Bernard Stiegler is perhaps the most important figure in contemporary continental philosophy of technology. Unquestionably, the theoretical basis and point of departure for his thought can be found in his seminal Technics and Time series. As part of the widening reception of his work, fostered by recent translations, commentators are returning to Technics and Time as a resource for many of the original concepts underpinning Stiegler’s philosophy. With the first volume, The Fault of Epimetheus available in English since 1998 and the second and third since 2009 and 2011, the English-language reception of this series is quite established and growing. However, within this secondary literature there is, to date, not one sustained treatment of futurity. This absence is remarkable because the importance of rethinking futurity and the possibility of a different future is announced at the very beginning of Technics and Time and maintained throughout. Moreover,
the question of futurity is not only a theme which can be seen to unify the Technics and Time series but has increasingly come to the fore in Stiegler’s later and most recent work on the Anthropocene as articulating, perhaps, the ultimate exigency of his thought.5

The theme of futurity is unambiguously announced in the opening sentence of the first volume of Technics and Time: “The object of this work is technics, apprehended as the horizon of all possibility to come [à venir] and of all possibility of a future [d’avenir].”6 At the same time, the absence of a future in the contemporary epoch is announced as a collapse of orientation that defines the most extreme challenge to thought within that horizon: “The frenzy of time is all the more paradoxical in that, although it should open onto evidence of a future [un avenir], never before has the imminence of an impossibility to come [à venir] been more acute.”7 This absence of a future is announced in The Fault of Epimetheus with its opening epigraph from “On a Change of Epoch” from Blanchot’s The Infinite Conversation and reiterated in its final sentence: “Whence the excess of measure in this exceptional phrase inscribed on the wall of time: no future.”8 The uncanny sense of crisis invoked by these references to Blanchot is not that our epoch is in a state of mere transition to another coming epoch, but rather, that we stand within a turning in excess of all traditional measures of the coming of time.

For Stiegler, all relations to time are opened and constituted through the irreducible materiality of technological inscription. This understanding of originary technicity is able to define a tradition from Plato to Heidegger in which technics was construed as the mere determination of a pre-technical sense of time. This division between time and technics was nowhere more pronounced than in the traditional metaphysical projection of the future as opening in advance of any material determination. This construal of the future as a pre-technical purity is one of the deepest metaphysical prejudices of our tradition and can be seen as Stiegler’s point of engagement with his main interlocutors in Technics and Time. The challenge this diagnostic reading articulates is the need to rethink futurity at once from within the horizon of a technologically factored becoming [devenir] but at the same time as figured by a difference that is not reducible to that becoming. One of the most pressing implications of thinking time as constituted by originary technicity is that the traditional concepts of futurity, as predicated upon an extra-technological donation of time, are rendered inadequate. Moreover, these concepts actually obfuscate both the genuine sources of possibility within our technological condition and the urgency of recomposing a new futurity from out
of them. Between a merely mechanical becoming and an equally problematic messianic sense of the future, Stiegler can be seen to repose the question of futurity itself in terms of a transformation of becoming.

Within the horizon of technics, the openness of the future can no longer be sought in thematizations of time that would hope to transcend that horizon or merely await messianic incursions from beyond it. From this perspective, the issue of futurity can be seen to articulate the distance that Stiegler’s work stakes out with respect to the accounts of Heidegger and Derrida who, both in their own ways, can be seen to think the future as a resource in excess of technological constitution. Like these previous thinkers, Stiegler will also diagnose the distortion of time in ever accelerating technologies which culminate today in the phantasms of “real” and “live” time. However, for Stiegler, the recovery of a possible future is not sought in the non-technological anteriority of the truth of being or the messianic resources of différence, but rather, in the inventive transformation and reorganization of technological becoming itself. As I will argue, this rethinking of futurity in Technics and Time is a theme which is crucial for the reception of Stiegler’s work in that it brings to light both the singularity of Stiegler’s thought and a vital aspect of his project as a whole.

My argument in this essay is structured in three sections. In the first, I present a brief introduction to Stiegler’s novel understanding of originary technicity. In the second, I then trace the central motif of futurity in Technics and Time. While critical reception has understandably concentrated on the vital themes of retention and memory, what has frequently gone unnoticed is the actually predominant roles of protention and anticipation. Focusing on The Fault of Epimetheus, I demonstrate the importance of the question of futurity in Stiegler’s readings of Leroi-Gourhan, Simondon, Heidegger and Derrida. While it is beyond the scope of the present essay to enter into a detailed evaluation of Stiegler’s readings of his interlocutors, my intention is to articulate the theme of futurity within the purview of Stiegler’s own thought in the early volumes of Technics and Time. In the final section, I draw out some crucial elements within those early volumes for a possible future as the task of thinking a future of technics. I then make some suggestions as to how this early engagement with the theme of futurity can be seen as an important resource for approaching the question of futurity in Stiegler’s more recent work.
In *The Fault of Epimetheus* Stiegler first presents traditional interpretations of the nature of technological beings and the way in which their dynamic precedes ethnic and cultural unities. This initial stage traces conventional accounts of technological beings and systems as emerging and evolving merely *within* time. However, this depiction of technological beings as intra-temporal entities is purely diagnostic in that it remains within the conventional metaphysical understanding of technicity. Since Plato, this tradition has construed technological beings as merely inanimate formations of matter which were shaped by an anterior human agency. What this understanding of technical beings obscured is the actually autonomous dynamic of technically formed matter and its role in opening the temporality through which human specificity within the history of life is first achieved. Rather than framing technics as what would merely augment an already given determination of the human, Stiegler thinks both anthropogenesis and technogenesis as a “process of exteriorization” whereby life is transformed through conjugation with a technical exteriority. This sense of exteriorization is not to be understood as if there was an interiority which would preceed it. Rather, the relation must be seen as aporetic in that interiority itself only arises via the reorganization of life in the externality of technically formed matter.

The term which Stiegler introduces for technics thought from out of the originary process of exteriorization is: “organized inorganic beings.” 9 Neither living nor inert material, technically organized matter can be seen as an autonomous third order of beings. Although Stiegler stresses the differences opened when life becomes technically mediated, one of the important aspects of continuity which is retained across this rupture is the character of both pre-technical and technical life as negentropic configurations of matter. The movement of life as a continuous deferral of entropic diffusion, i.e. an “increase in negentropy,” is not first opened by technics, but rather, is an aspect of life that is accentuated by technical exteriorization. 10 Although technically mediated life is a new configuration of negentropy it must be seen as also an accelerator of entropy. Technical beings as the matrix of hominization are paradoxically both the condition for the opening of negentropic transformations and equally the source of entropic regressions as what is most threatening to life as such. This inherent co-possibility of vital advance and decline is the basis for Stiegler’s later characterization of technicity as pharmacological. Earlier than metaphysical accounts, which have always opposed the human to the technical, technics must be rethought as co-original with the
very emergence of the human as such.

Stiegler employs the work of paleontologist Leroi-Gourhan as an initial framework for thinking technicity in the aporetic passage from biological to technically organized life. From this perspective, the cortex \([\text{cortex}]\) of prehominid life is transformed along with the emergence of the first flint \([\text{silex}]\) tool.\(^1\) This complex of living and inorganic organization displaces any merely naturalistic determination of the body and its physical environment. The original transformation of life in technicity is understood as a rupture with zoological life which originally disorients the relation between life and its environment. In the wake of this immemorial dis-orientation arises the first possibility of an explicit thematization of a surrounding environment. From out of this threshold of exteriorization the first technically mediated thematizations of time and space initially unfurl. This external prosthetic support for the thematization of time and space is the basis for the difference between life organized merely biologically and the specificity of human life as organized by an inorganic technical supplement. Stiegler employs the manifold sense of the word “organ” to articulate this originary prostheticity of the human body. The organized matter of the first tool or \(\text{organon}\) is, strictly speaking, also the first specifically \textit{human} organ. From this perspective, there is no proper or natural human body. The body \textit{qua} human arises through the aporetic re-organization of life in the technicity of external “inorganic organs.”

Stiegler’s appropriation of Leroi-Gourhan on the original technical exteriorization of life remains, however, an \textit{initial} formulation. Ultimately, Leroi-Gourhan will not maintain the aporia of this technological origin but allows it to collapse into a merely metaphysical opposition between a discreet origin and a subsequent fall into technics. Conversely, Stiegler radicalizes the undecidability of this originary rupture by thinking it in terms of Simondon’s concept of transduction and Derrida’s thought of \textit{différence}. However, Stiegler’s own interpretation of the material technical supplement will remain irreducible to both of these accounts of originary technicity. The first technically formed matter is not the expression of a prior intention or creative intelligence, but rather, is paradoxically co-origin with the anticipation which would seem to bring it forth: “the tool appears at one and the same time \textit{qua} the result of anticipation, exteriorization, and \textit{qua} the condition of all anticipation.”\(^2\) The original transformation of life from its purely biological organization into life articulated in technically organized matter is not to be understood as a mere transition within an abstract thematization of space and time. While the technological supplement is described as constitutive of both
time and space as separate theoretical metrics, for Stiegler, it is also constitutive of what he describes as the “earlier” dimensionality of “speed.” This sense of speed designates the originary relatedness of time and space prior to their decomposition into discrete chronological and geometric orders.

Speed, understood as the primordial composition of time and space, is the most original dimension opened by the conjugation of life and the autonomous dynamic of technological beings. On this point Stiegler can be seen to philosophically appropriate Leroi-Gourhan’s understanding of the technological exteriorization of life as the continuation of a “conquest of mobility.” The origin of technics is not the expression of any pre-technical intelligence, but rather, a function of life’s vector towards increased capacities of movement. The technical articulation of life’s motility as speed is the earliest horizon within which technological beings are defined.

Organized inorganic beings are originarily [...] constitutive (in the strict phenomenological sense) of temporality as well as spatiality, in quest [conquête] of a speed “older” than time and space, which are the derivative decompositions of speed. Life is the conquest [conquête] of mobility. As a “process of exteriorization,” technics is the pursuit of life by means other than life.

The dynamic animating technics is not a prosaic logic of acceleration which is merely the charting of movement within derivative time and space. While technics opens and constitutes the horizons of chronological and historical temporalities, it is also not reducible to explanation within these horizons. The technological being is also phenomenologically in excess of the temporal horizons it opens. It must also be understood as animated by the conquest of an extra-natural dimension of speed. Technics grants repose to the historical temporalities which it opens yet its innermost motility and auto-nomy moves in advance of these horizons and continually threatens to disrupt the theoretical and epochal orientations it makes possible. However, in a move that will distinguish Stiegler’s own conception of technical exteriorization, this spatial-temporal economy of speed is also grounded in another aspect of exteriorization which Stiegler describes as the opening of a new form of memory.

On Stiegler’s account, the first technological being, i.e. the flint which immemorially took form between living and merely physical matter, is itself the site of a
transformation of memory. Prior to the mediation of life in technicity, memory was structured either as a genetic program or in terms of the epigenetic retentions of an organism’s individual experience. With the grafting of life into technics another form of memory is made possible. In strictly biological forms of life the experiences and memories of an individual are lost with the death of the individual. However, the inorganic matter of the tool is able to preserve the epigenetic experience beyond the demise of the individual and open a trans-individual form of memory. This passage from a genetic to non-genetic memory via the non-living “artificial” organization of memory in the tool is the opening of an exterior to the merely biological scope of memory. Stiegler terms this third form of retention: “epiphylogenetic memory.” This techno-logical memory is described as the “already-there” [déjà-lâ] which makes possible the distension of time in anticipation and the conservation of a specific past. Access to a past and a future are first opened when life becomes technically exteriorized. However, this immemorial and in a sense “absolute” past is never allowed to function as a transcendental term. The specific empiricity of the technical memory support remains constitutive for all relations to time. Moreover, the technological conditions of access to a specific past and future are themselves evolving and remain tied to their specific material genealogies.

For Stiegler, the mode of access to a past and a future itself has a particular mne-mo-technical history and must be understood as an inextricable element in all thematizations of time.

This is the whole question of time, apprehended on the basis of the techno-logical problematic of artificial memory, always the memory of the human qua already-there. The already-there is the pre-given horizon of time, as the past that is mine but that I have nevertheless not lived, to which my sole access is through the traces left of that past.15

At the opening of metaphysics, Plato distinguished between the soul’s pure memory (anamnēsis) which was untainted by empiricity and a corrupted memory (hypomnēsis) which was contaminated by technical supports. This division between a technics-free time and one degraded by its implication in the materiality of technics can be seen as one of the most pervasive figures of metaphysics. This unquestioned structure was implicit in the history of different versions of the division between a transcendent pure origin of time and the subordinated orders of empiricity and historical time. The singularity of Stiegler’s own conception of
originary technicity can be seen in the radical degree to which he preserves the constitutive role of technical materiality and the specific relations to memory and futurity that it makes possible. There is no non-technical point of origin nor non-technical Other within the coming of time. The temporalization of time passes irretrievably through specific technical materiality not as the obfuscation of a prior privileged time but as the condition of time itself. However, this does not have the result of dragging down the possibilities of the future into a mere positivistically determined becoming. Rather than thinking technics as the corruption of a pure time or obstruction of an alteritous future to come, the beyond of the future must now be sought within technics.

The “to come” of a possible future opened by originary technicity is, of course, not merely a future present. Nor is it brought closer by any logic of “progress” construed as “the spontaneous bearer of the future.” Although the possibility of anticipation, foresight, and the awareness of mortality are all first opened by technics, the sense of a future to come is not any event merely distanced from the present in chronological time. This sense of a future beyond mere becoming yet within technicity represents a new configuration of futurity as such. When the human is rethought from out of the aporetic mediation of life in technics, what pertains to the future must also be rethought in terms of this constitutive technical prostheticity. Stiegler finds intimations of this prosthetic understanding of human beings in the early versions of the Prometheus-Epimetheus myth which were able to think and preserve this aporia prior to its dissolution in the categories of metaphysics. Technics is not something placed in front of a more original human essence that it would then passively complement, rather the rupture into prosthetics is co-original with the appearing of any human phenomena. Strictly speaking, the human as technically transformed life does not exist but is always to come. Rethinking the relation to futurity from out of this transformed sense of possibility within life can be seen as one of the most important, although often overlooked, themes of Technics and Time. Focusing on the first volume of this series, I will now demonstrate that the question of futurity both structures its key dialogues with other thinkers and also articulates a singular urgency.

One of Stiegler’s most important interlocutors in The Fault of Epimetheus is Leroi-Gourhan who can be seen as a precursor in that he attempts to think the human exactly on the basis of technics. However, despite the radicality of Leroi-Gourhan’s
project, it retains an implicit metaphysics and ends up claiming: “technological evolution is essentially of zoological origin, and elsewhere there is a ‘nontechnical,’ reflexive and symbolic ‘intelligence.’”\textsuperscript{18} Leroi-Gourhan will ultimately oppose a fabricating “animal” human with the non-technical consciousness of a “spiritual” human. The basis of Stiegler’s critique will be Leroi-Gourhan’s failure to understand the technical rooting of all relation to time and in particular the technical constitution of the relation to a future inherent in the structure of anticipation.\textsuperscript{19} Leroi-Gourhan allowed for a sense of anticipation that was enclosed within a zoological order and which governed the basic fabrication of tools. This sense of anticipation was then seen to quantitatively expand towards a higher non-technical consciousness which was associated with a capacity for symbols and an awareness of death. Against this naturalized capacity for anticipation as present in pre-human fabrication, Stiegler asserts that anticipation as such is not quantifiable: “Access to anticipation is access to the possible”\textsuperscript{20} and further: “anticipation, relation to the future, is immediately relation to all future.”\textsuperscript{21} Whereas Leroi-Gourhan posits a form of anticipation before the technical exteriorization of life, Stiegler claims that anticipation cannot be the expression of merely programmatic-genetic behavior, but rather, must be thought as arising only with the exteriorization of life into technics.

The opening of a future within life is co-incident with the becoming artificial of memory and the original distension of time within which anticipation is first possible. For Stiegler, there is anticipation, i.e. a future, only “since” the exteriorization and transformation of zoological life by the technical supplement: “There is no anticipation, no time outside of this passage outside [...] that ‘exteriorization’ is.”\textsuperscript{22} Despite his radicality, Leroi-Gourhan can be seen to have allowed for a pre-technical sense of futurity which amounts to an unsupportable projection back into zoological life of capacities that are only possible after exteriorization in technics. His positing of the awareness of death as first arising in a non-technical consciousness also divides mortality from the actually technical constitution of the future required for its possibility. In ascribing anticipation to pre-human life and the first awareness of death to a non-technical consciousness, Leroi-Gourhan can be seen to not draw out the full implications of his own insights. In both cases, a future independent of technics, beyond the constitutive horizon of technicity, had been uncritically maintained. The issue of anticipation and a future beyond technics can also be seen as the central point of critique in Stiegler’s reading of Simondon.
One of the most important resources for Stiegler in *Technics and Time* is the work of Gilbert Simondon. Perhaps more than any other philosopher of technology Simondon sought to rethink the nature of technical objects beyond the anthropocentric and hylomorphic categories of metaphysics. Rather than framing the technical object as merely the effect of an anterior human imposition of form upon an inert matter, Simondon attempted to think the industrial technical object in terms of its own proper autonomous dynamic. However, from Stiegler’s perspective, Simondon did not go far enough and think the proper co-originality of technics with all human phenomena. On the contrary, Simondon explicitly retained a non-technically mediated human capacity for anticipation as an operative component of the industrial technical object. The focus of Stiegler’s critique of Simondon is a passage from his *Du mode d’existence des objets techniques* in which Simondon describes the possibility of the technogeographical milieu as dependent upon “human intelligence” [l’intelligence de l’homme], and in particular, the employment of an: “inventive function of anticipation” [fonction inventive d’anticipation].23 Although Stiegler will explicitly frame the project of *Technics and Time* as an appropriation and extension of Simondon’s concepts of transduction and individuation, a crucial point of divergence is Stiegler’s understanding of the completely technical constitution of the human as such.

Despite the profundity of Simondon’s rethinking of technics, the metaphysical contour that Stiegler outlines in his thought is an uncritical acceptance of anticipation as an anterior human component of the industrial technical object. Stiegler charges: “If there is, a dynamic proper to the technical object tending toward its concretization, it nevertheless supposes a possibility of anticipation on the part of the operator, of the driving force, the human qua efficient cause of the technical object.”24 The residual metaphysics in Simondon’s thought can be seen in the positing of a capacity for anticipation, i.e. a relation to the future, not wholly constituted through technics. Because Stiegler appropriates Simondon’s thought of individuation an important point of divergence between the two can be seen in terms of their different accounts of the pre-individual. For Simondon, this comprises the metastable pre-individual potentiality of being as such from out of which specific chronologies are individuated, whereas for Stiegler the pre-individual is described as the already-there of the technical object that first opens the possibility of access to the dimensions of history and futurity.25 Although stemming from a very different motivation, the projection of a future independent of technics is also at the center of Stiegler’s critical engagement with Heidegger.
Stiegler’s reading of Heidegger is his most sustained engagement with another thinker in The Fault of Epimetheus and in many ways forms the culmination of that work. Despite Heidegger’s grounding of temporality in facticity and his own phenomenological articulations of an already-there aspect of Dasein, he is unable to think the originary relatedness of technics and time. Technics is unthought in Heidegger both in the sense of the originary technological constitution of all relation to time and in terms of the specific technological conditions of access which determine epochality. Against the background of originary technicity Heidegger is shown to remain within the traditional opposition between logos and tekhnē in which technics is understood as a mere constriction upon the proper dimensionality of time. Stiegler bases his reading on Heidegger’s 1924 lecture: “The Concept of Time.” In that lecture Heidegger can be seen to privilege Dasein’s capacity for anticipation [Vorlauf] beyond any constitutive relation to technics and its orthographic structures: “The fundamental phenomenon of time is the future … It is manifest that the original way of dealing with time is not a measuring.” For Heidegger, the anticipation which runs ahead towards the indeterminate, towards death, is the most original structure of time. Any reduction of this difference to the metrics of a specific continuum represents an inauthentic attempt to determine the indeterminate and obfuscate the properly futural structure of temporality.

For Heidegger, the future originally opens beyond the realms of calculation and metrification. This possibility of authentically anticipating the indeterminacy of the future is lost when it is subjected to metrification in terms of the “now” fixed by the chrono-graphy of clocks: “The Dasein that comes to be in anticipation—in différance—is not given its being through the clock; rather, it loses itself in the clock. Its temporality is its future.” Despite Heidegger’s phenomenology of tools and equipmentality, in the final analysis he will disallow any constitutivity to technics and ultimately conflate inauthenticity with the realm of technicity from which the anticipatory structure of Dasein can be extracted. This attempted decoupling of futurity from technics is not just characteristic of Heidegger’s early existential analytic but rather symptomatic of Heidegger’s thought as a whole. Just as Dasein was seen as able to conserve its relation to the future beyond any specific orthographic medium, Heidegger’s later determination of the relation of technology to the truth of being is also structured by a possible extraction from technics. The index of this determination is his account of technology as the culmination of the history of being and his articulation of a free relation to it in: “The Question Concerning Technology.” Heidegger’s interpretation of technology as
the culminating epoch of metaphysics as Gestell thinks technology ontologically and beyond many of the traditional concepts applied to technical beings. However, it still moves in the foreground of an ultimate division between a fallen order of technics and a non-technical origin.

Heidegger locates the start of metaphysics in Plato as a forgetful fall into the derivative calculations of mere correctness [orthotēs], however, what is forgotten is not the tragic aporia of originary technics, but conversely, a pre-technical origin of the truth of being. For Stiegler, this opposition between metaphysics as technics and the truth of being consigns Heidegger’s thought to an aspect of metaphysics determined by the more fundamental forgetting of originary technicity: “The meaning of alētheia still echoes the Platonic structure of reminiscence such as it is determined in opposition to hypomnesic memory, while this memory constitutes the destiny of being as the forgetting of being.”9 This non-technical anteriority of the truth of being will be the ultimate basis for Heidegger’s attempt to articulate an original difference between the essence of the human and the essence of technics in order to think a free relation to it. The difference which opens this ontological sense of freedom is the difference between metaphysics and the truth of being itself. The inherence of metaphysics in the forgotten truth of being is the utmost ground for Heidegger’s claim that the essence of technology is nothing technical. By thinking the non-technical truth of being as the origin and hidden essence of Gestell, a distance from technics is projected from out of which it could then be non-technically encountered. For Stiegler, the projection of this technics-free essence of technology merely traces the widest outcome of Heidegger’s forgetting of originary technics. This forgetting perhaps finds its ultimate expression in Heidegger’s understanding of the task of thinking as the conservation of being beyond our technological epoch. In contrast, Derrida would appear to offer a non-oppositional figuring of the technical constitution of time, however, a close reading of Stiegler on the composition of the differing and deferral of différance demonstrates this is not the case. The issue at the basis of Stiegler’s critical reading of Derrida is, once again, the question of futurity.

In the preface to The Fault of Epimetheus Stiegler clearly situates his work as both an appropriation of and critical dialogue with Derrida. At once Stiegler will explicitly invoke the thought of différance as a resource for moving beyond metaphysical determinations, however, Stiegler’s most sustained engagement with Derrida is the charge of an “indecision” regarding the technics of futurity. Derrida describes différance as characterizing all forms of life and accords a kind of temporaliza-
tion to all life. Stiegler accepts this understanding of life as *differance*, however, charges Derrida with an uncritical projection into non-human life of a thematization of temporality which is particular to technically exteriorized life. For Stiegler, Derrida has not properly articulated the specificity of human temporality within the history of life as *differance*. What remains unthought are the implications of the becoming technical of life and specifically the transformation of possibilities of temporalization that technical exteriorization opens within life as *differance*. Stiegler quotes from *Of Grammatology*: “the trace is the difference that opens appearing and the signification (articulating) the living onto the non-living in general.” For Stiegler, this description of life in general as *differance* betrays an unexamined importation of a relation to the non-living, i.e. the dead, which is made possible only through the technical exteriorization of life. The thematization of death presupposes the ability of life to take up a relation to the future and anticipate, however, this is a temporality particular only to the technically mediated life of humans.

There is an indecision, a passage remaining to be thought. At issue is the specificity of the temporality of life in which life is inscription in the non-living, spacing, temporalization, differentiation, and deferral by, of, and in the nonliving, in the dead. To think the articulation is also to think the birth of the relation we name with the verb ‘to exist’; this is to think anticipation.

While Stiegler’s reservations regarding Derrida’s indecision have generated a fair amount of critical reception, what has gone comparatively unnoticed is that the specificity of human time as mortal, which then guides his reading of Dasein’s futurity, is also the basis for an equally sustained reading of the futurity of *differance*. When Stiegler states: “The question of *differance* is death.” this not only refers to the need to think technicity as what makes a relation to death possible, but also opens the terms of a comparison, indeed convergence, of *differance* with the indeterminacy and deferment of originary temporality in Heidegger. In many ways, Stiegler can be seen to frame his culminating engagement with Heidegger as also an engagement with Derrida by explicitly converging Heidegger’s understanding of the improbable and indeterminate aspect of Dasein’s future death with the deferment of *differance*. What Stiegler describes, as “the structure of *differance* that articulates anticipation,” is found in the configuration which holds together the incalculable delay and calculating fall in Dasein’s (im)possible relation to its future: “It is certain knowledge of an uncertain difference, difference that ‘shrinks
back’ and that in this very withdrawal is this differance in the Derridean sense.”

The originary and constitutive delay which characterizes Dasein’s being-towards-death as incalculable and unprogrammable is described in terms of differance: “The delay can be seen to emerge from the lecture as differance.” This delay is explicitly framed in terms of a proper futurity “to come [à venir]” which opens in advance of any orthographic medium. The time of Dasein is a deferred time in that it temporalises itself from out of the indeterminacy of its being-towards-death. This deferment, that is the basis for differentiation and individuation, at once gives time but is also covered over in the very becoming-discrete of time in measurement and calculation.

Stiegler articulates a structural parallel between the original delay of Dasein in anticipation and differance in that both are obscured through the exactitude of calculation: “To calculate means to eliminate differance—the delay.” Referring to the improbability and indeterminacy of Dasein itself, Stiegler states that, “The structure Heidegger describes is indeed that of differance: because there is deferment, there is differentiation.” Further still: “The end pre-cedes Dasein as its possibility. As unsurpassable possibility, it is also the impossibility of Dasein. Improbable, it is impossible: its possibility is only differing and deferring.” Stiegler’s explicit introduction of Derridean terms into his reading of Heidegger is much more evident in the original French version because the English translation has often not preserved this aspect of Stiegler’s text. In the above quote, the expression “differing and deferring” is a translation of the single French term: “differante” which obscures Stiegler’s reference to differance. In another description of Dasein, Stiegler states: “The knowledge of the end always withdraws, is concealed in being deferred.” Instead of “being deferred” the original has “en se diffé rant.” However, the significance of Stiegler’s explicit and sustained reading of the thought of differance in terms of Heidegger’s existential analytic must be understood in light of the reservations regarding futurity these structural parallels reveal.

In anticipation Dasein is its deferral in the indeterminacy of death, any attempt to calculate this incalculable or prove this improbable is an obfuscation of the origin of time. The parallel that Stiegler draws with the thought of differance is that it also undergoes only a loss in the orthographic medium of its trace and can be seen to conserve itself beyond any constitutive dependence upon specific and actual conditions of access to the already-there. Stiegler quotes Heidegger and then articulates in Derrida a similar occlusion of ontic technicity: “The closest
closeness which one may have in being-towards-death as a possibility is as far as possible from anything actual. This entire discourse describes the structure of *différance*.” On Stiegler’s account, originary deferment opens the possibility of differentiations and increasingly exact measurements, however, the originary delay in Derrida is uncritically disengaged from the actual material conditions of technicity that open and condition all relations to time. This disengagement of the future from the specific memory supports which make it in fact possible is the basis for Derrida’s messianic figuring of the “to come” beyond every horizon of expectation or constitution. For Stiegler, the improbability of futurity in the delay of *différance* that gives differences must remain rooted in the actual empirical technicity that supports access to the already-there: “The *différance* that Dasein is can only be disclosed to it through a prostheticity that, if it most often conceals *différance* as calculation, measure, or determination, also puts it into actual play.” On Stiegler’s reading, Derrida has attempted to affirm a futurity that would elude its material and prosthetic roots and open beyond the condition of technicity. Tracing the theme of futurity in Stiegler’s engagements with thinkers from Leroi-Gourhan to Derrida has demonstrated that the forgetting of originary technicity also articulates a tradition in which futurity has been envisioned as independent from the actually ubiquitous constitutivity of technics. Stiegler’s readings all had the common outcome of exposing an uncritical understanding of the future as a time evading the horizon of technics. In every case, the constitutivity of the specific material inscription of technicity was disengaged from anticipation and the advent of a possible future. What this projection of the future beyond technics consistently obscured is the inexorably empirical and prosthetic condition of all futurity. Moreover, if all futurity is irreducibly technical and constitutively woven into material inscription, the projection of a non-technical alterity as its ultimate source can be seen to obscure the genuine resources for composing a possible future within the horizon of technical life. Stiegler’s genealogy of past futures has demonstrated that one of the most pressing challenges opened by the thought of originary technics is the task of rethinking the future at once beyond the futureless becoming of “real time” yet within the constitutive horizon of technics. In the final section, I will now present Stiegler’s own preparations in the early volumes of *Technics and Time* for a possible future that might open beyond the uncanny absence of a future in past philosophies and contemporaneous “real time.”
The absence of a future which Stiegler found expressed in the widespread experience of “no future” is to be understood in terms of the phenomena of real time: “the no future remains to be thought (as ‘real time’ in the sense of the non-deferred).” It is against the background of both the inability of traditional philosophy to compose a future and the contemporary crisis of real time that Stiegler’s own preparations for a different future in the early volumes of *Technics and Time* can be brought to light. For Stiegler, real time constitutes: “the fundamental trait of contemporary technology” as the industrially produced instantaneous temporality of data computation and mass media. What is distinctive about real time is that, unlike all traditional conceptions of time as opening from out of an originary deferral, real time is an ordering of time in which the speed of its synchronization has covered over its rooting in an originary deferral. This technical synthesis of time transpires at the speed of light and enacts an obfuscation of the deferral which opens time itself. Because time can only be what it is as deferred, the instantaneous character of real time, having covered over its deferral to an almost absolute degree, can be seen to pose the threat of a de-temporalization of time. For Stiegler, the non-deferred instantaneity of real time raises the unprecedented spectre of the: “disappearance of time in time itself.” What is covered over in the ubiquitous and banal present of real time is the earlier granting of the possibility of temporal differentiation by a technically articulated *différance*.

Perhaps the most dangerous aspect of real time, in addition to its specific difference dissolving effects, is that it occludes the rooting of time and space in the originary deferral of *différance* and conceals in advance the need and possibility for the opening of a different future. The work of *différance* as the becoming-time of space and the becoming-space of time is understood as the condition from out of which any specific differentiations are given. With the covering over of the work of *différance* what is also concealed is the possibility of the creation of differences that could open beyond the synchronic calculations of real time and reopen the possibility of a different future. For Stiegler, the seemingly total instantaneity of real time remains rooted in *différance* and “does not exclude the work of *différance* but conceals it in an essential manner” and further, real time is: “an exit from the deferred time specific to the history of being that seems to constitute a concealing of *différance* and a threat to all kinds of difference.” This covering over of *différance* in real time is equally the obfuscation of place: “the occultation of *différance* is the in-*différance* of a non-place (‘no future’ does not mean ‘nothing
happens anymore”).” However, in contrast to Derrida, the opening of a possible future is not figured in terms of the deferral of différance as in excess of all anticipation and technical inscription, but rather, is thought from within the horizon of technics.

For Stiegler: “Différance does not exist without the technologics of differentiation.” Instead of thinking the future from out of the messianic absolution of différance over every specific figuration of time it makes possible, Stiegler can be seen to call for a futurity that would relate to that excess as opening the possibility of composing specific differences. Since, for Stiegler, différance is articulated through technics, any projection of a futurity beyond technics would amount to an empty formalism which obscures the actual need to think a possible future wholly within the condition of technicity. Rather than the tropes of piety which Derrida invoked before the absolute alterity of a possible future to come, Stiegler, in explicit rejection of the messianic, can be seen to think the relation to a possible future in terms of adoption, making and invention. Although it is beyond the scope of the present essay to develop further, it is perhaps here, in terms of the need to produce criteria for a possible future, that Stiegler’s calls for a politics of technology most clearly diverge from Derrida’s approach to technics and futurity. In what is clearly a virtue of his thought, Stiegler’s politics of technology can be seen to articulate the exigency of a possible future as entwined with the need for concrete forms of engagement with the specific dangers and resources of our technological epoch.

Stiegler’s rethinking of futurity is articulated in terms of a possible transformation of becoming [devenir]. This sense of becoming is not to be understood in simple opposition to an unchanging being, but rather, as a site of possible composition: “The question is time, becoming qua the bringing into play of the non-programmed, the im-probable, and destiny qua nonpredestination, the decision.” In the English translation of the second two volumes of Technics and Time this crucial term is rendered sometimes as “becoming” and other times as “to-come” in an attempt to capture its sense of futurity. The concept of becoming defined as changing states linked by cause and effect does not itself constitute a future but must be understood as a basis that can undergo transformation into a possible future: “If the to-come is not the future, there is no future without the to-come, but there is a to-come without future.” The simple equation of becoming with the future amounts to a kind of mechanistic cancellation of the future. In contrast, Stiegler will describe the need for a production of differences that are irreducible
to this uniform order of becoming. The differences which could be opened between mere becoming and a possible future are to be composed and prepared for through an evaluative criteriology.

One of the most important contexts for understanding the pressing need for a criteriology which would be the basis for the adoption of the to-come of a possible future is the recent rise of technoscience. At once, “[t]he to-come, which is today in its broadest tendencies the fact of technology, is subsumed [inféodé] to technoscience”57 and this conjugation of technics, science and the anticipations of investment capital: “signals the opening of a future that is to be systematically explored through experimentation.”58 In what Stiegler refers to as “axiomatic ontology,” in which the possible was merely a modality of the real, traditional science understood itself as the progressive discovery of what is, i.e. the real. The rise of technoscience which merely utilizes the real as a basis for inventing the possible, represents the disruption of this traditional order. This condition of technoscientific disruption at once articulates the need for a critique of technoscience and an evaluative criteriology for the possibility of a to-come beyond the current technoscientific ordering of a systematic futurity.

For Stiegler, becoming in itself is merely entropic and denotes a technical synthesis of time that is forever without a future. Nor is a future opened by the mere interruption of becoming: “Becoming, which has been disrupted, does not produce a future.”59 Instead, what is called for is: “the transformation of this becoming into a future.”60 Stiegler returns to the interface between the indeterminate and calculation, the improbable and the probable, and calls for a dynamic recomposition of these elements in terms of a new criterior. This difference which is to be created is not simply an adaptation to becoming, which would merely be another entropic sequence, rather this difference is understood as one that is to be invented: “adoption is not a simple adaptation to becoming, but its projective transformation into a possible future as the implementation of a criterion that has been “invented” in the sense that it is projected onto the retentional screens forming the machinery of its time.”61 Perhaps the most important criterion that Stiegler sets for this created difference that could open upon a different future, is the distinction between entropic and negentropic organizations of matter.

The opening of a future beyond the entropic becoming of real time is explicitly described in terms of differences to be created: “differences that could be produced would be capable of constituting an adoptable to-come, a future.”62 The in-
vention of a specific difference that could open onto a different future is one that would distinguish between the entropy of mere becoming and its negentropic re-organization. In contrast to the “growing entropy – or what Nietzsche calls the desert” a “neguentropic difference” could provide a criterion for the desynchronization of real time and the possibility of composing new configurations of time and space. This possibility at once would assume difference as what opens the negentropic deferral of entropy in all life and specifically the technically mediated futurity of human life. What distinguishes Stiegler’s futurity is that the deferral of difference is not absolutized but understood as always entwined with the material specificity of a technically articulated difference. Rather than a future which would advent from beyond the specific forms of time shaped by ontic technicity, the opening of a negentropic futurity is conceived wholly within the medium of technical materiality as a creative trans-formation. The “to come” of this futurity is understood in terms of the creative cultivation of the technically opened improbable and indeterminate dimensions of prosthetic life. The negentropic composition of a possible future to come is shaped from out of the indeterminate always to come of the continual entropic deferral at the heart of technically mediated life. While the question of a possible future has become only more pressing with the recent articulation of our epoch as the Anthropocene, many aspects of Stiegler’s early treatment of futurity can be seen to look forward to his most recent work on this theme.

In a recent lecture, “Escaping the Anthropocene” Stiegler states: “Our question is the future—of work, of knowledge and of everything this entails and generates, that is, everything—insofar as it is not soluble into becoming.” Stiegler approaches the current epoch of the Anthropocene as the unsustainable systematic production of entropy which he more exactly defines as the “Entropocene.” The particularity of this current epoch is that it is dominated by a global negative protention, the awareness of an end, a nihil which Stiegler interprets in Nietzschean terms as “completed nihilism” whose overcoming is described as: “the transvaluation of becoming into future.” The perception of the absence of a future in this epoch is paired with the growing inability to compose a future beyond the pre-fabricated protentions imposed by increasing automatization in all areas of life. The result is a projected becoming that: “our organological and pharmacological condition no longer allows us to succeed in trans-forming into a future.” For this reason Stiegler states: “The great organological question in the contemporary Anthropocene is protention.” The evaluative criterion for the production of differences which could transform becoming into a future is understood in terms
of the transformation of entropic becoming to negentropy. This transformation marks the possible transition from the Anthropocene into what Stiegler terms the “Neganthropocene”: “If there is to be a future, and not just a becoming, the value of tomorrow will lie in the constitutive negentropy of the economy-to-come of the Neganthropocene.” Even from this cursory overview, the continuity between Stiegler’s early treatment of futurity and his most recent work can be clearly seen. This continuity can be traced in terms of the composition of a possible future as wholly technical, the critique of real time, the structuring of a possible future as the transformation of becoming and the preparation for this possibility in terms of the creative production of negentropic differences.

In the intervening years since the first volumes of *Technics and Time* Stiegler has widened his thought to include political economy, media studies and social theory in order to understand and respond to our increasingly unsustainable epoch. However, the philosophical basis behind many of those perspectives can often be seen as originally and more fully articulated in the early volumes of *Technics and Time*. One of the often overlooked achievements of these early works is Stiegler’s rethinking of the meaning of futurity that arises from his understanding of the technicity of human temporality. While traditional concepts of futurity have all been uncritically predicated upon the projection of an extra-technological donation of time, Stiegler can be seen to both diagnose this residual metaphysics and begin the task of rethinking a new composition of futurity as such. In terms of the reception of the early volumes of Stiegler’s *Technics and Time*, their continuity with his later thought, and potential resources for articulating our current technological epoch, the thought of a technical futurity, a possible future not beyond, but of technics, can be seen as one of the most crucial aspects of Stiegler’s thought. When the time of human life is seen as irreducibly technical, the dimension of the future takes on the character of an aspect of life to be created and conserved. It is from out of this possible future created through the negentropic power of life, that future life can, perhaps, be granted more time.

TRACY COLONY is Professor of Philosophy at Bard College Berlin. He is the translator of Heidegger’s *Phenomenology of Intuition and Expression* (Continuum 2010) and the author of many articles on contemporary continental philosophy.
NOTES


4. This theme is announced in Stephen Barker’s “Transformation as an Ontological Imperative: The [Human] Future According to Bernard Stiegler.” Transformations, 17, http://www.transformationsjournal.org/issues/17/article_01.shtml (Accessed 29 December 2016). While this is an instructive treatment of the concept of transformation, there is no discussion of temporality or futurity as such. Arthur Bradley admirably captures the importance of this theme when he states: “In Stiegler’s account, what is at stake in the question of hypomnesis today is nothing less than the future – or lack of it – of the human experience of time.” in Arthur Bradley, Originary Technicity: The Theory of Technology from Marx to Derrida. New York: Palgrave Macmillan, 2011, 126. However, although a chapter of this book is devoted to Stiegler there is no extended engagement with the question of futurity.


6. Stiegler, The Fault of Epimetheus, ix. La faute d’Epiméthée, 11. The English translation of “un avenir” as simply “a future” does not capture the specific sense of futurity which is not the future “le futur” to come in a merely chronological sense, but rather, a futurity as thought from out of a radical undecidability. Moreover, this pairing of a future “un avenir” and all possibility to come “à venir” should be read as an explicit engagement with Derrida’s contemporaneous work on this theme. Cf. Jacques Derrida, Specters of Marx. London: Routledge, 1994. This engagement with Derrida regarding futurity continues in Stiegler’s most recent work, see: Stiegler, Automatic Society, 244.


8. Stiegler, The Fault of Epimetheus, 276. The reference to Blanchot in this passage is clearer in the original French because earlier quotes from “On a Change of Epoch” regarding the “wall of time” were translated as “time barrier” whereas Stiegler consistently employed the one expression: “le mur du temps.” Cf. The Fault of Epimetheus, 15.

11. Stiegler repeatedly plays on the pairing of cortex/silex in the original French.
13. Paul Virilio’s concept of speed was clearly an influence on Stiegler, however, his elaboration of speed in *Technics and Time* is not simply reducible to Virilio’s account. Stiegler describes speed as what: “remains unthought” *The Fault of Epimetheus*, 15. This more originary sense of speed is even able to re-articulate an aspect of *différence*: “*différence* is itself also a conjunction of space and time more originary than their separation. It is in this sense, then, that *différence* will, perhaps, have to be thought as speed.” *The Fault of Epimetheus*, 146. For an excellent treatment of the theme of speed in *Technics and Time* see: Ulrik Ekman, “Of Transductive Speed – Stiegler.” *Parallax* 13 no.4 (2007): 46-63.
14. Stiegler, *The Fault of Epimetheus*, 17. *La faute d’Epiméthée*, 31. The force of this key passage has been diminished by not following Stiegler’s deliberate repetition of the word “conquest.” In the original, the sense of technics as emerging within life’s conquest of mobility is more explicit. The expression “conquest of mobility” is at once taken from Leroi-Gourhan, and reinterpreted in terms of speed: “The conquest of mobility, *qua* supernatural mobility, *qua* speed...” *The Fault of Epimetheus*, 146.
17. It is in terms of the possibility of a transformed future that Stiegler’s most explicit proximity to Nietzsche can be seen. At the opening of *The Fault of Epimetheus* Stiegler names Nietzsche as, although largely unmentioned, one of his most important interlocutors. Across the *Technics and Time* series, his specific references to Nietzsche often address the crisis and need for a different futurity: “The desert grows’ says Nietzsche, the philosopher of the future. But this desert, a kind of hell, this becoming through which ‘desertification’ is now to be understood, has no future.” *Cinematic Time and the Question of Malaise*, 102. For Stiegler, Nietzsche is able to diagnose the “growing entropy” of mere becoming as the desert of completed nihilism. The proximity this opens can be seen in terms of the dire necessity to think a transformed future from out of the negentropic resources of prosthetic life.
in the projected next volume: *L’avenir du savoir*.