Parallax

ISSN: 1353-4645 (Print) 1460-700X (Online) Journal homepage: https://www.tandfonline.com/loi/tpar20

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To cite this article: Deborah Goldgaber (2019) Plasticity, Technicity, Writing, Parallax, 25:2, 137-154, DOI: 10.1080/13534645.2019.1607232

To link to this article: https://doi.org/10.1080/13534645.2019.1607232

Published online: 01 Jul 2019.

parallax, 2019, Vol. 25, No. 2, 137–154, *à corps*
https://doi.org/10.1080/13534645.2019.1607232

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> *It should also be remembered that the parasite is by definition never simply external, never simply something that can be excluded from or kept outside of the body 'proper,' shut out from the 'familial' table or house. Parasitism takes place when the parasite […] comes to live off the life of the body in which it resides – and when, reciprocally, the host incorporates the parasite to an extent, willy-nilly offering it hospitality: providing it with a place.*
> Derrida, *Limited Inc.*[1]

> *Neither animal nor nonanimal, organic or inorganic, living or dead, this potential invader is like a computer virus. It is lodged in a processor of reading, writing, interpretation.*
> Derrida, *The Animal that Therefore I Am.*[2]

1. Introduction: On Originary Techno-Plasticity

In *On Touching*, Derrida commends philosopher Jean-Luc Nancy for 'taking into account [the] plasticity and technicity "at the heart" of the "body proper"'.[3] Specifying the meaning of this techno-plasticity, Derrida writes, the '[s]upplementarity of technical prosthetics *originarily* spaces out, defers, or expropriates all originary properness: there is no "the" sense of touch, there is no "originary" or essentially originary touching before it'.[4] What is 'proper' or 'original' to the body is not any set of properties or capacities – including sensorial or perceptual powers – but rather the 'plastic and substitutive structure of prosthetics', the very possibility of the body's 'technical' supplementation.[5]

Prosthetic supplementation re-organizes corporeal conditions. If perceptual powers, including haptic perception ('*the* sense of touch') are prosthetic effects, they cannot be proper, in the sense of original or essential, to the body. Rather, the concrete corporeal capacities of the body are acquisitions made possible by the ex-propriative activity of prosthesis. *Contra* Aristotle, there would be no proper and fixed object, no entelechy of the senses. Hapticity could come to express what, under present conditions, is expressed in auditory terms; or, the haptic field could be regulated and organized by that which is (presently) beyond the horizon of the human sensorium. If such opportunistic usurpations of prior corporeal organizations were the rule, thinking the nature of perception requires thinking the body's *originary* plasticity.

Despite announcing such a project, it is not clear that Derrida has laid the groundwork for this task. Derrida's readers will be familiar with 'original technicity' (along with 'supplementarity' and 'spacing'); far less obvious is the logical implication between his notion of technicity and a '*plastic* and substitutive structure'. Indeed, save for a handful of references in *On Touching*, explicit reference to 'plasticity' appears in only one other of Derrida's published works: the introduction to Catherine Malabou's *The Future of Hegel: Hegel and Plasticity*.[6]

The reference, in *On Touching*, to something like the body's originary techno-plasticity would probably be less surprising if the notion of originary technicity in Derrida's work applied, in the first instance, to corporeality. However, technicity (and its cognates) have most often appeared in linguistic and grammatological contexts.[7] What, then, should we make of Derrida's proposal in *On Touching*? Should we read it as a supplement to earlier, *grammatological* accounts of originary technicity – opening a new, more productive horizon for thinking corporeality than notions of *textuality*, *writing* and *trace*? Would this originary plasticity modify the meaning of technicity or, alternatively, have 'technicity' and 'supplementarity' referred to plasticity all along?

Malabou, whose work develops a robust concept of 'plasticity' at the 'dusk of [Derridean] writing', motivates her project in part by pointing out that – due to its grammatological fixation – deconstruction fails to think plasticity. Linguistic and semiotic schemas are inherently limited for thinking plasticity, materiality and corporeality more broadly.[8] These schemes are too formalistic, re-inscribing the traditional metaphysical distinction between form and matter. A materialism worthy of the name must think of morphogenetic processes as 'internal' to matter rather than as inscribed or impressed on the body. Yet, as we have seen, Derrida's identification of the 'supplementarity of technical prosthesis' with the body's indefinite ex-propriation, usurpation and *spacing* suggests that *originary* technicity implies the body's essential modifiability and transformability. Since writing (or more specifically, *archi-writing*) is the main figure through which Derrida thinks technicity, plasticity would not be foreign to the grammatological field. Indeed, *archi-writing* would be another name for originary techno-plasticity.

In what follows, I will argue that *archi-writing*, 'the most general concept of the *gramme*', is sufficient for thinking the body's originary techno-plasticity. If, for Derrida, writing serves as the image of the exemplary technical supplement, one that cannot, finally, be disentangled from that which it supplements, originary technicity has always implied the plasticity or modifiability of the 'original' or 'proper' body.

2. Originary Technicity and The Logic of the Supplement

Derrida specifies the meaning of 'originary technicity' and its cognates (supplementarity, prosthesis, generalized writing) in *Of Grammatology*. These terms – most notably *writing* – are distinguished from their everyday sense, taking on a specialized, technical meaning. For example, normally, prosthetic

supplements would refer to something added, something which more or less awkwardly, more or less inadequately come to take the place of an original, which has gone missing or no longer functions adequately. As with technical supplements more generally, prosthetic devices are usually thought to be genetically distinct and formally exterior to the body proper. For example, a notepad, used as mnemonic supplement, would be as essentially distinct and independent from 'interiorized' forms of human memory.

By contrast, what Derrida calls *originary* prosthesis or technicity implies a different sort of relation between 'origin' and 'supplement'. Karen Barad refers to this sort of relation as 'entanglement'.[9] 'To be entangled', she writes, 'is not simply to be intertwined with another, as in the joining of separate entities, but [for each term] to lack an independent, self-contained existence'.[10] 'Entanglement,' in other words, refers to a relation constitutive of its relata. An understanding of the body in terms of originary prosthesis or 'entanglement' would describe the body as continually re-constituted by the history of its incorporations.

Supplementarity as entanglement challenges the assumption that the body can be understood as originally prior to the 'supplementary' relations it enters into, foreclosing reference to a pre-technical or pre-prosthetic body.[11] This explains why, so often, Derrida's references to *bodies* are wrapped in scare quotes. This textual practice does not express any skepticism about our knowledge of bodies nor does it mark an anti-realist position with respect to their existence. Instead, scare quotes mark off the instability of the relata (bodies and prostheses) in the context of a relation of originary technicity. As their constitutive principle, supplementarity must be thought prior to any and all 'bodies'. Correlatively, as a generalized relation, supplementarity does not pertain exclusively to human or animal *bodies*. The 'bodies' constituted by supplementarity may be textual, digital or biological. Supplementarity may refer to processes that subtend or extend beyond the outline of the epidermis.

Famously, Derrida identifies 'supplementarity' (or entanglement) operating in both Rousseau and Saussure's accounts of language. For Rousseau, speech arises to supplement a more original, embodied language of gestures – which then come to serve as speech's adjuncts. Gesture is the body's original language, which speech (and subsequently writing) first supplement and then supplant. For Saussure, on the other hand, writing is essentially nothing but a technical supplement to original speech. Yet, he insists, writing is dangerous; if we begin by writing as we speak, we conclude by speaking as we write. Writing usurps speech for Saussure, even as, for Rousseau, speech usurps gesture. What interests Derrida is not which thinker gets the genesis of language right, but the movement of supplementation-reversal to which both theorists attest.

Both Saussure and Rousseau remark the possibility that the supplement may ex-propriate what it supplements, reversing the 'natural', 'original' order of

nature. Yet, both treat this possibility as accidental, revealing nothing *essential* about the 'natural' order in question. Derrida presses Saussure on this point: What makes it possible for phonetic writing to re-shape or re-write speech? If such a possibility were *essential* to the relation, as it seems to be, it must be accounted for.

For Saussure, spoken language is a treasure-house of [cultural] memory.[12] Phonetic writing's tendency to *re-write* traditional speech patterns marks the potential of a devastating erasure of the past.[13] However, he believes that the damaging effects of technical supplementation can be avoided by the vigilance of linguistic gatekeepers. Derrida argues that the *possibility* of usurpation Saussure diagnoses speaks against the preservation of an original spoken language. Moreover, this possibility reveals something *essential* about the relationship between speech and its technical supplement, writing: namely, their constitutive entanglement.

The entangled relation Derrida proposes contrasts with the way philosophers and linguistics have usually understood the relation between *phonetic* writing and speech: as a one-sided dependence. If phonetic writing were an image or representation of speech, speech would have no vital need for writing; its historical priority would be an index of its *a priori* ontological independence. Yet, it is easy enough to imagine a world in which we lose our knack for speaking but continue on with our writing. It is equally conceivable that 'phonetic' writing *could* have preceded speech in the evolution of human linguistic capacities. Derrida argues that these possibilities undermine assumptions that phonetic writing is essentially dependent upon and derivative of speech. Can writing really be essentially a representation of speech if it can radically take the place of speech, or, equally, if it could have originated speech? If we go wrong when we understand writing as derivative of speech, how ought we characterize their relation? It would seem that Derrida's thought experiments aim to establish the mutual interchangeability of writing and speech. But in this case, wouldn't their fungibility indicate ontological *independence* rather than constitutive entanglement?

Derrida insists otherwise. When we think of speech and writing as interchangeable sign systems, we fail to factor the essential possibility of expropriation of speech by writing (and vice versa). If phonetic writing can always come to de-form speech, if it can radically supplant and usurp its power – not accidentally but necessarily – then independence poorly characterizes their relation. Consequently, Derrida introduces '*archi-writing*', the most general concept of the *gramme*, to specify the sort of relation that includes expropriation as it essential possibility. The latter will specify supplementation as an indefinite movement of exteriorization and re-incorporation, which, each time, transforms its relata.

Technical supplementation assumes the radical plasticity of the terms or bodies it relates; or Derridean '*archi-writing*' names originary techno-plasticity.

This has been poorly understood in the literature. Instead, as we shall now see, Derrida's most influential interpreters have continued to think of *archi-writing* as pertaining to a notion of technicity in crucial respects opposed to plasticity.

3. Neo-Grammatological Splits

If Derrida insists on the logical implication of technicity and plasticity (as the very condition of the body 'proper'), it is noteworthy that two of Derrida's most important contemporary interlocutors, Catherine Malabou and Bernard Stiegler, have considered these terms as essentially opposed, though for different reasons.

Malabou sees her work on plasticity as re-writing (Derridean) *archi-writing*. Plasticity is the *heir* of the grammatological project, she writes, because *like* grammatology it aims to think corporeality and materiality in terms of '*différance*' and the '*trace*', that is to say, forms of non-presence. However, plasticity transcends the inherent limitations that grammatology faces.[14] Malabouian plasticity marks a decisive break with grammatology as a science of *writing* by declining to think the trace as *inscribed* or *graphic*. Graphism yields schemas too impliable for thinking the plasticity of the trace. For example, of neuronal traces, Malabou writes, 'plasticity *configures the traces, erases them in order to form them, without however rigidifying them*… [P]lasticity is the sublation [*relève*] of writing'. [15]

On Malabou's reading, grammatology is limited, on the one hand, by the model of inscription and, on the other, by models of code and program. Such schemas are insufficiently *materialist* – they require us to think of form as transcendent to matter – and *insufficiently* general – the notions of form implied are overly rigid for the phenomena they are asked to describe (e.g. neuronal plasticity). The model of writing is unable to adapt itself to new scientific models, particularly those in the neurosciences, which think material processes as self-organizing, auto-affecting and self-forming. Today, it is no longer writing, no longer the code or program, but models of plasticity, connectivity, networks, and 'graphs that are anything but inscribed' that allow us think through corporeality.[16]

There are some notable problems, however, with this proposed 'sublation' *qua* sublation. Though Malabou does not remark it, this sublation leaves behind (rather than preserving) the significance of 'writing' as originary technicity. Indeed, whereas Derridean *writing* sublates the distinction between the technical and the organic, Malabou's account brackets the question of technicity altogether in favor of attention to organic morphogenesis. As a result, Malabouian plasticity leaves intact the distinction between inorganic technicity and organic plasticity that Derridean writing was programmed to deconstruct. Moreover, if Malabou claims that (neurological) models of plasticity present fertile terrain for re-thinking the Derridean trace, liberating it from

the shackles of graphism, why would this not suggest the project of re-thinking (narrow, empirical) writing in non-graphic terms? Is it so obvious that (narrow) writing lacks plasticity? Even if it were true that writing has always been thought in terms of graphic inscription, this leaves ample room for the possibility that this is a false image of writing.

If, through the figure of organic plasticity, Malabou takes up one side of grammatology's projected account of techno-plasticity, Stiegler's account of technics takes up the other side, through the figure of the 'inorganic' organization of memory. Like Malabou, Stiegler argues that Derrida's notion of *archi-writing* is insufficiently materialist, not because too formalistic (or 'transcendental'), but because too tied to an immaterial account of consciousness (Husserlian, phenomenological).[17] The *gramme* must be specified in terms of a specific (historical) materialization of memory traces, an ontological break 'in the history of life' which Stiegler calls grammatization.[18]

Grammatization, Stiegler writes, is 'the process through which the flows and continuities that weave our existences are *discretized*: writing, as the discretization of the flow of speech, is a stage of grammatization'.[19] Stiegler's multivolume series *Technics and Time* tells the story of technics as this grammatization, the *exteriorization* of embodied mnesic traces and programmes. If for Stiegler, *hominization*, the becoming-human of the human, is explicable as *writing*, it is inasmuch as writing metonymically stands in for specific processes of grammatization constitutive of the human, of which the manual-visual articulation first described by French paleontologist Leroi-Gourhan is but one instance.[20]

Stiegler insists that technicity – as both the general field of grammatization and the specific stores of 'exteriorized' mnesic traces – is radically disjunct from forms of biological (genetic) and cognitive (epigenetic) memory. It forms a third kind of memory. Stiegler's insistence on thinking technicity as rupture amounts to a refusal of the 'expropriability' and modifiability of genetic and epigenetic programmes by each other and by (subsequent) technical programmes. As a matter of 'law', organic forms of memory are unresponsive *vis a vis* the latter. The 'law' of nature's inviolability marks Stiegler's refusal to countenance thinking technicity according to the logic of supplementarity (or entanglement). Processes of grammatization, following Stiegler's account, do not alter, transform or re-write that which they supplement (e.g. organic forms of memory).[21] Stieglerian technicity refuses to factor the plastic structure of prosthesis that Derrida insists is the mark of the technical supplement just as Malabouian plasticity refuses originary technicity.

The foregoing cannot count as an adequate critical treatment of either Malabou or Stiegler's neo-grammatological projects. However, its more modest aim was to suggest that in 'splitting' the grammatological along the lines of organic/plasticity and inorganic/technicity, we lose sight entirely of Derrida's projected account of an originary techno-plasticity that would

displace any appeal to corporeal propriety. Neither thinker, I suggest, takes up the grammatological challenge. Either technicity (and writing) will be thought narrowly as grammatization, excluding plasticity (Stiegler), or plasticity will be thought broadly, excluding technicity (Malabou).

4. Grammatology and *Archi-writing*

'the most general concept of the gramme'

In 1967, on *Of Grammatology's* opening pages, Derrida remarks a tendency not limited to theoretical discourses:

> [T]o say 'writing' … for all that gives rise to an inscription in general, whether it is literal or not and even if what it distributes in space is alien to the order of the voice: cinematography, choreography, of course, but also pictorial, musical, sculptural 'writing' […] to *describe not only the system of notation secondarily connected with these activities but the essence and the content of these activities themselves*.[22]

Derrida notes here that, in a variety of discursive contexts, people speak *as if* at the origin, there were writing. *As if* what Stiegler refers to as grammatization, the discretization and linearization of a flow of information, were always already at work in the 'essence and content' of first-order processes.

Included in this grammatological inflation was cybernetics,[23] the post-war science of information; the life sciences, especially genetics; and discourses associated with all manners of artistic and technical production. Just as the idea of a genetic *code* likens inter- and intra-cellular processes to information processing in computers, the expanding sense of the world as essentially a process or stream of information (ready for capture, manipulation and archivization) permitted thinking life, movement, thought, language in terms of 'codes', 'programs' or 'scripts'. But this metonymic inflation of writing in both lay and scientific discourses – already a *fait accompli* by the time of *Grammatology's* publication – does not amount to a philosophical justification. Indeed, as Malabou argues, we can read this inflation or 'generalization' of writing as a case of metaphor run amok. Is Malabou right, or does this inflation reflect a deeper insight into the nature of the activities and processes in question?

Derrida's articulation of the grammatological project aims to vindicate the latter view. The ontological pertinence of grammatology, and 'the most general concept of the gramme', would extend 'from "genetic inscription" to the "short programmatic sequences" regulating the behavior of the amoeba or the annelid up to passage beyond alphabetic writing'.[24] The justification of this extension of writing from second-order to first-order processes will be the distinctive task of the grammatologist.

Archi-writing, designating this original, constitutive form of writing, promises to re-tell not only the technical and evolutionary history of 'a certain homo sapiens' but the 'history of life *as a history of the gramme*'.[25] Rather than marking a break with the organic, as on Stiegler's account,[26] the history of gramme, of *grammatization*, implies the radical continuity between life and *techne*, a continuity in and across heterogeneous domains. For this reason, we can understand the history of the *gramme* and its development as the history of life, and the history of life as *différance*.[27] The form of life producing technical phonetic writing, 'grammatizing' the flow of speech, is itself always already an effect of *grammatization*, a movement without origin or end.

Archi-writing and the complementary notion of *originary grammatization* are, for the grammatologist, the condition for thinking the common origins of language and life. *Archi-writing* specifies what must be the case if our ways of talking about generalized writing are warranted, if, as the cyberneticists wagered, the history of life and the history of technical development can be told within a common frame. Such a history would permit us to think of breaks, distinctive levels, strata – in short, ontological differentiation – in terms of novel forms of grammatization within a continual development of writing 'as such'.[28]

Switching Codes

Derrida's projected grammatology insists on the need for a new schema for writing, designated as '*archi-writing*', that would both revise our conception of graphic writing and allow us to understand non-linguistic processes as forms of (a generalized) writing. To do the latter requires revising the former precisely because the inherited conception of graphic writing *resists* its grammatological expansion – and for the very reasons Malabou names. To get a sense for what this new schema must *do*, how it differs from *any* other available schemas of 'writing', we need to make explicit the *insufficiency* of available alternative models for generalized writing, in particular the cybernetic notions of code, program or message.

If the extension of *writing* beyond language – to include processes subtending and transcending the human – requires and assumes a suitably neutral, non-anthropocentric and non-anthropomorphic, concept of writing, in what sense are the cybernetic terms 'code' or 'program' not adequate to the task? Indeed, given the stated objectives of cybernetics – to be a generalized science of information and systems – wouldn't cybernetics offer itself up as grammatology by another name? [29] Grammatology would be a well-founded, critical cybernetics – giving the latter the right concepts for a unified theory of information and communication, whether these take place at the sub-cellular level or across fiber optic networks.

If traditional concepts of writing relying on the intuitive model of phonetic writing are too *phonocentric* (too tied to the voice or human speech), don't

the notions of 'message' and 'code', apparently neutral with respect to the mode and manner of expression, escape the problematic 'phonocentrism' Derrida diagnoses in philosophical and linguistic attempts to understand the nature of writing? Doesn't the ontological promiscuity of 'code' already take us beyond the limited horizon in which writing can appear only as a kind of technical supplement to spoken language?

The sense in which *archi-writing* differs from the formal and quantitative models of writing offered by cybernetics and linguists is crucial to grasping the specificity of Derrida's grammatological project. Yet, this difference has rarely been adequately clarified.[30] For Derrida, the cybernetic or information-theoretic concepts of code remain unscientific for the very same reasons these terms can come to appear as more scientific than the terms they displace. 'Code' and 'message' 'generalize' and formalize a *certain* un-criticized image of graphic, phonetic writing. This generalization abstracts from the model of graphic writing and permits the expansion of writing's ontological purchase. Had cyberneticists begun with a critique of accounts of graphic writing, their generalization of writing would be on more solid philosophical footing.

By focusing exclusively on certain structural features of *phonetic* writing and related systems of coding (e.g. Morse code), cybernetic and information-theoretic models of writing inherit the limits and metaphysical presuppositions of traditional (Western) conceptions of writing. Derrida points out that such a mistake with respect to the nature of writing would have been harder to make were the starting point non-phonetic systems of writing (e.g. 'ideographic').[31] In any case, departing from English phonetic writing permitted, Derrida notes, a purely quantitative and formal analysis of writing through a two-step abstraction. The first step isolates a graphic *form* from the *materiality* of its expression. The second step defines this form as essentially differential. 'The *graphie,* a possible unit of a system of writing' is a *purely* differential mark, one that has (linguistic) value only inasmuch as it is distinct from other terms.[32] This formal conception of a system of writing undergirds the sort of purely quantitative analysis proposed by Claude Shannon in his *Mathematical Theory of Communication*, where messages (no matter what kind) are modeled as transmissible bits that can be coded, received and de-coded.

This model of writing falsifies the relation between writing and speech, on the one hand, and written signifier (message) and signified (semantic element), on the other. It represents an *entangled* relation as a relation between a dependent written signifier or coded element and an independent term ('speech' or signified). Writing refers not only to the signifying face of language, but also to the signified element. Or, so Derrida argues, against Claude Shannon's insistence that, 'the semantic aspects of communication are irrelevant to the engineering aspects'.[33] Codes (as generalized writing) can be understood in purely quantitative, information-theoretic terms (Shannon) – as *transmissible* bit-messages over a channel – precisely because the question of what the message is *about,* what it en-codes and preserves in

the transmission is excluded, understood as not taking the same form as the signified message (and, hence, not part of the 'engineering problem'). This idea of code (and cryptography) seems to imply non-grammatized, or 'extra-textual' semantic elements. These 'transcendental signifieds' are not transmitted or transmissible; they are present prior to transmission and restored at the message's receiving end. The pure quantifiability of the coded message insures the possibility of error-free reconstitution of the 'original' meaning or text.

Logically, Shannon's notion of code entails the possibility of its reduction, a restitution of the heterogeneous elements for which the message codes. But the possibility of successful restitution seems to rest on a third mediating element, a 'key' or 'rosetta stone' specifying the links connecting the signifying code to its (transcendental) signified. In the intuitively familiar case of phonetic writing, for example, we might assume that the proficient reader possesses such an interiorized key, translating the arbitrary written marks into speech, which organic memory then associates with distinctive cognitive meanings.

The main problem arising with this picture of language, according to Derrida, is that we cannot consistently think that which grammatized texts supplement ('original', non-written communication, thoughts, meanings) without also thinking the latter as *always already* 'written', in the relevant sense. For written texts to function in the way we assume they do – reproducing and disseminating meaningful messages – requires that that these messages always already have all the formal features of a text.[34] We cannot bracket semantics as outside-the-code (or text), since the latter too must take the form of a transmissible message.

On pain of infinite regress, at some level of analysis, the signifier and signified must be indissociable or entangled. Indeed, this is just what Saussure insisted upon in his path-breaking work on the nature of the linguistic sign, namely, the *indissociability* of the two faces of the sign. Yet, as Derrida notes in *Positions*, the function of language nonetheless seems to depend upon 'practicing the difference between the signifier and the signified'.[35] If the latter cannot be *absolutely* distinguished or disentangled, the grammatologist will need a different model of writing than the one inherited from modern linguistics or cybernetics.

Iterability, Writing and Parasitic Forms

In the absence of 'transcendental signifieds', how to think the relation between signifier and signified? What would it mean to think of this relation in terms of entanglement, or originary supplementarity? Derrida's clearest response to this question can be found in the essay 'Signature, Event, Context'. There, Derrida returns to Shannon's model of transmission, shared by theorists who model language in terms of a communicative circuit. This

model assumes that wherever we locate the written/coded message, be it in the head of the speaker or the receiver or somewhere *en route*, the message remains, in principle, 'structurally readable'. Whatever medium we imagine the message passing through on the way to its destination and eventual decoding, the message must be *readable* at any point of its itinerary. Equally, if a message is readable upon arrival, when in the presence of its intended recipient, it must also remain readable in the case of the indefinite suspension of its arrival. The sent message remains readable even if the time of its passage coincides with the sudden and apparently irrevocable disappearance of all possible readers. As Derrida writes:

> In order for my 'written communication' to retain its function as writing it must remain *repeatable* – *iterable* – despite the *absolute* disappearance of any receiver, determined in general. […] My communication must be readable – *iterable* – in the absolute absence of the receiver or of any empirically determinable collectivity of receivers. […] A writing not *structurally readable* – iterable – beyond the death of the addressee would not be writing.[36]

In this often-cited but chronically misunderstood thought experiment, Derrida asks us to consider what remains of any text's meaning once we imagine the death not of this or that addressee, but the death of *any* living author and *any* living receiver. For our classic, linguistic and information-theoretic accounts of writing, the answer must be: 'Nothing'. For the latter, meaning is not on the side of the text; the conditions of a text's readability are on the side of the author or reader. Indeed, such radical absence would preclude the possibility of readability, which requires the (possible) presence of the reader's living memory. Indeed, as Peter Bornedal argues, rather than testifying to the possibility of texts' functioning under conditions of radical absence, Derrida's thought experiment *testifies* to the requirement of a reader's radical *presence*.[37]

When we assume that written texts are technical supplements to an original (form of) living presence that animates them, texts will require some – any – possible readers (together with whatever empirical conditions or 'keys' required to de-code them). If a text's 'inner' meaning or content is, as Shannon assumed, radically exterior to the text, it follows directly that the 'life' of a text is radically dependent upon the life of its possible readers. *When* the presence of linguistic agents is the necessary condition for readability, we have to assume, under the conditions Derrida's thought experiment specifies, that texts are no longer readable. Yet, Derrida argues that the text remains 'structurally readable' under conditions of radical absence. In what sense, then, does a text with an indefinitely suspended readership remain readable? Similarly, in what sense does a code remain decipherable with no possible de-coders on the horizon? To what sort of possibility does 'structural readability' refer?

Derrida's neologism, *iterability,* clarifies the meaning of 'structural readability'. Iterability refers to the particular nature of repetition constitutive of written texts:

> *Iterability* – (*iter*, meaning 'again', probably comes from *itara*, 'other' in sanskrit and everything that follows can be read as the working out of the logic that ties repetition to alterity) structures the mark of writing itself, no matter what particular type of writing is involved.[38]

'Iterability' speaks of a *structuring* repetition, a repetition constitutive of the text. Texts are not *potentially* repeatable; texts are (always already) repetitions. This is not the (uninteresting) observation that any text is composed of (linguistic) elements that pre-exist its composition; it is the surprising claim that texts are informed by heterogeneous texts. Like a code embedded with a viral code, texts are, Derrida argues, parasitic structures. Hence, rather than testifying to the possibility of an irrevocable loss of meaning, *texts* name the structural conditions for the *survival* of the heterogeneous signified element or 'alterity' in and through the repetition proper to them. 'Iterability' specifies the sort of structure that includes its other – a structure 'foreign to the order of presence', in which a repeatable mark (a signifier) *repeats* a heterogeneous difference (its signified).

We miss what is formally distinctive about writing when we attend only to the features that provide for its quantification, in the same way that we miss what is essential about writing when we attend only to its aesthetic features (viz., calligraphy). To correct our models, Derrida offers the parasite as an intuitive aid. 'Iterability alters, contaminating parasitically what it identifies and enables to repeat "itself"'.[39] The tortured grammar of the last sentence is necessitated by the phenomenon in question. Iterability tells the story of the constitution of the written mark. Its identity (form) is always already *in*-formed ('contaminated') by a heterogeneous form. Hence, the repeatable mark always already repeats what in-forms it. The relation between a (written) text and its meaning, between a signifier and its signified, is *like* the relation between a parasite and its host, where the parasite exists in and through the body of its host. The 'identity' (of a text or written mark) is an 'entangled' one: its form (or topographic features) reveals the structure in-forming it. And, as the scientific discourses of parasitology and immunology attest, the entangled, symbiotic relationships between parasites and hosts – the forms of 'hospitality' these imply – do not follow metaphysically familiar relations between parts and whole.

Following Derrida's image of parasitism, it seems that the form of the signifying strata of language, composed of its patterns of differential elements, would be explicable (at least partially) in terms of the 'parasitic' elements it expresses. The signified of any text is not transcendent, but *in-forms* it, an infra-form 'haunting' a manifest one. Indeed, this entangled relation between signifying and signified elements is exactly how Saussure characterized the relationship between the 'parts' of the linguistic sign.

Indissociable, constitutive, Saussure said of the two faces of the sign, not one without the other.[40] Differences constitute themselves in and through the retention of heterogeneous differences. Or, as Derrida writes, concluding his reading of Saussure in *Of Grammatology*:

> Differences appear among the elements or rather produce them, make them emerge as such and constitute the *texts,* the chains, and the systems of traces. These chains and systems cannot be outlined except in the fabric of the trace or imprint.[41]

As a system of differences, texts only appear 'as such' by altering, modifying or in-forming[42] a heterogeneous pattern of differences. Reproducing a text or code, 'virally' transmits or disseminates another. Hence, texts live on, or survive, only in the 'flesh' of other texts and if this is right, this means that texts are necessarily composed of essentially modifiable elements, which can be programmed, encoded, or usurped to space/host other texts. The *iterability* of texts adequately specifies what Derrida means by originary technicity and plasticity.

5. Conclusion: The techno-plasticity of touch

I have argued that the parasitic structure of writing reveals or specifies a schema for thinking original techno-plasticity. Whereas the schema of parasitic writing specifies the (in-formed) form of textuality, techno-plasticity accounts for the formation (and de-formation) of *textual* forms or bodies. To think of corporeality *textually* is to think bodily processes in terms of this schema of parasitism: organic life as parasitic life. Of course, the pertinence and productivity of this grammatological schema must still be tested. Do grammatological descriptions provide us with insight into corporeal phenomena? Returning to the point of departure, Derrida's discussion of haptic perception in *On Touching*, will give us a sense for the productivity of such an account.

The Im/propriety of Touch

Applied to the field of perception, grammatological descriptions promise to reveal the techno-plasticity of perceptual systems. When we describe hapticity *grammatologically*, as an instance of techno-plasticity, what is disclosed about this sense modality and sense modalities more generally?

Originary technicity permits us to formulate the project of a genealogy of touch.[43] We ask how *the* constituted sense of touch may reveal the history of its constitution as the usurpation and expropriation of a regulated organization older than itself. If our sense of touch is the effect of a mastery, usurpation or expropriation, we cannot say that we have fingers so that we can touch – so that we can 'feelingly' engage with the textured surfaces of things. Patterns of differences at our fingertips discern a pattern of differences at the

palpated surface. For example, when I brush my fingers back and forth over a certain fabric, I feel a certain pattern of smoothness/roughness. This play of differences expresses and discerns, for example, the distinctive, *one-sided* pile of velvet. What asserts itself, makes a place for itself, in touch is not essentially or properly haptic.

Consider that I also *see* this roughness and smoothness.[44] Of course, one may suggest, as Merleau-Ponty does, that in this case what I see when I 'see' texture is effectively an anticipation of what it would be like to touch the surface. Thus, vision includes haptic qualities amodally or improperly. There is no doubt some truth in this. But the haptic difference of roughness and smoothness anticipated in vision appears as the characteristic sheen or visual patterning of velvet material.

The very possibility of such amodal perception ('seeing' texture), Derrida insists, requires thinking the self-differentiated (viz. parasitic) or 'spaced' structure of touch. In other words, what is supposed to be present, primarily and properly in touch is always already 'amodally' present there. Touch is always alienated from what it touches, and is characterized by this dehiscence. As Derrida writes: '[h]ow could the visual secondarily come to "coincide", attempt to "coincide", with the tactile if the tactile were not already different from itself, motioning toward surrogacy'.[45]

A surrogate stands in for or substitutes for the original. Perceptions supplement and surrogate one another such that the rule of sense is impropriety/amodality.

Habitual linguistic descriptions obscure this 'amodality' of perception. In our everyday way of speaking we say 'I touch something smooth' but it would arguably be truer to the phenomenology of haptic experience to say that *through* the pattern of differences (sensations) produced-perceived at the fingertips, a heterogeneous set of differences 'appear' or are 'expressed' *haptically*. Indeed, we can get a model for the textuality of touch by considering the way haptic signifiers 'appear' for the Braille reader. Haptic differences disclose to the reader a parasitic text. Braille, as touch's technical prosthesis, present a model of the 'original' sense of touch as always already structured by a hetero-modal text. In the case of Braille reading, haptic differences become-unmotivated or arbitrary in order to take on *linguistic* value. This technical 'liberation' of touch (for Braille) is an instance of the sort of usurpation-supplementation that a genealogy of touch makes visible.

Descriptions of learning to read Braille exemplify what Derrida calls, in *On Touching*, the 'plastic and substitutive structure of prosthetics'. According to researchers, reading Braille texts entails something like the becoming-visual of touch.[46] A protocol for a sighted person to learn to read Braille is a prescribed period of blindfolding. Researchers argue putting sight out of play 'liberates' the 'visual' cortex from its habitual functions, and permits the

grammatization, linearization and discretization of haptic marks. If it is apt to say that touch, in spatializing the Braille text, *becomes* (more like) vision, that in reading, the fingers *see*, we also have warrant to say that there is no proper sense of vision, nor a properly *visual* cortex. There are only particular organizations of technical prostheses, modifying and transforming themselves in their supplementation.

Grammatological descriptions such as these are speculative, specifying what the world would be like if it *were* textual, if writing *were* originary. These descriptions must be judged by their plausibility, but also for the insights they may offer into the phenomena they describe. Do grammatological descriptions allow us to bring into view the entanglement of the senses, the production (and destruction) of the distinctive human corporeal organization? Do they disclose the way that technical devices undo and remake the distinction between the organic and the inorganic, nature and techne? If so, grammatology would not name the exhaustion of philosophy's long linguistic turn but the still untapped possibilities of thinking the techno-plasticity of language and life.

Notes

[1] Derrida, "Signature, Event," 90.

[2] Derrida, "Signature, Event," 22.

[3] Derrida, *On Touching*, 221. The scare quotes around "body proper" do double duty. First, they mark a history of translation of the phenomenological notion of the lived body, from the German *Leib* (in Husserl) to Derrida's French translates as *corps propre* and finally into the English translation as 'body proper'. See Derrida, *On Touching*, 350 (note 14). Secondly, the scare quotes refer to the way that the notions of technicity and plasticity disturb the propriety of the body. This move disturbs, also, the distinction between a living (phenomenological) body and the physicalist notion of *Korpor*, as physical or organic body. As such, the 'body proper' refers, both in *On Touching* and in this text, which follows Derrida's usage, to both 'identitarian' conceptions of the physical body and the phenomenological correlate of embodied experience.

[4] Derrida, *On Touching*, 223.

[5] Ibid.

[6] see Malabou, *The Future of Hegel*, xiv. Derrida supervised Malabou's *agrégation* and *doctorate* obtained at *École des hautes études en sciences sociales* (EHESS). This dissertation became the book, *L'Avenir de Hegel: Plasticité, Temporalité, Dialectique*. Despite his familiarity with her work, and his insistence on its originality and pertinence of her work for thinking corporeality ('*The future of Hegel* opens precisely the way to a thought of the corporeal') Derrida, without further explication, singles out Nancy for his exposition of plasticity, citing Malabou only once in an endnote. See Derrida, *On Touching*, 342.

[7] For example, in *Monolingualism of the Other*, original prosthesis refers to the absence of an original and self-transparent 'mother tongue' in which the subject (and her lived experience) would be 'at home'. The language in which we become aware of ourselves and our world, Derrida argues, is always grafted on to our experience, and remains in some sense foreign. This is not the contingent experience of the refugee or of émigrés, but the necessary consequence of having language.

[8] See Malabou, *Plasticity*, and more recently Malabou, "Whither Materialism", 47–60.

[9] The notion of an entangled relation is quite broad and therefore will not, I think, sufficiently specify Derrida's notion of supplementarity. An entangled relation may be symmetrical or asymmetrical. Cybernetic 'feedback' relations seems to be a version of entanglement. Derrida evokes the specter of violent overthrow (usurpation) and, as we will see *parasitism*. In other words, entanglements may take many forms, parasitic symbiosis just one among them.

[10] Barad, *Meeting the Universe Halfway*, ix.

[11] As Robert Bernasconi glosses, 'the supplement is an addition from the outside, but it can also be understood as supplying what is [essentially] missing and in this way is already inscribed within that to which it is added'. Bernasconi, *Derrida*, 20.

[12] In "Scribble", Derrida notes that Warburton espouses the opposite view; 'writing' and not speech is the 'treasure-house' of cultural memory. Both Saussure and Warburton emphasize the mnemonic power of writing (while recognizing the risks associated with 'usurpation'). They diverge in their opinion about how best to safe-guard the treasure. Derrida's interest is to consider precisely the necessity, which neither factor, that links retention to modification, mnemonic form to plasticity. See Derrida, "Scribble," 117–147.

[13] 'By imposing itself upon the masses, spelling influences and modifies language. This happens only in highly literate languages where written texts play an important role. Then visual images lead to wrong pronunciations; such mistakes are really pathological.' Saussure, *Course*, 30–31.

[14] Malabou, "The End of Writing," 431–441.

[15] Malabou, *Plasticity at Dusk*, 61.

[16] Malabou, "The End of Writing," 440.

[17] See Stiegler, *Technics and Time*, 137–141.

[18] See Stiegler, *For a New Critique,* 31–32.

[19] Ibid.

[20] See Derrida, *Of Grammatology*, 84–86.

[21] For Stiegler's insistence on technicity as rupture see Roberts, "Stiegler reading Derrida."

[22] Derrida, *Of Grammatology*, 9. Emphasis mine.

[23] Cybernetics promised to enfold the biological and the technical into a general science of the circulation and exchange of information, seeking in the process, as Derrida wrote, to 'oust' older, metaphysical oppositions (*e.g.* biological life/machine). As Derrida wrote, '*whether it has essential limits or not*, the entire field covered by the cybernetic program will be the field of writing' (Derrida, *Of Grammatology*, 9 [*emphasis mine*]).

[24] Derrida, *Of Grammatology*, 84.

[25] Ibid.

[26] See Stiegler, "Quand faire c'est dire," 271–296. Here Stiegler insists that bio-technologies entail a kind of violation of the 'law of life' where the latter's jurisdiction marks an ontological break with what supersedes it – the technical organization of life.

[27] Derrida, *Of Grammatology*, 84.

[28] According to Derrida, the specificity of narrow, graphic writing is that it allows the gramme to 'appear as such', where the 'as such' refers to a distinctively human, phenomenological perspective, but the gramme that appears for us as an object – from the silent testament of hieroglyphics to the digital text – was always already at work prior to its externalization.

[29] For an excellent account of the fascinating relations between post-war 'French Theory' and Cybernetics see Geoghegan, "From Information Theory to French Theory," 96–126.

[30] One of the reasons for this relative neglect is that Derrida's critique of Shannon (and cybernetics more generally) is condensed to several lines in *Of Grammatology*, whereas his treatment of structural linguistics is much more expansive. As Lydia Liu points out in her indispensable analysis, Derrida's critique of formalistic approaches in structural linguistic (which would include Shannon's information-theoretic approach) can be found in the chapter entitled "Grammatology and Linguistics". See Liu "Writing," 310–319.

[31] Derrida, *Of Grammatology*, 87–90.

[32] Ibid., 52.

[33] Shannon, "Recent Contributions," 8.

[34] Derrida most explicitly argues this view, about which he is absolutely consistent across his oeuvre, in *Limited Inc.*, his reply to Searle.

[35] Derrida, *Positions*, 20.

[36] Derrida, "Signature, Event," 8. Emphasis mine. The English translations here vary between 'legible' and 'readable'. Derrida uses the (French) term *lisible*, which is standardly translated as readable. '*Une écriture qui ne serait pas structurellement lisible – itérable – par-delà la mort du destinataire ne serait pas une écriture.*' The claim that a text remains readable outside the horizon of all readers is, it seems to me, a stronger claim than the one that a text remains legible, and, I argue, closer to Derrida's intention.

[37] Bornedal, *Speech and System*, 201–205.

[38] Derrida, "Signature, Event," 8.

[39] Ibid., 62.

[40] Derrida, *Of Grammatology*, 11.

[41] Ibid., 65.

[42] I reserve the neo-logistic 'in-forming' to characterize this parasitic relationship or schema, while retaining its resonance with our everyday notion of information.

[43] Derrida explicitly formulates the question of plasticity in genealogical terms, as the history of the present (and the history of the present's history) in his prefatory remarks to Malabou's *The Future of Hegel*. See Malabou, *The Future of Hegel*, xx.

[44] Derrida rejects the idea that vision presents tactile sensations amodally, as Alva Noe has suggested, following Merleau-Ponty (see Noe, *Action in Perception*). On the latter view, because the eyes 'know' what it is like to touch the object that is made visible, this virtual contact is added to visual perception.

[45] Derrida, *On Touching*, 350.

[46] See Ahmedi, "The Occipital Cortex"; Hamilton, "Cortical Plasticity" and Sodato, "How the Blind 'See' Braille".

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