thus being constitutive of space. The spatiality of the "who" is characterised as de-severance. The radio, through de-severance, brings things closer. De-severance is thus accompanied by prostheses. These prostheses are then forgotten (the glasses on one's nose, for example). This is the naturalisation of the prosthetic. More generally, this is why the already-there usually presents itself as having-been rather than as the facticity of having-been. Heidegger himself forgets the instrumental condition of the already-there, even though he thinks through equipment – he does not see what he is describing. He ought to have concluded that constitution is always re-constitution, less genetic than epigenetic, or, in Nietzschean terms, genealogical.[86]

The "who" of *Dasein*, in its everydayness, is the One, the neutral. It carries within it the tendency towards mediocrity, governed by publicity. It is in the weight of the "what" that the "who" (re-)discovers its having-to-be. *Dasein* is thrown into its lack of quality, its prosthetic technicity. The existential structure of understanding presupposes being-thrown. Any interpretation must already have understood what is to be interpreted. Removing the Platonic disavowal of mortality from this structure (of Meno) opens up the question of the already-there. Historiality is possible only on the basis of an analysis of the pro-grammatic, of the facticity of the already-there. The fore-structure of understanding varies with respect to its possibilities on the basis of the particular support of the already-there. But the possibilities of the "what" are then constitutive of the very possibility of the "who."[87]

Heidegger points out that when we "first" hear a noise, it is not simply a complex of sounds but, rather, it is already and immediately "the creaking coach, the motor-cycle," and he thus notes that we are already dwelling alongside what is ready-to-hand. Stiegler notes that this question of the "to-hand" is something other than either primary or secondary retention, but that Heidegger then ignores the implications of this question. A tool is before anything else memory. Only on the basis of the system of references, and *as* a reference, can I hear "the creaking coach." The tool refers to a fore-having of something that the "who" has not itself necessarily lived. A tool functions first of all as image-consciousness. Tertiary retention grounds the irreducible neutrality of the "who."[88]

For Heidegger, there is a primordial uprooting more originary than the uprooting particular to the idiotic publicity of the One (which still contains a certain familiarity). As care-ful, *Dasein* is in advance of and beyond itself, outside itself. *Dasein*'s oblivion is originary. The structure of care affirms the unity of *prometheia* and *epimetheia*. Orthothetic memory is the possibility of both calculation (determination) and letter (indeterminacy).[89]

The structure of being-at-fault

The improbability and non-predestination of the "who" is grounded in the indeterminacy of death. It doubles up on irreducible facticity with a kind of suspension of active programs, a kind of epochality. This happens as "conscience," consciousness

of fault or debt. One's ownmost possibility lies in the suspension of the programs of everyday publicity. Heidegger calls it "freedom for death," suspending neutrality. This suspension finds its possibility in a "call"; that which "hears" the call is "resoluteness."[90]

Heidegger says: consciousness manifests itself as the call of care. Rather than debt or fault, with *Schuld* we should hear de-fault. Indebtedness, according to Heidegger himself, occurs on the basis of a primordial being-in-debt, and what he means by "basis" is a lack of power over one's ownmost being. Hence this is nothing but the de-fault of quality and the community of de-fault. The de-fault of origin (debt) and end (which is always defaulting) are two aspects of the one relation. Technics is the vector of anticipation insofar as there is only de-fault of origin *qua* facticity, an experience of the already-there, and thus the prostheticity of the already-there is the truth of care.[91]

The accessibility of the already-there is possible only through the experience of an in-finitude (of the accumulation of past faults) in the ordeal of enduring the end. It is because resoluteness projects itself beyond the "who," for the "who" to come, that the "who" takes care of the "what," projecting another horizon of "whats," affirming an infinite finality of the "who-what" totality. Does not the consideration of *tekhnē*, as the originary horizon of any access of the being that we ourselves are to itself, amount to the very possibility of disanthropologising the temporal, existential analytic? If the finitude of *Dasein* may give the understanding of time, it can do so only on the basis of an in-finitude of the "what." The finitude of primordial time is in fact constituted in the "what" that is promised to a hypo-thetical infinite exceeding the finitude of *Dasein*.[92]

Being futural means returning to the already-there. This "already" is both *Dasein*'s lived past and the world. The inclusion of the "non-lived" in the "instant" of resoluteness implies that these memories, these retentions, which are neither primary nor secondary, re-establish the threshold of time. The traces of materiality belong originarily to the phenomenon of temporality, but this implies a critique of the Husserlian conception of memory that Heidegger fails to undertake.[93]

Concern is always inscribed in a complex of tools. Stiegler quotes Blanchot discussing Hegel: a writer must be a writer in order to write, but he is not a writer until he has written. Hence the writer must "start immediately." This is the structure of the *après-coup* of all invention, and is, furthermore, generalisable to all human work. To work is to forget the self, to let one's other be. This other is at the heart of the idiom, and this line of argument moves far beyond Heidegger's analysis of curiosity. Stiegler then refers

to Barthes's phenomenological (and technological) analysis of photography, according to which "there-has-been" finds its full force in the photographic possibility. With photography one can *see* the past life of the other, and by projection one's own alterity, one's own mortality. This "catastrophe" is the experience of a repetition in which the ordeal of the idiocy of the already-there and the return of death are indissociable. This is the structure of Heidegger's "call," without voice, of conscience. But returning to Blanchot, this is not a call that returns one to oneself, but rather outside-of-self, into (the effects of) writing, constitutive of temporality as such, and essentially including an element of "publicity."[94]

Science is born with the suspension of handling; it is a withdrawal of the hand. But it is also a *praxis* that employs instruments and hence in that way it remains a handling. While Heidegger acknowledges the role of instrumentality in scientific knowledge, what he fails to analyse is the fact that knowledge *qua* knowledge is *constituted* and *organised* instrumentally.[95]

The historial constitution of historiality

Everydayness is the inauthentic modality of the historiality of *Dasein*. *Dasein* is not merely "in time," yet nevertheless is so unceasingly (the clock, the calendar). For Heidegger, *Dasein*'s originary temporality makes intratemporality and historiality possible, rather than the reverse. *Eigentlichkeit* remains understood as the possibility of releasing a "who" from the "what," the possibility of redeeming it (even if just for an instant) from its facticity. Heidegger then disastrously excludes the positivity of facts and traces from any possibility of containing an ontological dimension for historical science. In contrast to this, the "who" and the "what" must be both distinguished and brought together: the having-been-there is the general possibility of the there-has-been, a there-has-been older than the separation between my lived past and my inherited past.[96]

"Fate" means *Dasein*'s originary historising, in which *Dasein* hands itself over to itself, free for death, in a possibility it has inherited yet has also chosen. This is the structure of *epimetheia* insofar as the "blows of fate" are the engendered faults of the de-fault and the attempts to make up for it. It is a shared, communal fate. For Stiegler, this is the question of the community without community, the de-fault of community and the

community of the de-fault, necessarily raising the question of the relationship between convention and idiom. What Heidegger calls the "possibility that *Dasein* may choose its hero" is a repetition that makes sense only within an epiphylogenetic horizon.[97]

While Heidegger admits that equipment and work have their own character of movement, he regrettably declines to follow up the problem of the ontological structure of world-historial historising. Through this omission Heidegger allows for the possibility of disengagement from "historising in general." He thereby undermines the specificity of the world-historial, and the price he pays is that he, himself, ends up understanding it in terms of the present-at-hand. While Heidegger is right to think that the historial cannot be thought as a mere succession of now-points, what he cannot think is that it must be understood in terms of a flux of recurrences. Hence, for example, geometry and philosophy should be understood as an unceasing reinauguration.[98]

Heidegger justifies his disengagement of the "who" from any "what" through his critique of horological instrumentality, but this instrumentality is thought exclusively in terms of its end – exactitude. Exactitude, as the *telos* of instrumentality, is the attempt to determine the undetermined. Now, it is indeed true that *Dasein* reckons with time before any particular measuring instrument, but not before any instrument: equipmentality is constitutive of being-in-the-world. There must be a "what" for there to be an *account* of time, and this relation to time presupposes the hand articulating the "who" with the "what." Calendarity is the general form of the inscribability of the "who" (*qua* temporal) in the "what" (and this is the basis of the time of the One and the public). The "who" is structured through calendrical and temporally programmatic publicity. The ortho-thetic form is not just an exactitude of measure, but a matter of recording and access.[99]

Although he never renounced the existential analytic, Heidegger continued on a different path, that of the "history of being." But would that history have been possible without the exactitude of the ortho-thetic? In what would the logic of the orthographic supplement consist? This will be Stiegler's subject in the second volume of *Technics and Time.* This line of thought will make possible an interpretation of contemporary technics and an approach towards the following question: to what extent, today, can the "who" that we are double up on the "what"? The irreducible relation of the "who" to the "what" is the expression of retentional finitude. Today, memory is the object of an industrial exploitation that is also a war of speed. Light-time forms the age of *différance*

in real time, an exit from the time specific to the history of being. There is a pressing need for a politics of memory. This would be nothing other than a thinking of technics taking into consideration the reflexivity informing every orthothetic form, insofar as it calls for reflection on the originary de-fault of origin.[100]

Succeeding Volumes

Stiegler has thus far published three volumes in the *Technics and Time* series: *Tome 1: La faute d'Epiméthée* was followed by *Tome 2: La désorientation* (1996) and *Tome 3: Le temps du cinéma et la question du mal-être* (2001). Volume Two was published in translation by Stanford University Press in 2008 with the subtitle, *Disorientation*, with Volume Three appearing in 2010 with the subtitle, *Cinematic Time and the Question of Malaise* (both volumes translated by Stephen Barker).

The three French books were republished in 2018 in a single volume by Fayard, with a new preface and a new afterword entitled "Le nouveau conflit des facultés et des fonctions dans l'Anthropocene." The preface indicated that a new fourth volume would be interpolated between the existing three volumes and the three planned subsequent volumes, resulting in a projected seven-volume work:

1. *La faute d'Epiméthée*
2. *La désorientation*
3. *La temps du cinéma et la question du mal-être*
4. *L'épreuve de la vérité dans l'ère post-véridique*
5. *Symboles et diaboles*
6. *La guerre des esprits*
7. *Le défaut qu'il faut. Idiome,* idios*, idiotie.*

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