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Media Theory

Mark B.N. Hansen

Abstract Poised on the cusp between phenomenology and materiality, media institute a theoretical oscillation that promises to displace the empirical-transcendental divide that has structured western meditation on thinking, including the thinking of technics. Because media give the infrastructure conditioning thought without ceasing to be empirical (i.e. without functioning as a *transcendental* condition), they form the basis for a complex hermeneutics that cannot avoid the task of accounting for its unthematizable infrastructural condition. Tracing the oscillation constitutive of such a hermeneutics as it serves variously to constitute media theory in the work of critics from McLuhan to Kittler, from Leroi-Gourhan to Stiegler, my interrogation ultimately conceptualizes the medium as an environment for life: by giving concrete form to 'epiphylogenesis' (the exteriorization of human evolution), concrete media find their most 'originary' function not as artifacts but via their participation in human technogenesis (our co-evolution with technics).

Keywords information, meaning, mediation, technical life, technogenesis, temporality, transduction

'**M**edia determine our situation.' So runs the opening line of Friedrich Kittler's important and influential theoretical historicization of media, *Gramophone, Film, Typewriter* (1999). In supplementing Foucault's concept of the historical a priori with a concrete exploration of mediatic materiality, Kittler radicalizes the pre- or anti-hermeneutic dimensions of Foucault's work in a way that bears decisive significance for contemporary media theory. Put schematically, Kittler's critical position institutes a fundamental division between two types of approach to media: one that explores the experiential dimensions of media, including new media, and another that excavates the technical logics of media, logics which – for Kittler at least – are only contingently and impermanently synchronized with the ratios of human perception. What results from this division, itself the legacy of a certain (arguably contestable) assimilation of information theory, is an ineliminable oscillation between the materiality and the phenomenality of media. Without necessarily betokening the impasse of incompatibility, this oscillation does seem to impose the necessity for perspectival shift, such that the media critic must choose whether to foreground the infrastructure conditioning experience (media materiality) or the experience thereby realized.

This oscillation, I would like to suggest, comprises the most fundamental theoretical challenge posed by media to the cultural theorist. In one sense, it seems to constitute an updating for our media age of literary (and philosophical) deconstruction: like the many oscillations in Paul de Man (or Derrida) – oscillations of enumeration and metaphorization, of materiality and phenomenality, and so on – this properly mediatic oscillation seems to impose a constraining, but also enabling, frame on hermeneutic practice. In another sense, this oscillation can be understood as a new kind of transcendental condition for experience, though it is one that, because of its anchoring in concrete or material technicity, would appear to disturb traditional divisions between the transcendental and the empirical. In this way, as I have already suggested, it resembles Foucault's historical a priori but also Gilles Deleuze's transcendental empiricism: like these, it proffers the conditions for real experience without exceeding the domain of experience, without being, properly speaking, transcendental at all.

Contemporary media, I want to suggest, occupies the space *between* these two historical-theoretical resonances, and in so doing, it poses new demands on thinking, demands not incurred by either deconstruction or neo-transcendentalist thought. For this very reason, media theory marks a chance for us to move forward in our thinking, to displace definitively (at least in some sense) the empirical-transcendental divide that has structured western meditation on thinking, including the thinking of technics. Put another – perhaps more polemical – way, media theory comprises the contamination of thinking by technics; it offers an opportunity for reversing the longstanding subordination of technics paradigmatically expressed in Heidegger's (1982) maxim that 'the essence of technology is nothing technical'. To repeat, the reason for this chance, this opportunity, is indeed the fact that *media conditions our situation*, though in a manner perhaps quite dissimilar to what Kittler intended: by giving the empirical-technical infrastructure for thought, by specifying a certain technical materiality for the possibility of thinking, media remains an ineliminable, if unthematizable, aspect of the experience that gives rise to thought. This revelation of media's fundamental irreducibility underscores the insufficiency of any theoretical stance that fails to interrogate the oscillation itself, that remains content to treat it solely and simply as a radical challenge to hermeneutics and not as the very configuration of the admittedly complex condition for whatever hermeneutics might be in our world today. In seeking to interrogate this oscillation here, I shall make an effort to address both the theoretical and the historical dimensions of media, even though – in the end – these will prove inseparable, if not in fact indistinguishable, from one another. For if, in one sense, the particular opportunity just outlined for contemporary theory stems from the specific state of media today, it also marks an 'originary' correlation of technics and thought, one that comes 'before' history and that is, for this very reason, necessarily expressed by history, by the history of technics as much as that of thinking.

Mediation

To begin interrogating this oscillation with which contemporary media challenges theory – the oscillation between materiality and phenomenality – let us return to one important (if partial) source for Kittler's media history, namely Marshall McLuhan's formalist conception of mediation. In *Understanding Media* (1964), McLuhan famously identified the medium and the message, or rather more exactly, he defined the message as the medium itself. By this, he meant to effect a conceptual shift from the content of a message to its technical form, such that the content simply became the technical form. In a series of concrete analyses proceeding from orality and writing to electric lighting and automobiles, McLuhan in effect demonstrated the hermeneutical prowess of what is potentially a most radical anti-hermeneutic conception. Indeed, the neat dialectic proceeding from orality all the way to the computer demarcates a well-nigh pop-Hegelian project for understanding media – a veritable hermeneutics of mediation – that would find its first principle in the incessant and ongoing shift from message to medium, from informational content to technical form.

Notwithstanding the abstract formality of his conception of mediation, McLuhan's thinking is driven by an insight into the profound continuity of informational meaning and technical expression – of message and medium – that has important implications for our understanding of media today. One might even want to say that his neat dialectics was always a bit too neat, that the shift from message to medium never fully takes place, or even that it is not a shift at all, but more of an expansion in the scope of hermeneutic analysis to include the material-technical support for the message. (In this sense, McLuhan's hermeneutics of media comprises a vastly different cultural assimilation of information theory than that of Kittler; specifically, it takes stock of the role of embodied reception – that is, the active role of embodiment – in what Donald McKay calls a 'whole theory of information', rather than focusing, myopically in my opinion, on the technical circuit as it was theorized by Claude Shannon, and by, literally, every information theorist following in his wake.) And if this dialectical incompleteness finally detracts from the success of McLuhan's theory, so much the better since it bequeathes to us the opportunity to explore the 'transduction' of message and medium that, I would suggest,

becomes generalized in our contemporary media age. (Transduction, following Gilbert Simondon's conceptualization, is a relation in which the relation itself holds primacy over the terms related.) Understood in this way, McLuhan takes his rightful place as one of the most important thinkers of the inseparability of culture and technics and, consequently, as a figure deeply resistant to the polarizations that have shaped and that continue to shape debates over media. From his standpoint, there simply is no such thing as technical determinism, not because technics don't determine our situation, but because they don't (and cannot) do so from a position that is outside of culture; likewise, there is no such thing as cultural constructivism – understood as a rigid, blanket privileging of ideology or cultural agency – not because culture doesn't construct ideology and experience, but because it doesn't (and cannot) do so without depending on technologies that are beyond the scope of its intentionality, of the very agency of cultural ideology.

Medium

Yet another dimension of McLuhan's theory helps to underscore the profound continuity that underlies the perhaps too differentiated dialectics of (his version of) media history. By linking the medium – and the operation of mediation per se – to the (sensory and perceptual) 'ratios' of human experience, McLuhan underscored the 'essential' correlation of the human and the technical. Though never an explicit theme for him, this correlation inheres in his conception of media as prosthesis of human experience, and it implicates human embodiment in media history in a way that makes common cause with some important contemporary media theorists and philosophers of technics. Thus, in deep resonance with N. Katherine Hayles's (1999) defense of embodiment against its reduction to informational pattern, McLuhan's conception of media as prosthetics necessarily places it in a transductive relation with the human body; yet unlike Hayles, who doesn't sufficiently differentiate the way information is embodied in humans and in nonhuman media, McLuhan sees the two distinct forms of embodiment as necessary correlates of one another. While he would hold that the human body cannot be understood as a first or primary medium, as (at least) some proponents of the posthuman advocate, McLuhan's conception stands rigorously opposed to technicist manoeuvres – like Kittler's and those of his compatriot 'media-scientists' – that would grant technics a wholesale autonomy over against the human and its sensory-perceptual ratios.

In this respect, McLuhan's work converges with the position of another important contemporary critic, philosopher Bernard Stiegler, whose extension of phenomenology and deconstruction into the domain of technics is rooted in a rigorous refusal to subordinate technics to thinking (philosophy). Following paleonotologist André Leroi-Gourhan, Stiegler argues for the co-originarity of technics and the human, in the sense that the break giving rise to the human as a distinct species simply is the invention of technics. With the earliest fossil remains of proto-humans being contemporaneous with the earliest remains of primitive flint tools, Stiegler finds important empirical support for his own theorization of the human as an originarily prosthetic being. Human beings, he contends, evolve by passing on their knowledge through culture; and this means that humans are 'essentially' technical and have been so from their very 'origin'. In order to differentiate it from strictly zoological evolution, Stiegler thus defines human evolution as irreducibly both biological and cultural; it occurs as a process that he dubs 'epiphylogenesis', evolution through means other than life.

Stiegler's work, to which we shall return, is important in the present context because of its implications for our effort to understand the concept of medium. More exactly, his claim regarding the inaugural coupling of the human and technics supports a conceptualization of the medium as an *environment for life*. Such a conceptualization draws explicitly on the implications of recent work in biological autopoiesis (which, among other salient claims, demonstrates that embodied life necessarily involves a 'structural coupling' of an organism and an environment), but it does so, importantly, in a way that opens the door to technics, that in effect contaminates the logic of the living with the distinct and always concrete operation of technics. From this perspective, the medium is, from the very onset, a concept that is

irrevocably implicated in life, in the epiphylogenesis of the human, and in the history to which it gives rise *qua* history of concrete effects. Thus, long before the appearance of the term 'medium' in the English language, and also long before the appearance of its root, the Latin term *medium* (meaning middle, center, midst, intermediate course, thus something implying mediation or an intermediary), the medium existed as an operation fundamentally bound up with the living, but also with the technical. The medium, we might say, is implicated in the living as essentially technical, in what I elsewhere call 'technical life'; it is the operation of mediation – and perhaps also the support for the always concrete mediation – between a living being and the environment. In this sense, the medium perhaps names the very transduction between the organism and the environment that constitutes life as essentially technical; thus it is nothing less than a medium for the exteriorization of the living, and correlatively, for the selective actualization of the environment, for the creation of what Francisco Varela calls a 'surplus of significance', a demarcation of a world, of an existential domain, from the unmarked environment as such.

Such a conceptualization of medium as an environment for life (or more exactly, as a support for the transduction of life and environment) differs crucially from conceptions of the medium as a specifically and narrowly technical entity. Before it becomes available to designate any given, technically-specific form of conversion or mediation, medium names an ontological condition of humanization – the constitutive dimension of exteriorization that is part and parcel of the transduction of technics and life. The multitude of contemporary critics who focus on the medium – and on media (that is, medium in the plural) – as part of an objective domain or thing-world that is autonomous (or potentially autonomous) from the world of human action and communication simply fail to take stock of this difference. They fail, that is, to recognize that the medium, and mediation as such, *necessarily involves the operation of the living, the operation of human embodiment*. Attending to the concrete embodiment of information in contemporary machines, as Hayles does in her important and ground-breaking work, or focusing on concrete storage technologies as the ground for what can be inscribed in a given historical moment, as does Kittler in his equally important and ground-breaking work, thus addresses only one side of a bi-directional circuit that has only become more complex, more mutually-imbricated, and more productive as the evolution of technics has accelerated to disorienting speed.

If Hayles, Kittler and the host of their respective legatees (not to mention yet other contemporary critics and critical currents that similarly focus on media artifacts) can easily be excused for their neglect of the living basis of technics, it is precisely because of the disorientation that has accompanied technical change since the industrial revolution. As Stiegler has argued, expanding the important analysis of Gilbert Simondon, the industrial revolution marks a massive acceleration in the evolution of technics, understood as a (third) domain – that of 'organized inanimate matter' – in between the animate and the inanimate, the living and the inert. However much this massive acceleration, and the resulting increase in disorientation, has impacted human experience, it does nothing to alter the theoretical correlation of the human and technics. For even in this most recent phase of its ongoing and constitutive correlation with technics, the human continues to evolve by exteriorization, by means other than life, which is, let us recall, precisely what constitutes it as human in the first place. What the massive acceleration of the evolution of technics makes overwhelmingly clear is that human evolution is necessarily, and has always been, co-evolution *with* technics. Human evolution is 'technogenesis' in the sense that humans have always evolved in recursive correlation with the evolution of technics.

Since this also means that the concept of the medium retains a stability across this destabilizing epoch – it continues to designate the necessity for exteriorization, the support for the transduction of the human and technics – our understanding of the medium as environment for life comes into conflict with efforts to historicize media via technical artifactuality. The semantic history of the term medium evinces the signs of this conflict from the moment that the term 'media' emerges as a distinct substantive; clearly indebted to the instrumental sense of 'medium' that arose from the post-classical Latin phrase *per medium*, media carries with it

the sense of circulation, a meaning that, from the 18th century onwards, became that of mass circulation (hence the term 'mass media'). With the expansion of concrete media in this instrumental sense, it is easy to see why the sense of medium as environment for life would become obscured: to wit, it brings a shift in emphasis from the 'origin' and operation of mediation to its artifactuality, a shift that has been reinforced by the general rise of mass media and by the ever-increasing proliferation of new media technologies that has characterized western history (at least) from the Rennaissance onwards.

When Kittler argues that, prior to the differentiation of media in the 19th century, there was only one universal medium (alphabetic writing) and hence no concept of the 'medium' as such (since, being a differential concept, this would require that there be at least two media), he betrays his allegiance to a notion of media artifactuality in the sense discussed above. Gramophone, film and typewriter are technical embodiments of different possibilities for storing everything that can be technically inscribed; in this respect, as Kittler suggests, they provide the technical infrastructure – the technical transcendental ground – for Lacan's three registers, namely, the real, the imaginary and the symbolic (respectively), and thus, for all possible experience from the mid-19th century onward (that is, as Kittler, here following, and all-too-indebted to Lacan, understands it). Yet by fetishizing the triumvirate of gramophone, film and typewriter, Kittler ignores the thick history of western representation (isn't painting a storage medium that, to some extent at least, rivals alphabetic writing?). Still more importantly, he turns away from the essential correlation of storage with life, a correlation that is at the heart of McLuhan's, Leroi-Gourhan's and Stiegler's work. Thus the triumvirate of media artifacts do not comprise technical exteriorizations of the human body so much as they furnish the technical basis for the ideology of the human; and if the essential anti-humanism of such a media history (here completely of a piece with the epistemological anti-humanism of the early Foucault) must await the technical de-differentiation of the digital to appear in all its clarity, it nonetheless motivates the entirety of Kittler's analysis, which, for that very reason, gains its purchase through the *epoche* of the medium's function as environment for life, its role as support for the transduction of technics and life.

That said, there is an important sense in which the digital – and specifically the possibility for a total convergence of media in the 'super-medium' of digital code – allows us to reframe media history in an extremely constructive way. Far from demonstrating the superfluousness of the human in the technical circuit, however, what such reframing can teach us is precisely that and just how much media has always been correlated with the living: we learn, specifically, that what all media mediates is life, and that (human) life is mediation, that is, the concrete actualization of the living via exteriorization in an environment, in a medium. Thus, rather than forming a universal, properly 'post-medium' storage form, digital code comprises the most recent, and certainly the most complex, stage of the ongoing evolution of technics; as such, it impacts the human not from the outside (as Kittler's posthumanist fantasies suggest), but rather as an expansion of the very exteriorization that is constitutive of the human, that lies at the innermost core of the human as a form of the living.

Given that our interest here is to move beyond the opposition between artifactual and transductive conceptions of the medium (an opposition itself imposed by the fetishizing of the former among certain contemporary critics and reinforced by the massively accelerated evolution of technics in the last two centuries), it behooves us to explain the complementarity of media artifacts and human technogenesis, and, toward that end, to differentiate two concepts of autonomy. It is true, and here we must agree with Kittler and Hayles, that technologies now perform extremely sophisticated cognitive labor both in the production of everyday life and the reproduction of species life. Indeed, they are often so sophisticated that they give the appearance of being fully autonomous, of developing an entirely new form of life altogether, a new form of life variously theorized, for example, as artificial life (Chris Langton and Thomas Ray) and as an entirely new kind of systemic coupling and a new form of autopoietic reproduction (Niklas Luhmann). But in the face of this *lure* of autonomy, it is important to remember that no matter how cognitively sophisticated these technologies

become, they operate *only through their coupling with the human*, even in instances (and these have become ever more routine) where this coupling is complexly and multiply mediated. (From this perspective, if 'we' do one day succeed in artifactually generating artificial life, a truly new evolutionary lineage, or rather, if out of the process of cosmic life in which we participate, such an artifactual genesis of artificial life emerges, it will be one that is no longer correlated – via the species-constituting transduction of the human and technics – with the human, and thus one that may well lay claim to true autonomy.)

Simondon's work on the evolution of technics as a third ontic domain between the animate and the inanimate furnishes a different, weaker notion of autonomy, or perhaps more accurately, of quasi-autonomy. This notion is defined by the double fact that, on one hand, technics enjoys an evolutionary lineage of its own (even if it is one that has always been, and that continues to be, assisted by human intervention), while on the other hand, it is essentially correlated with the human, as a distinct (similarly quasi-autonomous) evolutionary lineage. This quasi-autonomy of technics supports a conception of the mutual correlation of human evolution and technical evolution by reciprocal (though asymmetrical) *indirection*. According to this conception, rather than operating through causal interference, technics impacts the human being and the human impacts the technical as respective perturbations to the organization-maintaining (and hence system-preserving) operation of the other. Technics and the living impact one another by triggering crises in the organizational closure of the other, such that each must change, and change not through submission to external forces, but through self-(re-) structuring that follows operational rules and preserves constitutive organizational principles. What results then is a mutual, bidirectional, asymmetrical dialectic of indirection: a punctuated, nonlinear, and extremely complex recursive catalysis of the living by technics and of the machinic by embodiment.

As I have suggested elsewhere (Hansen, 2005), *Son-O-House*, a joint endeavor of Dutch architect Lars Spuybroek and Dutch sound artist Edwin van der Heide, offers a perfect and, in my opinion, perfectly prophetic, example of this complex dialectic. Indeed, it forms something of a recipe for how to stimulate human-machinic cross-fertilization through what we may want to call artificial, that is, non-living (or at least, non-genetic) means. Beginning with the captured data of human movement through domestic spaces, the project proceeds through several stages of de-formation – including the construction of a paper model, the digitization of this model, and its transformation into a sound environment – each of which comprises a 'stage' in the dialectic of indirection. What Spuybroek and van der Heide thereby achieve is a performative declaration-demonstration of the state of human technogenesis today: they show, on the one hand, how the quasi-autonomy of the technical (here exemplified not only by the digital computer but by the role of paper as a 'material machine', a machine with certain autonomous properties that may be said to be emergent – here what develops from the capacity to be cut, bent and stapled) challenges the habits of embodied occupation of space. And, on the other hand, they show how the principles of human embodiment – and specifically the principle of operational (or organizational) closure, the very principle of quasi-autonomy itself – retain a certain privilege in the transductive dialectic of the living and the machinic, namely the privilege of furnishing the very rules according to which each can change, and thus, the privilege of providing a model for the capacity of both to impact the other. This is why the transductive dialectic is asymmetrical: as an 'originary' correlate of the living, a condition for the production of life itself, media technics remains and can only remain within the history opened by the inauguration of (human) life.

All of this comes together beautifully in the second, performative or interactive component of the project, namely the sound environment. Quite literally a 'house where sounds live', *Son-O-House* is a warped space, constituted out of curving ribs that force the visitor to bend and bow her own body, and filled with speakers and motion sensors that create a feedback between movement and frequency and yield various emergent forms of frequency interference. To cite my own description of the environment, *Son-O-House* 'brings together body, sound, and space into a positive feedback system that creates two kinds of emergence: of new bodily

movements and of new frequency interferences. And while both emergences – human and machinic respectively – are only possible through the perturbation introduced by the other, each occurs solely through a reorganization that respects its constitutive principle of operational closure. While both follow the same basic rule – let movement create space – each does so in a manner entirely particular to it. This is equally to say that both retain the crucial investment in indirection. . . . Just as the sounds themselves do not directly cause changes in bodily movement, but influence the internal processing that yields such changes, visitor movement has an impact on the *composition* of the sound, and not simply on the sound as already existent, which is to say, on the event of frequency interference itself. In this way, the 'autonomy' of the digital sound-generating (compositional) system combines with the (distinct) autonomy of embodied enaction to support the complex interactivity produced by this work' (Hansen, 2005: 161–2).

Media Critique

Spuybroek and van der Heide offer *Son-O-House* as a critical intervention into our contemporary, globalized media system. Designed as a space of retreat from the dominant rhythms of the Eindhoven corridor, the hub of the Netherlands' information technology industry, *Son-O-House* exploits the quasi-autonomy and material creativity of paper as an 'analog computer' and of the digital computer itself as a transformation of analog processes. (In so doing, incidentally, it lends support to Brian Massumi's important claim for the 'superiority of the analog': by showing how the modes of co-operation of the digital and the analog – 'transformative integration, translation and delay' – are themselves analog operations, Massumi offers a different, but corroborating, account of the certain privilege embodiment enjoys over technics [Massumi, 2002: 143].) Taking advantage of the excess of the analog, of the excessive materiality of embodiment, *Son-O-House* introduces deferral and delay into the smooth flow of the industrialized paradigm of contemporary real-time media networks. It thereby exposes the complex and highly artifactual pre-programming underlying the model of real-time interaction that, as Bernard Stiegler has shown, is intended to produce docile viewers by, literally, highjacking and standardizing the time of their consciousness. What, in my opinion, makes *Son-O-House* so effective and so interesting as a critical intervention in the contemporary media system is its return to the domain of embodiment, and specifically, its explicit effort to exploit the superiority of the analog, together with the certain privilege of the human that it conveys: because it treats the indirection that is the hallmark of embodied enaction as the very source for deferral and delay, *Son-O-House* facilitates a reprogramming of interactivity that exploits the material creativity of human embodiment and that yields radically emergent human sensations and (following from the coupling at issue in the transductive dialectic) radically emergent machinic processes.

More important even for our purposes here, *Son-O-House* comprises a more general example of a (potential) politics of mediation, what I call (in a forthcoming book of the same title) the politics of presencing. At the heart of such a politics is an effort to exploit the possibilities offered by digital technology, and specifically new technical capacities for analysis and synthesis of images and sounds that afford access to and control over the contemporary mediation (or media artifactualization) of the flux of consciousness (which is to say, over the flux of life itself). This politics of presencing finds a point of origin in Stiegler's analysis of contemporary real-time global media (with 'cinema' in the age of the internet being its prime exemplar); according to Stiegler cinema comprises the paradigmatic 'temporal object' in relation to which consciousness is able to take a distance from itself and reflect on its own temporal flow, the inner self-affection by time that, for western philosophy from Kant onward, constitutes the very content of 'inner sense' or 'internal time consciousness'.

By updating Husserl's account of time-consciousness – and specifically his identification of musical melody as an exemplary temporal object – Stiegler is able to demonstrate how the contemporary culture industries operate by controlling and directly capitalizing the time of consciousness itself. What emerges from Stiegler's updating is the fact that today's temporal

object, while retaining its function as surrogate for the self-reflection that constitutes time-consciousness, is incontestably a media artifact in the sense in which we have been using the term here. Unlike Husserl's melody, cinema in the expanded scope intended by Stiegler is in every respect the object of a media system that aims precisely and in the most calculated manner imaginable to subordinate the subjective flux of thinking to pre-programmed and thoroughly standardized temporal patterns of media artifacts. In this sense – and here is where politics enters the scene – the contemporary temporal object/media artifact constitutes the very site for a struggle over who controls the flux of consciousness, or more precisely for a struggle over secondary retention and its selective (and thus determining) impact on primary retention or the production of new presencings. As Stiegler has shown, the contemporary culture industries strive to exercise and maintain a stranglehold on cultural memory (secondary memory) by offering pre-programmed, media artifactual memory objects (tertiary memories) that, because of their seduction and their ubiquity, work to erode the role of personal consciousness and to displace lived experience as the basis for secondary memory. This is precisely how (say) television functions today as a temporal object and as a cultural industry, and it is more and more how – so Stiegler argues – tradition is handed down to new consciousness, which is to say, as something that *has not been lived* by personal consciousness but is available for adoption – and increasingly *required* to be adopted – by that consciousness.

The possibility for a critical interruption of the media system thus concerns the question whether there is any way to resist this industrialization of consciousness. For if the culture industries offer media artifacts that succeed in displacing the role of personal memory on the production of new experiences, on new presencings, then they will have succeeded in controlling the future itself, to the extent at least that the future arises out of anticipations or expectations – protentions – which are themselves projections of secondary retention. Now it is easy to see how digital technologies – and precisely the capacities for analysis and syntheses of image and sound fluxes – might offer some hope here. For by facilitating personal control over the flux of time – whether this be the flux of the television in one's living room (think of the potential of TIVO and other digital storage systems) or the flux of global broadband networks and informational databases – digital technologies empower personal secondary memory to reassert some control over the production of new presencings, and thus, over the projection of the future. More simply still: because they allow personal lived consciousness control over the flux of the media artifact that is its surrogate temporal object, they allow consciousness to live time (at least to some extent) according to its own rhythms. In sum, digital technologies restore some of the agency that personal lived consciousness has (apparently) lost over the past two centuries of rapidly accelerated technical evolution; by exemplifying the way that technologies function as correlates of embodied life (as our above account of the concept of mediation argued), digital technologies help personal consciousness intervene creatively and substantively in the production of presencing that constitutes – and constitutes *as an essentially technical process* – lived reality itself, including the lived reality of (constituting) consciousness.

This political deployment of digital media technologies raises two related historical differentiations that directly concern the topic and the future prospects of the culture industry. First, there is the question of the *newness* of new media, which is equally to say, its differentiation from some other form of media, be it 'old' media or simply media per se, media as an unmarked term. One thing our discussion thus far has demonstrated is that new media is not (and cannot be) new simply because of its technical specificity. If, as we have argued, technics is always correlated with the living, and the digital with an analog excess, analyses of *new* media like Lev Manovich's that focus on the formalist or technicist dimensions of programmability and computation (and here one could equally include analyses of Kittler and his fellow German media scientists) remain positivist and extremely partial. Another way of making this point is to say, as we have said above, that the singular plural term new media cannot simply designate a new kind (or some new kinds) of media artifact(s), but rather must designate a new phase of human technogenesis, one that is perhaps catalyzed first and foremost by new

technical capacities (precisely those just analyzed) and one that will become old or unmarked in its turn. The use of the term 'new' here is, of course, a way of marking the historicity specific to modernity, but at the same time, it is a way of marking *the technical specificity of* this modernist dialectic: as a techno-historical phenomenon and lineage, media simply is the perpetual, that is, repeated invention of the new.

A second historical differentiation – of new media from mass media – brings the open-endedness, and thus the political potential, of this understanding of media as the perpetual invention of the new to bear on the fraught topic of the consciousness industry. Many recent critics have welcomed new media as a new infrastructure – and indeed a new media system – that would succeed mass media. Thus Félix Guattari (1995) speaks of a post-mass media culture that would tap the singularizing potential of digital media, and specifically, its actualization of living affects; similarly, Pierre Lévy (1998) develops an entire aesthetics out of the various concrete capacities digital technologies afford to intervene in and reappropriate mass cultural artifacts (the technique of sampling being a key example). While these accounts are important and do contribute to a critical media politics, they remain partial in the sense that they fail to grapple with the continuing force, indeed hegemony, exercised by the mass media today. In this respect, one of the merits of Stiegler's analysis (and Stiegler, let us reiterate, also appreciates the critical potential of digital technologies) is its resistance to any utopian hope (or delusion) that new media would somehow displace and succeed mass media, that mass media would simply wither away.

What 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. In this respect, I would suggest, Stiegler's departure from the thoroughgoing pessimism of Adorno and Horkheimer's famous critique of the culture industry is inspiring: for by treating the contemporary culture industries – or more precisely, the technologies that form their material infrastructure – as (potential) sources for the reassertion of personal control over secondary retention and the temporal flux, Stiegler does more than simply 'postmodernize' the grim picture painted by the German philosophers. Indeed, he bears witness to the deepest insight of the concept of human technogenesis, to the most profound dimension of the transductive coupling of the living and technics, at least as it concerns us today, in our current phase of dizzying technical development: namely, the risk that accompanies, and has always accompanied, human life as essentially-technical, as epiphylogenesis. In a way that goes far toward redeeming Walter Benjamin's (1969) peculiar appreciation for mass culture and his insight into the tenuous balance between aesthetics and politics, Stiegler's work shows – and is indeed premised on the very notion – that this risk is a risk that is simply not worth taking, but a risk that *simply must be taken*. The very hope for a viable future, the hope of keeping open the future, requires a struggle with today's culture industries and with the media artifacts that they produce; and this struggle is a struggle for control over the source that is living singularity, which is to say, the source of the very transductive dialectic – between the living and technics – that constitutes the being of the human. That is why finding new ways to tap the creativity of human embodiment – to rediscover the singularity of embodied temporal fluxes – comprises the most pressing challenge, and the most inspiring task, for media theorists today.

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