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Technics, Individuation and Tertiary Memory: Bernard Stiegler's challenge to media theory

Ben Roberts

Media studies as a field has traditionally been wary of the question of technology. Discussion of technology has often been constrained by concerns about technological determinism. In recent times there has been renewed interest, however, in the technological dimension of media. In part this is doubtless due to rapid changes in media technology, such as the rise of the internet and the digital convergence of media technologies. But there are also an increasing number of writers who seem to believe that media theory, and more widely social science and the humanities, needs to rethink the question of technology and its relationship to society, culture and cultural production. In some ways this move might reinvigorate debate about the ways in which technology has been understood in the humanities. Andrew Feenberg has characterized the two most dominant positions as, on the one hand, the social constructivist or 'technology studies' approach to technology, and, on the other, the 'substantivist' theory of technology.¹

The first of these, the social constructivist approach, aims to show how the development of technology is shaped not by technical and scientific progress but by contingent social, cultural and economic forces. A well known example of this is given in Pinch and Bijker's discussion of the evolution of the bicycle. Pinch and Bijker resist the idea that the early evolution of the bicycle represented a linear progression driven by technological innovation. From the perspective of a linear

¹ Andrew Feenberg, 'Modernity Theory and Technology Studies', in A. Feenberg, T.J. Misa and P. Brey (eds), *Modernity and Technology*, Cambridge, Mass., MIT Press, 2003, p74–5.

progression it seems as if the ‘safety bicycle’, that is, the form of the bicycle which we are most familiar is the natural and inevitable outcome of technological progress. Instead Pinch and Bijker argue for a ‘multi-directional model’, where competing social factors shaped technological evolution.² They argue that, far from being driven by developing technology, in fact the competing needs of different social groups led to the outcome in which the safety bicycle prevailed. An especially important factor was the popularity of cycling among women – the safety bicycle was much easier to mount for a woman wearing a long dress. Although not explicitly ‘constructivist’, a similar argument can be found in Raymond Williams’s well known discussion of television. Williams urges caution about the claims made for the transformative power of communications systems such as to be found in the ‘apparently sophisticated technological determinism’ of Marshall McLuhan.³ He argues that television technology, for which all the essential building blocks were in place by the end of the nineteenth century, did not really take off until some time later in response to the imperatives of what Williams calls ‘mobile privatisation’, that is, ‘on the one hand mobility, on the other hand the more apparently self-sufficient family home’.⁴ Television is a response to a particular social need arising from industrialised and urbanised societies and the shift from public to private domestic space.

It is especially a characteristic of the communication systems that *all were foreseen – not in a utopian but in technical ways – before the crucial components of the developed systems had been discovered and refined*. In no way is this a history of communications systems creating a new society or new social conditions. The decisive and earlier transformation of industrial production, and its new social forms ... created new needs but also new possibilities, and the communications systems, down to television were their intrinsic outcome.⁵

Television therefore needs to be understood in the context of ongoing social changes and not in terms of the inherent or formal qualities of the medium. The strength of this broadly constructivist

2 Trevor J. Pinch and Wiebe E. Bijker, ‘The Social Construction of Facts and Artefacts: Or How the Sociology of Science and the Sociology of Technology Might Benefit Each Other’, *Social Studies of Science*, 14, 3 (1984): 399–441, p411.

3 Raymond Williams, *Television, Technology and Cultural Form*, London, Routledge, 1990, p127.

4 *Ibid.*, p26.

5 *Ibid.*, p19.

approach, then, is that it shows the rootedness of the technical in social processes. The limitation of this view, however, is that it tends to see technology as no different from any other social process and it may lose the ability to distinguish between the technical object and any other social formation or cultural artefact. Andrew Feenberg argues that social constructivists ‘lose part of the truth when they emphasise only the social complexity and embeddedness of technology and minimise the distinctive emphasis on top-down control that accompanies technical rationalisation’ and ‘...constructivist technology studies complicates the notion of progress at the risk of dissolving it altogether’.⁶

On the other hand, social and cultural studies has also been influenced by what Feenberg thinks of as the ‘substantivist’ approach to technology. The substantivist group think that technology is neither simply a tool nor a social or cultural artifact but a substantial force which alters our relationship with the world. Key thinkers to whom Feenberg attributes this view include Habermas and Heidegger. As Feenberg puts it:

These “substantive” theories of technology attribute a more than instrumental, a substantive, content to technical mediation ... The tools we use shape our way of life in modern societies where technique has become all pervasive. In this situation, means and ends cannot be separated. How we do things determines who we are. Technological development transforms what it is to be human.⁷

Of course these two positions are not simply opposed in the sense that Heidegger and Habermas are no more technological determinists than Pinch and Bijker. It is rather that the ‘substantivists’, as Feenberg calls them (not unproblematically), understand technology and the technical not simply in the narrow sense of objects and artifacts but in the wider sense as technological thinking about the world. What Feenberg in fact goes to argue for is a synthesis of these two approaches on the basis that they are both modes of interpretation:

On the one hand [i.e., for social constructivists], the evolution of technologies depends on

⁶ Feenberg, ‘Modernity Theory and Technology Studies’, op. cit., p74,79.

⁷ Andrew Feenberg, *Questioning Technology*, London, Routledge, 1999, pp2–3.

the interpretative practises of their users. On the other hand, [i.e., for ‘substantivists’] human beings are essentially interpreters shaped by world-disclosing technologies. [...] A synthesis must enable us to understand the central role of technology in modern life as both technically rational in form and rich in socially specific content.⁸

But in some ways, however productive his distinction between ‘substantive’ and ‘constructivist’ approaches seems, this synthesis that Feenberg advocates may also be reductive. From the Feenberg point of view these two positions seem to be simply different ways of thinking about the same thing. That is, there is a consistent phenomenon called technology that is somehow being interpreted differently, or in a different mode by, for example, Heidegger and Pinch and Bijker. Feenberg’s analysis misses the most obvious distinction between these two ways of thinking: that for constructivists the ‘meaning’ of technology is relatively unambiguous; what is at stake for them is rather the question of whether social and cultural forces or scientific progress ‘shape’ technological evolution. However for Heidegger it is exactly the meaning of technology that is problematic. Indeed in questioning this meaning Heidegger from the beginning argues that ‘the essence of technology is by no means anything technological’.⁹ Given that Heidegger favors an understanding of *tekhne* that is quite distinct from what he sees as the modern, narrow understanding as a ‘means to an end’, one is entitled to wonder whether Heidegger’s ‘substantivist’ approach really means the same thing by the word ‘technology’ as Feenberg’s ‘constructivists’. One might well question the idea that these two ‘interpretations’ of technology are synthesisable at all, or whether they are in fact radically heterogeneous. In fact what both approaches may have in common is rather a failure to think through the implications of an inseparability of the cultural and the technical that they both recognise. What Feenberg is calling the constructivist approach, in particular, is marked by a desire to demonstrate that technological developments are inseparable from the social and cultural practices in which they emerge. However it largely neglects the reciprocal consequence of this co-implication: the dependence

⁸ Feenberg, ‘Modernity Theory and Technology Studies’, op. cit., p95.

⁹ Martin Heidegger, *The Question Concerning Technology*, New York, Harper and Row, 1977, p4.

of social and cultural practices on its technological supports. This neglect seems to be motivated a suspicion of technological determinism and such constructivist fears are very much embedded in the development of media theory. As Caroline Bassett puts it:

If media theory rarely begins with technology then this may be because media theorists, haunted by the spectre of technological determinism, are afraid of material technologies in their specificity and their particularity, preferring to deal with technology by ‘dissolving it in culture and discourse’.¹⁰

From the perspective of media theory it has been attractive to see technology as a subset of the cultural artifact and not vice versa, therefore explaining technology in terms of culture and society. But there are powerful arguments for arguing something like the opposite: in other words for understanding culture and society in terms of or as technical objects. In recent years this argument has been put most forcefully by the French philosopher Bernard Stiegler.

What Stiegler calls ‘technics’ (*la technique*) is not simply modern technology. Technics comprises everything from primitive tools to systems of writing. Stiegler rejects an opposition between technics and culture indeed, ‘technics is the condition of culture’.¹¹ Human culture is the product of technics as the prosthetic relationship between the human and its ‘exteriorisation’ in matter. Technics therefore does not have the instrumental sense of technology as a tool that the human makes use of but rather defines the human as no longer simply a biological being. Stiegler therefore also refers to what he calls ‘epiphylogenesis’, that is a type of human evolution that is no longer thought of in merely biological terms (phylogenesis) but is essentially to be found in the development of the human’s technical supports or ‘organised inorganic matter’.¹² As he puts it: ‘The evolution of the “prosthesis”, not itself living, by

¹⁰ Caroline Bassett, *The Arc and the Machine: Narrative and New Media*, Manchester University Press, 2007, p47–8.

Bassett is quoting Tiziana Terranova, ‘Infallible Universal Happiness: media technology and creativity’, in A. Dimitrakaki, P. Skelton and W.A. Library (eds), *Private Views: Spaces and Gender in Contemporary Art from Britain and Estonia*, London, Women’s Art Library, 2000, p111.

¹¹ Bernard Stiegler, *Philosopher Par Accident: Entretiens Avec Élie During*, Paris, Galilée, 2004, p59.

¹² Ibid., p49.

which the human is nonetheless defined as a living being, constitutes the reality of the human's evolution, as if, with it, the history of life were to continue by means other than life'.¹³

However, it is important to understand that what Stiegler seeks is not simply a new thinking of the relationship between the human and technics, but technics as a challenge to thinking and philosophy itself. In this sense Stiegler resists the description of a 'philosopher of technics':

I do not consider myself as a "philosopher of technics", but rather as a philosopher who tries to contribute, along with some others, to establishing that the philosophical question *is*, and *is throughout*, the endurance of a condition which I call techno-logical: at the same time technics and logic, from the beginning forged on the cross which language and the tool form, that is, which allow the human its *exteriorization*. In my work I try to show that, since its origin, philosophy has endured this technological condition, *but as repression and denial* and that is the entire difficulty of my undertaking—to show that *philosophy begins with the repression of its proper question*.¹⁴

As Stiegler's words suggest, what is significant here is not simply the history of technics as epiphylogenesis, but the deconstruction of philosophy's approach to technicity in general. Indeed a large part of Stiegler's published work is dedicated to exploring how the 'technological condition', as he puts it above, is repressed in the work of philosophers such as Rousseau, Kant, Husserl and Heidegger.

In this sense Stiegler is an inheritor of the deconstructive turn in philosophy initiated by his mentor, Jacques Derrida, while pushing it in the direction of a positive thesis about technics that Derrida would doubtless not himself have supported.¹⁵ In recent work he has clarified this distance from Derrida as a recuperation of critical thinking in the form of what he calls 'pharmacological critique', a concept which I elaborate on a little further shortly.¹⁶

13 Bernard Stiegler, *Technics and Time: 1. The Fault of Epimetheus*, Richard Beardsworth and George Collins (trans.), Stanford, Stanford University Press, 1998, p50.

14 Stiegler, *Philosopher Par Accident*, op. cit., p14–5.

15 For a longer description of the relationship between Derrida and Stiegler see Ben Roberts, 'Stiegler Reading Derrida: The Prosthesis of Deconstruction in Technics', *Postmodern Culture*, 16, 1 (2005); Geoffrey Bennington, 'Emergencies', *The Oxford Literary Review*, 18, 1–2 (1996): 175–216.

16 On the relationship between deconstruction and critique see Bernard Stiegler, *For a New Critique of Political Economy*, Daniel Ross (trans.), Cambridge, Polity Press, 2010, p15.

A second important aspect to Stiegler's thesis is his understanding of technics as accidentality. In part Stiegler explains this allegorically through the myth of Prometheus and Epimetheus. The version of the myth recounted in the *Protagoras* is as follows. Epimetheus is allotting powers to mortal creatures. He allocates characteristics like speed and strength to the animals in a balanced manner so that no species is too strong and no species will be destroyed. Having completed this distribution it appears that he has forgotten humans (leaving them 'naked, unshod, unbedded and unarmed').¹⁷ When his brother Prometheus discovers the error he steals from Hephaestus and Athena skill in the arts and fire. Essentially Stiegler emphasises here the 'Epimethean' side of the myth. What is important, then, is that the human is the result of an accident, a deviation from the usual path which leaves it lacking an essence: :

Before the deviation, there is nothing. Then the accidental event happens, the fault of Epimetheus: to have forgotten humans. Humans are the forgotten ones. Humans only occur through their being forgotten; they only appear in disappearing.¹⁸

Humans, unlike animals, are originally nothing: they are constituted by a lack. The crucial figure here for Stiegler is not Prometheus, but Epimetheus, who through forgetting the human constitutes, this original fault or default (*défaut*). This Epimethean reading of the myth therefore discloses the way in which Stiegler sees technics as accidentality. Technics is what supplements a lack of origin or essence (following a logic of supplementarity which is clearly Derridean). The point is not to replace humanism with technological determinism but rather that the human, lacking an essence, is constituted *contingently* through technics as becoming:

Mortals, having no qualities except *by default*, prosthetically, are on the contrary, animals condemned to seek ceaselessly their quality, that is, their destiny, that is, *their time* [...] Humans are only by default. That means, they *are* only in as much as they *become*.¹⁹

17 Plato, *The Collected Dialogues*, Princeton, Princeton University Press, 1961, p321c.

18 Stiegler, *Technics and Time: 1. The Fault of Epimetheus*, op. cit., p188. Stiegler, *Technics and Time: 1. The Fault of Epimetheus*, op. cit., p188. Stiegler, *Technics and Time: 1. The Fault of Epimetheus*, op. cit., p188.

19 Stiegler, *Philosopher Par Accident*, op. cit., p43..

We can now begin to see how Stiegler ideas around technics refigure or displace the opposition between social constructivism and technological determinism. Technics is not understood in the narrow sense of techno-scientific technology but in the wider sense of all the ways in which the human is exteriorised into artifacts or organized inorganic matter. It is thus inseparable from culture and society and one cannot talk of technics determining culture and society. Culture and society are not determined by technics, but rather materialised through it. Indeed arguments around causality and determinism founder on Stiegler's crucial observation in the first volume of *Technics and Time* that the relationship between the human and the technical is essentially one of aporia. The default of origin (of the human) in Stiegler's account is tied to the aporia of the 'who' and 'what', or the 'paradox of an exteriorisation without a preceding interior'.²⁰ The aporia of origin here is that there is no origin of the 'who' in the 'what' or origin of the 'what' in the 'who' but only an unknowable and aporetic complication of the two, the 'who-what'. The origin of the who is aporetic therefore in the sense of being unthinkable. Secondly technics in Stiegler's sense does not represent scientific progress or a deterministic evolution; rather, however strange this may seem, technics implies a kind of pure accidentality or contingency. For Stiegler, paradoxically, it is because of the exteriorisation of the human into technics, artifacts or inorganic organized matter that culture and society constitute themselves contingently. This is because such technical supports constitute a form of 'epiphylogenetic' memory that allows the human to break with its biological program. This point about contingency, derived in part of from Stiegler's reading of Gilbert Simondon, resonates with Adrian Mackenzie's account, also influenced by Simondon, of technology and radical contingency:

The sources of radical contingency do not reside in the subject or the predicates of consciousness, nor in any body as such. Rather, they stem from the limits of thinkability of bodies, from the ways in which they have no possible outline or form. The a-signifying status of matter ... can then be understood as a residue of historically interwoven

²⁰ Stiegler, *Technics and Time: 1. The Fault of Epimetheus*, op. cit., p141. Stiegler, *Technics and Time: 1. The Fault of Epimetheus*, op. cit., p141.

institutions, practices and discourses through which inherent corporeal divergences are realigned and held in tension.... The materiality of technology itself should be examined together with that of living bodies.²¹

Seeing the potential of technology as a source of contingency, rather than as a limit or threat to it, moves the debate about technology on in an important manner. In a fairly obvious way they reverse the assumption evident in what Feenberg calls ‘constructivism’ to see human users as the source of contingency in technological evolution –here it is the contingent evolution (or individuation) of technology itself that constitutes the ‘human’ as contingent. These two sides of Stiegler’s approach—the aporia of the ‘who’ and ‘what’ and his understanding of technics as accidentality—therefore mark an important break with the philosophy of technology, particularly Feenberg’s distinction between constructivism and substantivism. In particular, they allow him to develop a position with a sophisticated understanding of the coimplication of the social and technical while retaining the critical aspects of ‘substantivist’ approaches such as those of Habermas and Heidegger.

As has already been pointed out, for Stiegler technics is not to be identified simply with modern technology. Moreover, he resists the idea that the modern epoch is characterised by a confrontation between technology and tradition, or technology and culture. Culture, for Stiegler, is always already technical. On the other hand, he does see the modern epoch of technics as being distinctive:

Man is a cultural being to the extent that he is also essentially a technical being: it is because he is surrounded by this tertiary technical memory that he can accumulate the intergenerational experience that is often called culture — that is why it is absurd to oppose technics to culture. Technics is the condition of culture in as much as it permits transmission. On the other hand, there is an epoch of technics, called *technology*, and this is *our* epoch, when culture is in crisis, precisely because it has become industrial and as such finds itself submitted to the imperatives of market calculation.²²

Thus for Stiegler, if there is a crisis caused by modern technology it is not because something

21 Adrian Mackenzie, *Transductions: Bodies and Machines at Speed*, Continuum, 2002, p54.

22 Stiegler, *Philosopher Par Accident*, op. cit., p59.

‘natural’ or human is supplanted by something technological. Rather it is because there has been a transformation in technics itself, in the essential technicity that belongs to the human. To be more specific there has been a transformation in a specific form of technics that Stiegler calls ‘mnemotechnics’ or tertiary memory. Technical objects all support a type of cultural, non-genetic or ‘epiphylogenetic’, memory, but there is a subset that ‘one must call mnemotechnics, to speak properly’,²³ a type of technics that is specifically ‘*made for* keeping memory’.²⁴ Stiegler also calls mnemotechnics ‘tertiary memory’, a term that he derives from Husserl’s discussion of memory. Husserl distinguishes between primary retention or memory and secondary retention or memory. Primary retention is the kind of memory that is necessary to perceive a temporal object such as a melody: in effect the melody will not exist as an object of perception unless the listener retains or remembers the notes that precede the one that is currently heard.²⁵ Secondary retention is, as it were, the more traditional understanding of memory where, for example, I remember a melody I heard last week. There is also a third kind of memory, which Husserl calls ‘image consciousness’ and Stiegler calls ‘tertiary memory’ where an external object, such as a picture or photograph, reactivates a memory. Now for Husserl primary memory can be rigorously distinguished from secondary or tertiary memory because it belongs to the act of perception itself, whereas secondary or tertiary memory involve acts of imaginative selection.²⁶ Secondary and tertiary memory are thus derivative from primary memory. For Stiegler, however, something like the reverse is true: tertiary memory, the exteriorization of memory into technical objects—mnemotechnics—is constitutive of primary memory,

23 Ibid., p59.

24 ‘*faite pour* garder la mémoire’ : Stiegler, *Philosopher Par Accident*, op. cit., p60.

25 See Bernard Stiegler, *La Technique Et Le Temps: 3. Le Temps Du Cinéma Et La Question Du Mal-être*, Paris, Galilée, 2001, p37.

26 This is also because, as Derrida argues, Husserl wants to make a rigorous distinction between retention and representation: ‘Husserl would refuse to assimilate the necessity of retention and the necessity of signs, for it is only the latter which (like the image) belong to the genus of representation and symbolism. Moreover, Husserl cannot give up this rigorous distinction without bringing into question the axiomatic *principium* of phenomenology itself . . . The frontier must pass not between the pure present and nonpresent, i.e., between the actuality and nonactuality of a living now, but rather between two forms of the re-turn or re-stitution of the present: re-tention and re-presentation. Jacques Derrida, *Speech and Phenomena*, David B. Allison (trans.), Evanston, Northwestern UP, 1973, p66.

secondary memory or our perception of the temporal object.²⁷

One obvious example of mnemotechnics is writing and indeed Stiegler dedicates a large part of the second volume of *La technique et le temps, La Désorientation* to a discussion of the transformation in mnemotechnics represented by the shift to orthographic writing.²⁸ However, it is in a new transformation in the course of mnemotechnics, one represented by the audiovisual tele-technologies of mass media, that lies the cultural crisis of which Stiegler writes. In part this is because these new forms of audio-visual recording introduce a new class of *industrial* temporal object and therefore a new relation between primary, secondary and tertiary memory. Stiegler illustrates this through the example of the repeated listenings afforded by the gramophone record:

You only have to listen twice to the same melody to see that between the two auditions, consciousness (the ear, here) never hears the same thing: something has occurred. Each new audition affords a new phenomenon, richer if the music is good, less so if not, and that is why the music lover is an *aficionado* of repeated auditions—a variation of selections ... From one audition to the next the ear is not the same, precisely because the ear of the second audition has been affected by the first.

In other words, the perception of the temporal object (primary memory) is affected here by the imaginative selections constituted through secondary and tertiary memory.

Loss of individuation and symbolic misery

Simondon had shown that the appearance of the machine tool had caused what he called a *loss of individuation* for the worker, deprived of his knowledge and reduced to the condition of a pure servant of the machine which, having exteriorised this knowledge, had itself become the technical individual in place of the worker. In fact, in this sense, Simondon was reinterpreting analyses in Marx's manuscripts. With analogue technologies of the temporal object, a new loss of individuation is produced: one which tends to deprive consciousnesses of their diachronicity, that is, of their singularity.²⁹

27 For further discussion of this argument about Husserl in Stiegler please see Ben Roberts, 'Cinema as mnemotechnics: Bernard Stiegler and the industrialisation of memory', *Angelaki*, 11, 1 (2006): 55–63; Mark B. N Hansen, 'The Time of Affect, or Bearing Witness to Life', *Critical Inquiry*, 30, Spring (2004): 584–626; Patrick Crogan, 'Essential Viewing: Bernard Stiegler (2001) *La technique et le temps 3: Le temps du cinéma et la question du mal-être*', *Film-Philosophy*, 10, 2 (2009) <<http://www.film-philosophy.com/index.php/f-p/article/view/166>>.

28 See Bernard Stiegler, *La Technique Et Le Temps: 2. La Désorientation*, Paris, Galilée, 1996, pp67–73.

29 Stiegler, *Philosopher Par Accident*, op. cit., p90–1.

Here Stiegler refers to Gilbert Simondon, the French thinker of technology, a key influence on his work (as indeed on that of Deleuze).³⁰ The concept of individuation is central to Simondon's work and is at the heart of Stiegler's own understanding of technics and technicity. Simondon stresses the need, 'to understand the individual from the perspective of the process of individuation rather than the process of individuation by means of the individual'.³¹ The process of individuation is thus primordial and Simondon urges us to see the individual not as a substantial or hylemorphic entity but rather as a 'metastable' equilibrium within this process or ontogenesis. In *Du mode d'existence des objets techniques (On the Mode of Existence of Technical Objects)*, Simondon argues that the rise of the machine tool removes the ability of the skilled worker to differentiate their labor from that of other workers: a 'a loss of individuation' which Stiegler sees reproduced at the level of consciousness by the new teletechnologies and their industrialisation of memory. He adds to Simondon's analysis the idea that the process of industrialisation is also a *grammatisation*, that is to say a process, analogous to that of the development of writing, by which idiomatic actions (for example, those of the weaver) are standardised, discretised and materialised (for example, in the Jacquard loom).³² As he puts it, '[t]he current loss of individuation is a stage of grammatisation where three individuations, psychic, collective and techno-machinic, generalise the formalisation by calculation'.³³ However he also makes a break with Simondon, arguing that the latter failed to connect his twin theses about technical individuation, on the one hand, and psychic or collective individuation on the other.³⁴ For Stiegler, psychosocial individuation depends on a preindi-

30 On the relationship between Deleuze and Simondon see Alberto Toscano, 'La disparation: politique et sujet chez Simondon', *Multitudes*, 18 (2004) <http://multitudes.samizdat.net/article.php3?id_article=1576> [accessed 15 June 2009].

31 Gilbert Simondon, 'The Genesis of the Individual', in J. Crary and K. Sanford (eds), Mark Cohen and Kwinter Sanford (trans.), *Zone 6: Incorporations*, Zone Books, 1992, p300.

32 Stiegler, *For a New Critique of Political Economy*, op. cit., pp10–11. Stiegler, *For a New Critique of Political Economy*, op. cit., pp10–11.

33 Bernard Stiegler, *De La Misère Symbolique: 1. L'époque Hyperindustrielle*, Paris, Galilée, 2004, p142.

34 Stiegler finds it surprising that Simondon doesn't think these two modes of individuation together. See Bernard Stiegler, 'Temps et individuation technique, psychique, et collective dans l'oeuvre de Simondon', *Futur Antérieur*, 19-20 (1993) <<http://multitudes.samizdat.net/Temps-et-individuation-technique.html>> [accessed 3 June 2009]; Stiegler, *De La Misère Symbolique: 1. L'époque Hyperindustrielle*, op. cit., pp106, 141.

vidual that is essentially constituted through organised, inorganic objects or technics. Technical individuation is thus inseparable from psychic and collective individuation and new forms of mnemotechnics represent challenges to this process of transindividuation. It is in this context that Stiegler describes the rise of new ‘orthothetic’ analogue and digital recording technologies as marking a break with the recording technology of orthographic writing.³⁵ To understand what Stiegler thinks is different in these new technologies it is first necessary to understand the significance of orthographic writing, which he describes in the second volume of *La technique et le temps* (‘La désorientation’). As will be seen, Stiegler blends Simondonian ideas about individuation both with concepts of authenticity and singularity drawn, in part, from Heidegger and with the idea of *différance* taken from Derrida.

Orthographic writing (as opposed to pictographic inscription) is marked by its ability to break with the context of its inscription and a certain (mechanical) certainty in its reproduction (or exactitude, as Stiegler has it). This certainty of a mechanical, ‘exact’ possibility of repetition, the possibility of an absolute break with context, does not eliminate context or determine the reading of the text to be the same everywhere; rather, Stiegler argues, it is the condition of textuality, or a certain open-ended indeterminacy that any text exhibits. The possibility of being read again, of recontextualization means that the text is never in fact closed.³⁶ Therefore, for Stiegler, the ‘exactness’ of repetition, or, as it were, the ‘transparency’ of the orthographical mark in its ability to be reproduced outside the context of its inscription, is the condition of what Stiegler calls here a ‘paradoxical opacity’: because the mark is

35 ‘Orthothetic’ is Stiegler’s neologism of which Stiegler comments: ‘I have had to construct this neologism on the basis of the Greek words *orthotès* and *thésis*. The *orthotès* signifies exactitude, and the *thésis* situation [*position*]. The utterances that I call “orthothetic” (as is the case with alphabetic utterances) set down [*posent*] the past exactly.’ (‘J’ai dû construire ce néologisme à partir des mots grec *orthotès* et *thésis*. L’*orthotès* signifie l’exactitude, et la *thésis* la position. Les énoncés que je dis «orthothétiques» (c’est le cas des énoncés alphabétiques) posent exactement le passé’: Stiegler, *Philosopher Par Accident*, op. cit., p64–5.

36 There is an important problem with Stiegler’s argument here, an argument which tends to make it seem as if the possibility of recontextualisation is simply constituted by the orthographic mark. But in fact such a possibility is equally and irreducibly tied to the possibility of a new context, i.e., spatial and temporal alterity. Moreover the orthographic mark can never simply be constitutive of the relationship to (e.g., temporal) alterity because it is constituted itself as the mark that it is through its relationship with alterity. This is essentially an argument around iteration that Stiegler borrows from Derrida (see ‘Signature Event Context’: Jacques Derrida, *Margins of Philosophy*, Alan Bass (trans.), Chicago, University of Chicago Press, 1982, p307–40.

fixed, mechanically and programmatically iterable, its meaning is *never* fixed.³⁷ Now the second argument here—one that returns us to the question of the relationship between the ‘program’ and the ‘improbable’ that has been sketched in the first volume of *La technique et le temps* in relation to Dasein—is that this relationship between the certainty or exactitude of the orthographic reproduction of the text and the ‘paradoxical opacity’ of its interpretation (infinitely recontextualizable, therefore infinitely open to new interpretations) also constitutes the textuality of the reader’s identity as ‘*une identité différante*’, a deferring and differing identity, an identity that experiences the difference of identity through temporal deferral:

The *who* discovers their textuality in confronting the orthographic deferring and differing of identity (or literal synthesis) because, in losing the identity of the same text when they read and repeat it in different contexts, it is their own identity that is placed in crisis ... At the moment when they discover that the same text varies and derives indefinitely in the dissemination that is all contextualisation, the reader is caught in a process of irreducible *différance* to the extent that the here and the now, space and time, are irreducible, to the extent also that they discover themselves to be textual, themselves to be *tissued* by past statements [*énoncés*], already-there, their *own*, those that they have themselves lived, as well as those which they have inherited and which must be unceasingly interpreted.³⁸

In effect, the reader is constituted as the indefinite possibility of recontextualization. The ‘program’ of exact orthographic inscription does not determine the ‘who’ but rather frees it to experience itself as the indeterminacy of recontextualization and the irreducibility of context.³⁹ However, the new industrial temporal objects of analogue and digital recording represent a new relationship between singularity, consciousness and time:

The society of industrial temporal objects thus transforms our existences into a prefabricated series of clichés that we string together without perceiving very much. The coincidence of the time of the industrial temporal objects’ flow with our consciousnesses has the consequence that, in making them our objects of consciousness, that is, of attention, we embrace and adopt their time: we adhere to them in such great intimacy that they come to substitute themselves for the proper temporalities of our consciousnesses. Such is the

37 Stiegler, *La Désorientation*, op. cit., p70–1.

38 Ibid., p72.

39 Ibid., p72–3.

catastrophic utilization, by cultural industries, of the power of temporal objects, which results in a ecological catastrophe in the milieu of spirit that is epiphylogenesis.⁴⁰

The passivity which is ascribed here to the relationship with industrial temporal objects is inevitably reminiscent of Frankfurt School approaches to mass media. Indeed Stiegler's whole approach to understanding media as industrialization clearly recalls Adorno and Horkheimer's discussion of 'culture industry' (*Kulturindustrie*), a connection which is explicitly discussed in *La désorientation*.⁴¹ In general, media theory since the Frankfurt School has been keen to resist the pessimism of its view of mass media and, in particular, to demonstrate the active (rather than passive) role that the audience play in the construction of media meaning.⁴² There has been a shift from the study of the conditions of production (industrial or otherwise) of mass media to the study of the conditions of media consumption, which is particularly evident in audience studies.

Despite the distance that he puts between his own position and the work of Adorno (or Marcuse, for that matter) there are good reasons for thinking that he is indeed an heir of what we might call, with Feenberg, 'critical theory of technology'.⁴³ He shares with Marcuse (and Feenberg) a vision of modern technology as a 'quasi-dystopian system that might be changed through political action'.⁴⁴ He also obviously shares with this tradition a focus on the relationship between technology and what he thinks of as 'hyperindustrial' capitalism, a relationship which brings about a new 'cognitive and affective proletarianisation'.⁴⁵ This alignment is arguably underlined by the affirmation of critique – and indeed political economy – in *For a New Critique of Political Economy*.⁴⁶ However, Stiegler's argument about

40 Stiegler, *Philosopher Par Accident*, op. cit., p85–6.

41 See Adorno and Horkheimer, *Dialectic of Enlightenment*. On the connection with Adorno and Horkheimer, see Roberts, 'Cinema as Mnemotechnics', op. cit.

42 See David Morley, *Television, Audiences, and Cultural Studies*, London, Routledge, 1992, p45–8; Shaun Moores, *Interpreting Audiences: The Ethnography of Media Consumption*, London, Sage, 1993. Morley, op. cit., p45–8; Moores, op. cit.

43 Andrew Feenberg, 'Critical Theory of Technology', in J.-K.B. Olsen, S.A. Pedersen and V.F. Hendricks (eds), *A Companion to the Philosophy of Technology*, Chichester, Wiley-Blackwell, 2009.

44 Ibid., p147.

45 Bernard Stiegler, *Pour Une Nouvelle Critique De L'économie Politique*, Paris, Galilée, 2009, p45.

46 Stiegler, *For a New Critique of Political Economy*, op. cit. Stiegler, *For a New Critique of Political Economy*, op. cit.

mass media and industrialization is actually quite different from that of the Frankfurt School. For Adorno and Horkheimer, the rise of culture industry can be tied to forms of mass media where technology comes to usurp the place of a properly human ability to schematize.⁴⁷ For Stiegler, on the question, it is never a question of a technical dehumanization—the ‘human’ is always already technics. The issue is rather understanding a shift within technical individuation that allows for the ‘industrialization’ of memory. Indeed as he tries to show in *Le temps du cinéma*, the schematisation is also technical.⁴⁸ The important point, as Robert Sinnerbrink points out, is that ‘the Frankfurt school analysis of the “culture industry” remains caught within the prevailing instrumental-anthropological understanding of technology’.⁴⁹ Stiegler, on the other hand, drawing on Simondon, Heidegger and Derrida, sees that the relationship between the human and technology is fundamentally one of aporia or transduction, where both terms are constituted by their relation. This means that his arguments concerning the ‘industrialisation of memory’ are working with a very different understanding of what *industrialisation* means. Since exteriorisation or grammatisation are in some sense essential – we can’t do without them – the critique offered by Stiegler is in some sense more nuanced. It is, as he would put it, a ‘pharmacological critique’, one which understands mnemotechnics as both poison and remedy. This pharmacological approach also means that he doesn’t quite share the pessimism of the Frankfurt school. As Mark Hansen has argued, ‘[w]hat is perhaps most striking about Stiegler’s analysis is its success in diagnosing what he calls the “symbolic misery” of contemporary cultural existence (or ‘subsistence’) without losing hope for the future’.⁵⁰

Stiegler’s work therefore remains relevant to media theory. One reason is the currently shifting ground of the discipline of media studies itself. As Nick Couldry has argued:

47Theodor Adorno and Max Horkheimer, *Dialectic of Enlightenment*, London, Verso, 1979, p124.

48 Stiegler, *Le Temps Du Cinéma*, op. cit. See also Crogan, op. cit.

49 Robert Sinnerbrink, ‘Culture Industry Redux: Stiegler and Derrida on Technics and Cultural Politics’, *Transformations*, 17, 2009 <http://www.transformationsjournal.org/journal/issue_17/article_05.shtml> [accessed 19 November 2009].

50 Mark B. N Hansen, ‘Media Theory’, *Theory, Culture and Society*, 23, 2–3 (2006): 297–306, p305.

Although, in various ways, media studies has complicated earlier mass media models (most importantly through studying the diversity of audience interpretations), it is its original relation to centralized mass media that continues to shape its dominant interpretative frameworks and research priorities [...] A research agenda focused almost exclusively on the production, circulation and reception of mainstream media risks forfeiting media studies' critical edge. Its underlying assumptions miss critical dimensions of media change.⁵¹

If media studies has tended to bracket issues around the industrialised nature of media production in favor of studying the consumption of media and the 'diversity of media interpretations', that focus on consumption becomes harder to justify when the conditions of media production are changing so rapidly. Similarly if the object of media studies is shifting away from the exclusive study of what Couldry calls 'centralized mass media' then one consequence may well be a renewed need to decenter mass media, that is, to understand their historical and technological specificity. It is exactly these questions that, as we have seen, Stiegler's work opens up. More widely, it allows us to think about the technological changes associated, for example, with the rise of networks without committing us to technological determinism. As has been argued, the technical object here is also a source of contingency (or accidentality) not a threat to it. Stiegler's *aporetic* understanding of the relationship between technology and society fundamentally means *neither* term is privileged, nor is the former dissolved in the latter.

51 Nick Couldry, 'Transvaluing media studies: or, beyond the myth of the mediated centre', in J. Curran and D. Morley (eds), *Media and Cultural Theory*, London, Routledge, 2006, p177-8.