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Inscription and 'Anscription': Surface and System in Cybernetics, Deconstruction, and Don DeLillo

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Abstract: This essay proposes the concept of 'anscription', and employs it to re-think some of the typical valences of inscription in media theory. The word is derived from the German *anschreiben*, which can simply mean, 'to write up', but also refers to the specific act, and the set of social relations that come into place, when one writes something up on a blackboard. Not quite encompassed by inscription, it offers an essential counterpart to the term for media-oriented thinkers. The essay draws out this corresponding function through readings of three imagined (but not-quite-imaginary) media, across which emerges a dialectic in the cultural imaginary of inscription. The first comes from the mathematician Norbert Wiener's description of a mechanism that would translate written text into tactile impressions; the second, from Jacques Derrida's historical framing of the project of deconstruction in relation to writing systems; and the third, from a thirty-two-page description of an American football game in Don DeLillo's 1972 novel, *End Zone*. Each will offer a different exemplification of the function termed 'anscription'. Just as significantly, each example presents this function in relation to the technical possibilities of media and articulates it through a theory of the body that is entangled with writing.

Keywords: Inscription; media; cybernetics; deconstruction; Wiener; Derrida; DeLillo

1. Introduction

If we take the metaphor seriously, then performing an 'anatomy of inscription' might involve dissecting its practices into the particulate forms, the atomy, which make up the function of inscribing—and scribing them, in turn, onto some media surface. The anatomy of concepts in general (and no less that of inscription in particular) would therefore need to draw out the tensions implicated by its own metaphors of scriptural bodies and bodily scripts. Not only does anatomy need to be written up to be legible, but it must have been scribed from the body, across media, and resolved into a system of notation. The anatomising of distinctive practices, in other words, would present a set of relations among surface, tool, and symbol concomitant to that which it describes. This essay aims to draw out one such reflexive function and the productive tensions it holds for considering the cultural imaginary of inscription. To do so, I identify a dialectic in that imaginary, within which inscription contrasts with the curious function of semi-permanent marks.

My starting point for this dialectic lies in the difficulties of translating inscription itself across medial boundaries. It has, for a long time, been unclear to media historians where the scribing practices called 'writing' and their more or less ethereal cousins may be arranged within the epistemological grid of media technology. For Friedrich Kittler (1999), the inscribing of the sonic trace into wax cylinders and later ceramic or rubber records secured the real, if never quite encompassing it, by directly inscribing its trace into a new material. But the impressions of typewriter hammers on paper could not be accorded the same status, since their own traces of the real had been translated through the prior medium of the alphabetic script before they could be scribed into the secondary medium of writing. Somewhere between the two, the cinema captured those semi-traces of the real that could only live on

in the imaginary. Reading this imaginary back against the grain of film theory, Thomas Elsaesser (2009) has located this curious in-between space in Freud's own metaphor of inscriptive practices as the basis for memory and perception. In his 'Note on the Mystic Writing-Pad', the father of psychoanalysis revised his understanding of memory functions into a system of impression-making within which the unconscious was always preceded by the scribing of traces across the medium of perception. The act of 'scratching' on the pad is not 'effected directly', Freud (1961, p. 229) wrote, but 'through the medium of the covering sheet'. Reality, it turned out, was not transcribed into the unconscious, nor quite inscribed, but mediated by a function analogous to the medial function of this 'transparent sheet'. Memory emerged, therefore, as that which scribes itself within the very tension between the limited unconscious and the infinite real. The cultural imaginary of inscriptive media continues to resonate with this tension, which transmits the act of conversion itself across media, placing inscription at the ambiguous finale of a series of cinematic captures and cuts.

Revisiting Freud's example thus places pressure not only on the medium of mnemonic inscriptions, but also on those of the writing that externalises them. He is careful to explain that, in this case, 'the writing [*Schreiben*] does not depend on material being deposited on the receptive surface', and thus, scratching the surface is enough to make 'depressions upon which constitute the "writing" [*Schrift*]' (1961, p. 229). The change from *Schreiben* to *Schrift* to name this writing indicates that the former should suggest the register of communication media, while those final depressions that constitute its medial form must amount to the storage-system of a script. In this sense, the status of 'writing' within Freud's analogy is held in its own tension between the transference that takes place in communication (as in the case of writing in ink) and those deeper inscriptions whose medial form holds meaning in place (as in stone carvings). Memory is neither penmanship nor chiselling; it alternates, becoming deeper than the former, but also lighter than the latter. At the essay's conclusion, Freud scales up this comparison to the entire perceptual system. Perception, it seems, also articulates this inscriptive tension: it operates in a 'discontinuous' fashion, caused by its 'periodic non-excitability', which Freud speculates may lie at 'the origin of the concept of time' (p. 231).

It would seem reasonable to conclude, therefore, that perception in Freud's model is *digital*, or at least that it contains a function approximating that which we now label digital—both insofar as it is 'sampled' from the world in a general sense, and insofar as its act of mediation specifically reduces the real into a form that can be stored, processed, and reproduced. But we should be cautious about reading recursively back against the grain of media history. Elsaesser (2009, p. 101), for example, translates Freud's apprehension of discrete perception into a kind of prehension of the cybernetic system: 'Consciousness (the perceptual system) should be imagined [in Freud's theory] as a feedback system or a dynamic circuit, and therefore must not retain any data, otherwise it could not respond to the environment and be self-regulating'. Yet, this problem of storage and self-reference is present in part because Freud drew inconsistently on metaphors from contemporaneous media technologies, never quite instructing the reader on how they might go about re-reading psychoanalysis as a theory of media technology as such. As Jacques Derrida (2001, p. 250) put it, Freud does not use metaphors 'to make of the known an allusion to the unknown', but 'through the insistence of his metaphoric investment he makes what we believe we know under the name of writing enigmatic'. Thus, we should ask not 'if a writing apparatus ... is a good metaphor for representing the working of the psyche', but instead 'what relationship [must exist] between psyche, writing, and spacing for such a metaphoric transition to be possible ... within the history of psyche, text, and technology' (p. 250).

Translating Freud's inscriptions into a cybernetic vocabulary suggests an untimely media theory that articulates this relationship as a reduction of all media to the one medium that transfers information. Elsaesser (2009, p. 103) concludes that perception and memory here involve 'a general mode of information transmission and transcoding, of which "media/memory" in its widest sense (including "history" and "cultural memory", as well as machine-memory) is the special human form, but which at the limit encompasses the transmission of all information, including biological information (and which thus allows for non-human forms of memory)'. But what are the contemporary implications of putting Freud's

inscriptive technologies in an informatic register? In the present media context, drawing history, cultural memory, machine memory, information, and biology into equivalence represents a freighted discursive turn. I suspect we need to account for more volatile negotiations between the location of writing and its relocation into digital media technologies than this universal equivalence would allow. If the writing-pad is indeed an information machine, we are also presented with the pressing question of what cultural fantasies reside not just in the transcription of Freud the analyst into Freud the ‘media theorist’, but also in the inscription of the contemporary digital imaginary into those descriptions of media history that employ its vocabulary.

Perhaps a starting point for this more capacious theory of inscription might lie in the difficulty of rendering *Schreiben* and *Schrift* in English, which is missing a term not circumscribed by the dimensions of writing or the finiteness of inscription. Indeed, media theorists have long grown accustomed to a certain level of hand-wringing about this translation problem, as is felt particularly keenly in rendering Kittler (1990) use of *Aufschreibesysteme* in English (see Connor 2015). The point where this problem intersects the terms of inscription and of writing is worth some specific attention. It brings into unique focus the epistemology of mark-making that lies embedded in media history, and the gaps in this epistemology that remain to be filled. In the context of this special issue, this translation problem also opens a few pathways into the anatomising of inscription, by offering images of what more lightly made marks might be.

An example from colloquial usage will be my starting point: *anschreiben*, ‘to write up’, ‘chalk up’, or ‘write to’. The distinction from the downwards direction given by *auf*- (as in *Aufschreibesystem*) to the upwards direction given by *an*- is crucial. A specific example would be the act one performs, and the set of social relations that come into place, when writing something up on a blackboard. Not quite encompassed by inscription, it offers an essential compliment to the term for media-oriented thinkers. First, the act assumes an audience, and so comes with an assumed relation between authority and listeners, teacher and students—between the performance of knowledge and its reception. Secondly, it refers not quite to the inscribing of marks into a surface, but to the scribing of marks across that surface. Chalk never penetrates nor incises the blackboard, and it can be wiped away; its effect, by contrast to inscriptions in stone, is exterior and impermanent. But it is not wholly transitory either. These are not quite transcriptions, since they do not transfer across media; they remain media-specific, while gesturing to a more general method of making semi-permanent marks.

The curious position of such marks, and their relation to inscription within systems of cultural meaning-making, will be the focus of this essay. I propose an English coinage from *anschreiben* that will designate a corresponding, yet distinct, meaning to the typical associations that inscription holds. The term *anscription* will designate this quality of writing up, rather than writing down, and of laying marks across rather than into the surface of a medium. Observing this shifting clarifies a certain media-blindness that assumes that inscription proceeds, in a unitary fashion, from tool into surface-mark. I will draw out a set of media-specific occurrences, each located in the description of an imagined (but not-quite-imaginary) medium, across which emerges a dialectic in the cultural imaginary of inscription. The first comes from the mathematician Norbert Wiener’s description of a mechanism that would translate written text into tactile impressions; the second, from Jacques Derrida’s historical framing of the project of deconstruction in relation to writing systems; and the third, from a thirty-two-page description of an American football game in Don DeLillo’s 1972 novel, *End Zone*. Each example offers a different iteration of the function I am calling *anscription*. Just as significantly, each presents this function in relation to the technical possibilities of media, and articulates it through a theory of the body that is entangled with writing. In this sense, *anscription* will shift across three quite different iterations, but its central meaning will denote the imaginative properties of transforming meaning-making across surfaces while remaining media-specific. *Anscription* thus describes the extent to which writing expands beyond the historical contours of inscription, beginning to describe a practice specific to digital media, and one which activates the fantasy that all bodies may be equally written across informational systems of meaning-making.

2. A Gestalt Machine

In Norbert Wiener's 1948 book, *Cybernetics, or Control and Communication in the Animal and the Machine*, which introduced the burgeoning field of cybernetic inquiry, he attempted to tackle the problem of 'the perception of *Gestalt*, or of the perceptual formation of universals' (Wiener 1985, p. 18). This problem was posed as: 'What is the mechanism by which we recognize a square as a square, irrespective of its position, its size, and its orientation?' (p. 18). The solution, Wiener claimed, might lie in considering hypothetical machines that would operate as prostheses for the senses. By simulating sensory perception, their own internal workings would, in turn, reveal the actual relations between sensory organs and the brain.

Towards the end of the chapter 'Gestalt and Universals', Wiener described a device that would supplement the perception of the blind by translating visual data into the other senses. He claimed that the neurophysiologist and fellow cybernetician Warren McCulloch had declared that, in this act of translation, the machine would in fact emulate the processes which are 'actually used in the brain in the detection of visual *Gestalt*' (p. 141). Its first component was a 'group scanning' mechanism (p. 137)—for which Wiener suggested the line-by-line procedure of a television's raster scan. The technician would present this scanner with a page of typed text. As the 'scanning apparatus passes over . . . the shapes of the individual letters', they would be recognised by 'several photoelectric cells placed in a vertical sequence, each attached to a sound-making apparatus of a different pitch' (p. 139). In essence, a series of musical notes would be triggered when the scanner passed over the black ink of the letter rather than the white background of the page. To standardise these marks into recognisably uniform notes, Wiener divided each typed letter into its combination of 'upper', 'middle', and 'lower' notes (p. 139), producing 'an auditory code' to be played for the 'reader' which, he believed, would 'not be more difficult than to read Braille, for instance' (p. 140)—given enough interpretative practice.

The continued use of the word, *read*, and the obvious analogy to braille indicates that the machine was intended as a specific replacement for the visual sense and not a general conversion of text into sound. This hypothetical machine can thus be understood as a three-stage simulation of human perception. First, a written text is scanned for pattern, simulating visual perception. Secondly, that pattern is rendered as a simple code, simulating the translation of pattern into legible meaning. Finally, the code is played as a series of signals recognisable to a different sense organ, simulating cognitive processing. In automating these processes in an external technical function, however, Wiener had assumed that, at each stage, the mind functions only according to the translation between various neurolinguistic codes. All cognitive processing, here, is understood as pattern recognition. Yet, he believed that this imaginary machine, if it worked, would be representative of the relationship between sensory perception and language recognition as such, since it would be creating information the brain could decode as a sort of language. This inversion was based on the assumption that simulating the ability to decode any meaning from sense experience indicates that meaning is defined by coding as such. Indeed, Wiener also believed that the hypothetical machine was, in essence, a digital computer—one which pre-empted today's programme-running computers with their supplementary external scanners and audio speakers. These two logical missteps prompted his conclusion that the human sensory system, which he already saw as a 'telegraph-type repeater' system of relays (p. 136), was connected to cognition by a process comparable to that of a computational network. Consequently, the secret of *Gestalt*—of recognising a square 'irrespective of its position, its size, and its orientation' (p. 18)—is that all perception and cognition reduces the world into a series of binary digits that can be processed as information because their position, size, and orientation are irrelevant to their discretisation into a uniform code. 'In short', he summarised, 'the group-scanning assembly is well adapted to form the sort of permanent subassembly of the brain corresponding to the adders or multipliers of the numerical computing machine' (p. 141).

For my purposes here, it is important not to get side-tracked with the metaphor of cognition as computing (and vice versa), but to refocus on the anatomical properties of Wiener's machine and the cultural excitement these features produced. The device was only one of many Wiener imagined between 1946 and 1952, and it does not seem that he ever tried to build it as such. His MIT lab did,

however, prototype a ‘hearing glove’, which would convert sound to touch in a technically similar, if logically inverted, process. As Ronald R. Kline (2015, pp. 74–76) has shown, experiments with the glove were unsuccessful, and, in *Cybernetics* and again in *The Human Use of Human Beings* (1950), Wiener had vastly overstated MIT’s progress in building prostheses. This exaggeration had sometimes tragic results. Newspapers reported the invention in still more embellished terms, popularising the notion that Wiener was close to building machines to reproduce sight and sound completely through tactile sensations. His correspondence from this period contains hopeful letters from the parents of blind and deaf children, and, on 30 December 1949, Helen Keller wrote to Wiener through the mathematician Thornton C. Fry, expressing her ‘great interest in your work on cybernetics’, and asking if she might ‘be able to try out the apparatus’ for ‘your tactual method of sensing sound’ (Fry 1949).

Wiener’s imaginary machines and the cultural imaginary that enfolded them present us with one version of *anscription*. In this sense, anscription might refer to the imagined form of certain marks that, because they are not deeply inscribed into but lightly scribed across the medium, can be translated into another sensory register—so long as they retain the same medial form. Since it does not cut deep, anscription may move among various surfaces, be transformed among various levels or devices. Wiener’s reading machine converts all acts of mark-making into the writing system of digital computation. When expressed in this form, such marks may be translated into any other phenomenological register. This is, then, something different than Kittler (1999, pp. 1–2) famous aphorism that, once discretised, ‘formerly distinct data flows’ become ‘a standardized series of digitized numbers’ that allow ‘any medium . . . [to] be translated into any other’. Kittler’s universal translation reproduces the fantasy of borderless transcription embedded in the digital; the gap between the fantasy of Wiener’s machine and its actual implementation instead articulates the limits of the medium itself. Anscription thus describes a process that remains media-specific. After all, the digital system is the only kind of system Wiener has in mind. It is, rather, sensations of the body which are translated into other sensations, thus collapsing the distinctions among the sensory capacities of human beings and the register of the machines that interact with them. Indeed, this would appear to disclose the entire sensory organism as a digital system not only in cognitive terms, but also in its phenomenological register. Anscription might name a cultural fantasy by which the differences among channels within the mediated interaction of bodies are erased. Resultingly, certain systems of meaning-making are taken to cohere with and among bodies, expressible across different levels of sensorial resonance, but through a method that necessarily registers resistance as it meets the limits of the transmission channel.

3. The Age of Rousseau; or, Derrida’s Media Theory

In her sketch of the ‘informatics of domination’, Donna J. Haraway (1991, pp. 161–62) famously aligned cellular biology, digital information, and the written code to point to the condition of bodies inscribed by militarism and capitalism. Although elsewhere in ‘A Cyborg Manifesto’ she mentions Derrida’s reorganisation of our understanding of writing and technology (see pp. 175, 247), his ideas make no appearance in her account of bioinformatics. While I am not critiquing this omission, it is tantalising to look back at the conceptual nexus she suggested through the lens of those passages in *Of Grammatology*’s opening that gestured to an equivalent formation. For Derrida (1967, pp. 19, 20), the elapse of logocentrism is, in fact, necessarily located in an historical moment defined by ‘theoretical mathematics’, ‘the *practices* of information retrieval’, and a scientific context in which ‘today the biologist speaks of writing and of *pro-gramme* about the most elementary processes of information within the living cell’.

In examining this passage’s articulation of techno-scientific concepts in general, and those of cybernetics in particular, I follow Christopher Johnson (1993) suggestion of the parallels these contextual foci present for the concept of writing in Derrida’s work. But I also want to take up a more slippery sense of Derrida’s brief comments on cybernetics and his articulation of the ontological principles embedded therein. While it is true, as Johnson (1993, pp. 6–7) states, that if we are looking for matters of influence, these comments are ‘more of the order of allusion and evocation than of active

engagement', the fact that Derrida's 'theory of writing ... shows some remarkable parallels with the discourse of modern biology, cybernetics and systems theory' should lead us to consider what other targets Derrida had in mind for the deconstructive project. After all, when he responded to Alan Sokal and Jean Bricmont's condemnation of so-called postmodern philosophers' use of scientific concepts in a 1998 article for *Le Monde*, Derrida (2005, pp. 70–71) would remark that, while he considered their attack trivial, he did take seriously 'the American context and the political context' of the 'so-called scientific "metaphors"'. Bernard Dionysius Geoghegan (2011, p. 126) has read this 'elliptical and enigmatic commentary' as questioning 'the very possibility of direct communication' and suggesting 'that medial, scientific, and political structures conditioned their claims and constrained his response'. To take that matter of conditioning and constraining seriously in turn, we must examine not only the concept of inscription as it is formulated in deconstruction, but also the inscribing of other discourses into deconstruction's founding text.

In *Grammatology's* opening, Derrida (1967, pp. 15–21) lays out some preliminary remarks to frame the practice of deconstruction through a remarkably diverse range of contexts. It turns out that deconstruction requires certain discursive preconditions, which lie in an 'historico-metaphysical epoch' (p. 15) that might already have slipped away from the logocentrism of the Western philosophical tradition. This slippage is located in the practices of writing and their claim to technical authority. As he clarifies, it is 'not that the word "writing" has ceased to designate the signifier of the signifier, but in a strange illumination it appears that "signifier of the signifier" has ceased to define accidental doubling and fallen secondarity' (p. 16). By contrast, this 'signifier of the signifier' is now increasingly understood to define a structure of interplay (or mutual dependency) between writing and speech, and 'all signifieds' are caught in secondarity 'always already, which is to say *from the start of play* [*d'entrée de jeu*]' (p. 16).¹ As such, the boundaries of signification and writing are coterminous, deriving equally from this game/play (*jeu*) paradigm: 'There is no signified that escapes ... the game [*jeu*] of signifying references that constitutes language. The advent of writing is the advent of play [*L'avènement de l'écriture est l'avènement du jeu*]' (p. 16).

The definition of language as a form of play or game, and its elements as operating in a perpetual state of interplay, is all too familiar by now. But Derrida goes on to clarify, just as significantly, that this definition of language is only possible within a present 'historico-metaphysical' moment defined by technologies of writing storage and transmission. This marks a contrast with the previous era, for which speech was synonymous with presence, and which he muses 'may perhaps be called the "age" of Rousseau' (p. 7). Today, writing is, by contrast, no longer secondary to speech, and this feature is described by Derrida in a section headed, '*Le Programme*', that closes, as I noted above, with a gesture towards both 'theoretical mathematics' and 'the practices of information retrieval' (p. 20). The latter of these, he writes, 'expands the possibilities of the "message" widely, to the point where it is no longer the "written" translation of a language, the transporting of a signified which could have remained spoken in its integrity' (pp. 20–21). Furthermore, this picture of writing is framed by specific media technologies: the development of practices of information retrieval 'also goes hand in hand with an extension of phonography', and it is 'coupled' with the 'non-fortuitous conjunction of cybernetics and the "human sciences" of writing' (p. 21).

At the very least, Derrida's play of signification is enframed within media-technological apparatuses. But it may be more precise to say that Derrida is reflexively enframing his own deconstructive project within the very technologies of writing that made it possible, and which themselves require critique. Certainly, this prefatory framing has two major implications for understanding a media history of inscription. First, the function of interplay or *différance* is not limited to individual acts of writing, but refers to the written character of our knowledge of history as such. This idea was expanded, too,

¹ Johnson (1993, p. 203) pointed out that '*jeu*' in this context did not suggest 'free play' as such, but the more rigid sense of 'interplay', and, as Lydia H. Liu (2010) has noted, it might also reference the formalistic structures of 'game theory'; my translation will use *play* and *game* to emphasise the variation between the two—here, I follow the sporting pun.

in *Writing and Difference*: ‘Logophonocentrism is not a philosophical or historical error . . . but is rather a necessary, and necessarily finite, movement and structure: the history of the possibility of symbolism in general . . . ; the history of *différance*, history as *différance*’ (p. 247). Although this conceptual movement is less direct in *Grammatology*, it is disclosed by a periodising gesture which, while not constructing an exact framework, nevertheless frames current knowledge practices through their difference from the previous ‘historico-metaphysical’ moment. In Derrida’s own terms, the word ‘epoch’ is used ‘to deal with a structural figure as much as an historical totality’ (p. 8). As Johnson (1993, p. 6) writes, Derrida’s diagnosis of an ‘epistemic shift towards the scriptural and the informational is also, inevitably and inseparably, a socio-cultural phenomenon . . . and it is essential to his perception of the urgently contemporary relevance of a philosophy of the trace’. In this way, Derrida’s ‘diagnosis of a certain “end” of (logocentric) metaphysics, of which the grammatological turn is a symptom, depends upon the total social fact of this qualitative as well as quantitative evolution of Western technological culture’ (p. 6).

Secondly, this periodisation is undergirded by the vocabulary of writing’s technological foundation. We can detect the glimmers of an equation between the postal system and the speech-presence paradigm, on the one hand, and between cybernetics and the writing-play paradigm, on the other. After Kittler (1990), we might recognise these parallels as amounting to a concept similar to the *Aufschreibesystem* of each historical moment. A logocentric inscription system has given way to one defined by the play of difference, and it is this moment of elapse that makes legible the metaphysics of the former. Indeed, these categories roughly already correspond to what Kittler names the ‘kingdom of sense’ circa 1800 and the ‘kingdom of pattern’ circa 1900. While I am not suggesting that Derrida was disclosing a Kittlerian media-technological periodisation as such, it is evident that deconstruction requires a foundation in the placing of historical boundaries according to a simultaneous apprehension of the technological and epistemological specificity of particular moments. There may be, then, a path to follow through Derrida’s later *La carte postale* (1980) into Kittler, as well as into Bernhard Siegert’s understanding of ‘cultural techniques’ (Siegert 1999, 2015). More significant than any media-theoretical parenting is, however, the essential work of reimagining deconstruction’s own historical, and indeed historicist, grounding. Derrida’s engagement with cybernetics should lead us to doubt that deconstruction was merely one of so many destabilising linguistic interventions, incapable of grasping anything but its own textual self-fashioning.² Nevertheless, my focus remains on defining my own term, anscription, and putting it to at least a little critical work. As such, I will focus instead, for now, on Derrida’s understanding of cybernetics and information theory.

Grammatology’s opening pages riff on various terms for notation and inscription, such as ‘écriture’, ‘trace’, ‘gramme’, and ‘graphème’ (p. 19), suggesting that Derrida has in mind inscriptions beyond penmanship. He tells us: ‘One now tends to say “writing” . . . [in order] to designate not only the physical gestures of literal, pictographic, or ideographic inscription, but also the totality of what makes it possible’ (p. 19). Having given examples from aesthetics, including ‘cinematography, choreography’, ‘pictorial, musical’, and ‘sculptural “writing”’ (p. 19), he turns to five further practices. It is worth quoting this passage at length.

One might also speak of athletic writing and more certainly still, if one thinks of the techniques which govern these domains today, of military or political writing. All this to describe not only the system of notation secondarily connected with these activities but the essence and content of these activities themselves. It is also in this sense that today the biologist speaks of writing and of *pro-gramme* about the most elementary processes of information within the living cell. Finally, whether or not it has essential limits, the entire field [*champ*] covered by the cybernetic *programme* will be the field of writing [*champ d’écriture*]. To suppose that the theory

² Such a recognition would be a part of the emerging historicisation of structuralism and its critics in relation to American techno-scientific concepts; see Liu 2010, Geoghegan 2011, and Galloway 2014. Indeed, this reassessment might also involve rethinking structuralism’s often-observed spatial metaphors, and their later critique, in terms of the horizontal form of the information network and of what I am calling anscription.

of cybernetics can dislodge by itself all the metaphysical concepts—all the way to the concepts of soul, of life, of value, of choice, of memory—which formerly served to separate the machine from man, it must conserve, until its own historico-metaphysical belonging is also denounced, the notion of writing, of trace, of gramme, or of graphème. (p. 19)

A nexus of sport, warfare, politics, biology, and cybernetics is formed here around the idea that their undergirding ‘essence and content’ lies in writing. But the term ‘writing’ should not, I think, be taken at face value. Derrida claims that the very slippage by which writing comes to substitute the essence and content of these domains operates by reference to a shared grammar, out of which all these diverse fields derive programmatic processes and a concomitant ousting of metaphysics. ‘Signification occurs where there are differences’, Juliet Fleming (2016, p. 8) summarises, ‘and these differences are all that is required for there to be writing’. These fields are thus *written* in the sense that they share this differential model, which we might call information. ‘Writing in this enlarged sense’, as Fleming (2016, p. 8) continues, ‘is better thought of as *information*, as that may be said to exist before (and in much greater quantities than) meaning’. The reflexivity of this principle has two major implications which I wish to draw out at length.

First, there is a form of inscription here which breaks the banks of inscription as such, to become connective and systemic, rather than fractional and singular. I am calling this form *anscription*, and it functions by tracing lines between as-yet-unformed semiotic units, rather than by marking divisions according to their unity. We might imagine, for example, the difference between the fine cuts one makes when chiselling into stone, and the film of chalk one might draw across it. The result, for Derrida, is that diverse aspects of social life can be understood, reflexively, through their connectivity according to this mode. In the vocabulary of systems theory, this is a web or mesh model, in which the asymmetrical form of the network enables differentiation on the basis of formal properties—as in the difference in densities among latticed zones—such that difference is made a property of connection, rather than of disconnection. Following Gregory Bateson’s famous definition of information as *the difference that makes a difference*, this form of channelling through differential properties—those differing densities or velocities in the flow of information—itself constitutes the simultaneous connection with and variance between each entity. Anscription is constituted by this formal property.

Secondly, it is remarkable that, for Derrida, this image is articulated through his own skimming over multiple contemporaneous registers that have been actualised by the vocabulary of cybernetics. This strategy articulates the reflexive principle central to deconstruction: that playing around with the present’s vocabulary to stretch its limits enables one to describe its historical specificity, and thus, by grasping limits of this vocabulary, one sets out towards a description of the system that preceded it. Here, Derrida’s stretching of the vocabulary of information to its limits enables both the articulation of a cultural moment in which meaning is defined by its derivation from information, and also the articulation of an elapsing of presence which Derrida wishes to channel into his deconstruction of logocentrism. But recognising this should lead us to distrust the overt evacuation of ‘metaphysical concepts’ (p. 19). Derrida reminds us that cybernetics retains at its base ‘the notion of writing’, of the ‘trace’, of ‘grammè’ (as in ‘written mark’—acknowledging the etymology of ‘pro-gramme’), or ‘grapheme’, and must do so at least ‘until its own historico-metaphysical belonging is also denounced’ (p. 19). In short, cybernetics articulates its own metaphysics even as it claims to evacuate those metaphysical differences that once separated humans and machines. If writing has come to mirror information formally, the ontological ground of information yet lies in writing, in the written code and the programme script, even if it does away with the form of presence once associated with deeper inscriptions. As Orit Halpern (2014, p. 44) suggests, it may be misplaced to speak of the ‘ontology’ of cybernetics, since its practitioners ‘concerned themselves with process, not essence’. Derrida reminds us, however, that a processual, anti-essential metaphysics remains itself an ontological underpinning that grounds cybernetics’ diffusion throughout the social field. It is this feature that enables cybernetics’ vision of language to define not content but pattern as the material stuff of differentiation. Information, we might say, is the difference that makes a *différance*.

To summarise: the second version of anscription describes a connective principle, which, by circulating among a number of registers, seeks to evade the act of deep inscription and its metaphysics while nevertheless scribing its own register into epistemology. Derrida offers us a loose periodisation from which inscription emerges as the function of a logocentric organisation of knowledge, associated with the Enlightenment and the technology of the postal system, while anscription emerges as the function of a post-logocentric system, associated with information theory and the technology of networked, mainframe computing. In the final part of this essay, I will explore the implications of this second period through a reading of Don DeLillo's remarkable description of an American football game in his 1972 novel, *End Zone*.

4. Play-Signals

The idea that aesthetics, war, sport, politics, biology, and cybernetics—as well as cybernetics' conceptual partners in Cold War techno-science—could all be collected under a shared apparatus of writing systems might also designate the central concern of *End Zone*. Where Derrida's interest in these fields prefaces the deconstruction of the *logos* in Western philosophy, DeLillo's narrative is itself contained within 'Logos College', a liberal arts institution secluded in the barren deserts of West Texas. Here, the novel's central interests—the 'Screaming Eagles' football team, the Officer Training Corps' course in nuclear strategy, the biology professor Alan Zapalac—are all framed as labouring under the sign of 'Logos' itself. Indeed, this mutual reference point between *End Zone* and *Grammatology* has led Tom LeClair (1987) to argue that the novel itself engages in deconstruction—a fictional compliment to Derrida's philosophical project. Many more critics (see Cowart 2003; Dewey 2006; Boxall 2006) have since observed how the narrator, Gary Harkness—a philosophically, and often theologically, minded running-back—is troubled by the unstable relationship between signifier and signified. The origins of this anxiety lie in his father's attempt to inspire in him an ethic of hard work by posting an inspirational maxim in his bedroom; staring at the sign, however, only emptied out its significance: 'All meaning faded. The words became pictures. It was a sinister thing to discover at such an age, that words can escape their meanings' (DeLillo 2011, p. 17). This flight of the visual from the semiotic acknowledges the technical register of DeLillo's prose, for which the technical function of words, as I will argue, begins to escape their meaningful apprehension. This feature can be examined through the novel's centrepiece: a thirty-two-page description of the season's 'big game' between Logos College and West Centrex Biotechnical, which draws incessantly on the register of information technology to render its game in prose.

But football is not the only register which leads Gary on in his search for semiotic stability. Simultaneously, he engages with football and nuclear war strategy for a palliative language of certainty. The latter offers pleasure in its euphemistic jargon, which is 'extremely effective ... [at] whispering shyly of cycles of destruction so great that the language of past world wars became laughable' (DeLillo 2011, p. 21). This new register may account for events that have no historical precedent through 'words and phrases like thermal hurricane, overkill, circular error probability, post-attack environment, stark deterrence, dose-rate contours, kill-ratio, spasm war' (pp. 20–21). As such, we might say that it is prescriptive, rather than descriptive; it defines meanings that have only an imagined referent, or a referent which will only come into being when the word is used.

Richard Landon (2005, pp. 74–75) notes that Gary finds a similar sense of comfort through linguistic order in the intricate jargon of football. This is because the language of football also offers this prescriptive quality, drawing meaning into a sort of operational apparatus that will play out on the sports field. The sport's vocabulary is generated by a 'passion for simplicity' (DeLillo 2011, p. 4), reducing signification only to those options which may be 'noted within the chalked borders of the playing field' (p. 3). Mirroring football's own ludic structure, it is conceived by Gary to be absolutely decidable, since it is employed not for its expressiveness, but for its efficient management in the placement of bodies on the field. The naming of plays indicates this instrumental quality:

Each play must have a name. The naming of plays is important. All teams run the same plays. But each team uses an entirely different system of naming. Coaches stay up well into the night in order to name plays. [. . .] No play begins until its name is called. (p. 118)

LeClair (1987, pp. 114–15) reads this passage as an assertion that ‘football offers the logocentric ideal. The names for plays that the coaches invent . . . are univocal. They have a numerical precision and separateness—one name, one play—for a very small, homogeneous speech community’. This univocal quality appears to derive from, rather than work in spite of, the fact that the names are wholly arbitrary. In this sense, the ‘logocentric ideal’ is offered by a form of instrumentalism: the names must operate as signals commensurate with the actions they are intended to cause. Nuclear strategy, once it becomes the determinative element of a conflict that drives history by its potential to end it, offers this same instrumentality. In answer to his roommate’s claim, ‘history is guilt’, Gary responds: ‘It’s also the placement of bodies’ (DeLillo 2011, p. 45). This is a placement determined by language: ‘What men say is relevant only to the point at which language moves masses of people or a few momentous objects into significant juxtaposition. After that it becomes almost mathematical’, and the progression of history itself ‘becomes some sort of historical calculus’ (p. 45).

In both football and the strategies of nuclear warfare, a register that privileges instrumentalism reunites the signifier and signified that had split in natural language. Furthermore, in both cases these operational qualities are produced by the requirements of *strategy*. In football, a binary notation of Xs and Os is the original form of any play, written up on a blackboard in chalk (in football lexicon, the term is ‘chalked-up’; in German, it would be ‘*anschreiben*’). This notation is then converted into the play-signal described by Gary as the coach’s arbitrary but deliberate assigning of names to the play’s various elements. What matters is not the signifying quality of the word as such, but its ability to trigger the players’ memory of the X and O diagram. If successful, it translates into a signal that causes the ‘placement of bodies’ which for Gary is a kind of metaphysical definition of history as such. Indeed, in Gary’s account, this linguistic apparatus holds the potential for ‘creating order out of chaos’, a skill for which the team’s coach, Emmett Creed, has become ‘famous’ (p. 9). It is fitting, then, that this play of relations among strategy, order, and chaos is articulated at the opening of the centrepiece football game:

The special teams collided, swarm and thud of interchangeable bodies, small wars commencing here and there, exaltation and firstblood, a helmet bouncing brightly on the splendid grass, the breathless impact of two destructive masses, quite pretty to watch. (p. 111)

Yet, here we are presented with the typical vocabulary of the football game: the metaphor of sport as warfare. DeLillo immediately intercedes with an ostensible authorial note, explaining that such a style of narration is likely to be little more than ‘the author’s way of adding his own neat quarter-notch to the scarred blue-steel of combat writing’ (p. 111). The metaphors are not only stale, but notorious for their performance of a certain kind of virtuosic writing; they are a means of showing-off. The ‘exemplary spectator’, DeLillo continues, will have long since grown bored with this ‘assault-technology motif’ (p. 111), and become drawn instead to ‘impressions, colors, statistics, patterns, mysteries, numbers, idioms, symbols’—those ‘details’ which offer the opportunity ‘to sort the many levels of material: to allot, to compress, to catalogue’ (p. 112). Immediately, the appeal of sport is relocated from the undivided impression of traditional spectatorship to a concern with processing the game as a series of discrete elements.

The idea of allotting, compressing, and cataloguing already draws us towards an alternative metaphorical register: that of information. Indeed, an interest in informatics, and its associated machines, emerges from the redefinition of sport that the authorial note also offers:

sport is a benign illusion, the illusion that order is possible. It’s a form of society [. . .] that is organized so that everyone follows precisely the same rules; that is electronically controlled, thus reducing human error and benefiting industry; that roots out the inefficient and penalizes the guilty; that tends always to move toward perfection. (pp. 111–12)

Where the typical metaphors of football fail to excite, the vocabulary of information theory, cybernetics, systems analysis, and digital computation are seen to reignite writerly technique. Breaking football down into its machinic components renders ‘a game on paper to be scanned when there are stale days between events; to be propped up and looked at—the book as television set—for whatever is in here of terminology, pattern, numbering’ (p. 112). The answer for the writer tackling football’s staid vocabulary is, therefore, to create a machine consumed by its own intricate self-functioning: ‘a cryptic ticking mechanism in search of a revolution’ (p. 113).

The register which comes to replace that of the stale language of the metaphorical comparison between war and sport, then, is that of machines, of mathematical quantification, and of visual media. This lexicon involves a shift from the traditional metaphorical register to one that is concerned with linguistic instrumentalism; it involves a concern with signal rather than symbol, with pattern or diagram rather than content, with order derived from the subtraction of material from a chaotic reality, with a visual reception based upon televisual scanning rather than reading, and with the construction of ‘a cryptic ticking’ linguistic ‘mechanism’ which would translate this imagined game of football into a series of often indecipherable codes that are subject to numeric rationalisation. Thus, it is presented as a language of the activities of patterning, numbering, allotting, compressing, coding, and decoding, scanning, electronic controlling, and optimising through rule-bound efficiency; it is, in this sense, perceived as a kind of *cybernetic machine*. We have already seen the parallels between *End Zone* and Derrida’s preface to deconstruction; here, we see its parallels to Wiener’s machine for the blind. Indeed, we might say that the re-articulation of sensory experience that Wiener wished to employ to translate text into tactile impressions mirrors DeLillo’s own writerly sense that a stale metaphorical vocabulary must be renewed by its translation according to new linguistic patterns and codes.

As in Wiener’s machine, we are presented with a system of perception, translation, and impression. Football’s play-signals begin from the visual perception of the game’s chaotic reality. They are then noted as Xs and Os and these in turn are translated into a set of sounds which, when spoken, can be decoded for their information: the play being called. Neil David Berman (1981, p. 60) has noted that, in the play-signals reported, ‘not one phrase is repeated’ and there ‘are almost no distinguishable key words or numbers’. His ‘brief sampling’ of the signals includes, ‘Twin option off modified crossbow’, ‘Monsoon sweep, string-in left, ready right’, ‘Middle-sift-W, alph-set, lemmy-2’ (p. 60; in DeLillo 2011, pp. 113, 116, 118). Berman comments that this lack of internal reference points translates the plays into a form of code, intriguingly using DeLillo’s own word ‘cryptic’ (p. 60). We might take this a stage further. In the terms of Claude Shannon (1949) information theory, since nothing meaningful is repeated there is no ‘redundancy’ at the level of words, giving almost no clues for the decoding of the message. In this way, the play-signals are the most information-rich they might be without dissolving into pure disorder—and, as such, into noise.

But there are two other linguistic registers in the football game worth noting. We can call these *football jargon*, the game’s general technical vocabulary beyond the play-signals, and *sporting slang*, the nontechnical vocabulary of inspirational maxims, player’s comments on the games, and insults to others. By contrast to the play-signals, when football jargon is present, its elements are repeated excessively, even within consecutive sentences. One coach tells Gary, in instructing him to ‘protect the ball’, that he must: ‘Get fetal, get fetal’; Gary simply shouts back, ‘Fetal’ (p. 114). In Shannon’s terms, each repetition increases the amount of redundancy in the message and so lowers the amount of information transmitted. In this way, sporting slang is even lower in information than this instructional jargon. In attempting to inspire his teammates, one player begins chanting repetitious nonsense: “‘Cree-unch,” he said softly. “Cree-unch. Creech. Crunch”” (p. 127). In response, they simply ‘make noises’ (p. 127), to which he replies in turn: “‘Footbawl”, George Owen shouted. “This is footbawl. You throw it, you ketch it, you kick it. Footbawl. Footbawl. Footbawl”” (p. 128).

DeLillo’s football game is a compelling example with which to contrast Wiener’s *Gestalt* machine and Derrida’s preface to deconstruction on account of this invocation of the absurd. Indeed, I would call this a sort of *informational absurd*, one which takes advantage of the potential for absurdity in

the semiotic fissure between a linguistic pattern that produces high levels of information and that pattern's nonsensical meaning in referential terms. Of the three linguistic levels delineated above, the play-signal—which is the most informationally dense in the context of the football game—is, in fact, the most obscure to the reader observing it. DeLillo's cryptic mechanism may be laid bare in the play-signals, but it is in these that its ticking is most difficult to follow. The absurd qualities of informatics are, I think, a good place to start in addressing a third sense of anscription, one which articulates more of the processual anti-ontology after which Derrida grasped. The comedy of the absurd plays upon certainty and uncertainty, it responds to the message without acceding to its pattern; it is *noise*. Both pre- and post-linguistic in psychoanalytic terms, laughter is a response to the message which does not accede to its logic, while still managing to access the material of the unconscious through its potential to violate taboo. As Michel Serres (1983, p. 74) wrote of the transition from thermodynamics to information theory, 'invariance' in systems 'is unique: neither static nor homeostatic, it is homeorrhetic'. The latter is a conjunction of *homos*, 'same', and *rhysis*, 'flow'. 'Homeorrhetic means at least that: the rhesis flows, but similarity pushes upstream and resists' (p. 74). Likewise, the absurd presses forwards into sense, but nevertheless retains a nonsensical quality in resistance. Anscription tends towards the absurd, since it converts inscription's incisions into impressions, yet still registers the resistance of the surface on which its marks are made. The surface is played back to itself as an imprint, neither being incised through the surface distinctly, nor quite floating free from the register of scribing as such. Anscription comes and goes: it is held in this space of suspension, enabling the fantasy of a writing that floats freely above the materiality of the medium while nevertheless, and inevitably, being called back onto it. This suspension, I think, operates absurdly, since it provokes a tension between the fantasy of immaterial transmission and the inevitability of a regression back into its material containment. In this way, DeLillo's anscription of a football game articulates the informational absurdity of semi-permanent marks and the semi-materialised indexing they produce.

5. Conclusions

In a recent article, Siegert has looked back to the early debates among cyberneticists in which they invented and tested the concept of the digital. He argues that the digital was not initially used to replace the analogue, but to justify the sphere of separateness produced by sampling it—'a tear between the symbolic and the real that produced freaks in the empire of signs' (Siegert 2018, p. 18). 'These breaks of reference', Siegert continues, 'appeared exactly at those places where the digital is given a definition that relies on the fact that the nonrepresentable is declared as nonreal, nonexistent, or as forbidden ground' (p. 18). As such, locating the digital in the occurrence of these breaks of reference rendered the 'nonsensical' as 'the nonexistent', and the 'nondefineable' as 'the basis for the possibility of notation' (p. 18). This phrase, 'the possibility of notation', however, suffers in English from a translation problem, and so Siegert clarifies the point in German: 'Das Nichtdefinierbare wird zur Grundlage der Anschreibbarkeit' (p. 18). The digital, therefore, is in this account founded on the attempt to make the form of *writing up* denoted by *anschreiben* constitute an inscription system that could render the real by eliminating anything that cannot be written up. The ontological realm of possibility that grounds the digital is not found in inscriptive media as such, but in its tension with what I have been calling anscription. In short, the 'possibility of notation' native to the digital is that of anscription, and the result is that the 'operationalization of the crisis of reference establishes the world of the symbolic machine' (p. 19).

Nevertheless, we might wonder what traces of this crisis remain embedded in media theory's own ontological register. This problem can be observed across cybernetics' wide influence and capacious intellectual afterlives. The function I have been calling anscription might not only draw out the processual anti-ontology of cybernetics, but also rearticulate its distribution across various discourses. The transmissibility that I have described has also made this discursive function appealing for transmission across disciplines and interdisciplines. If media theory is itself the child of

phenomenology and cybernetics, we must be cautious about transcribing not only the logocentrism of the former, but also the processual anti-ontology of the latter into our analysis of the technical systems of meaning and their articulation in the present. Media theory too often retains the fantasy that the media of history is nothing other than the history of media. On the other hand, in considering the histories of cybernetics, it is tempting to note its grammatological underpinnings without quite naming them. While I do not assume that my term, anscription, solves this problem by naming it, having a word may get us closer to unpacking the more troubling metaphysical problem: what traces of an anti-ontological ontology has cybernetics left across post-war knowledge and its technical apparatuses?

If the anatomy of inscription would have to begin with a dead body spread out on a table—fully articulated and ripe for dissection—its features would subsequently need to be copied into textbooks. I began by claiming that the anatomising of distinctive practices may involve a concomitant set of relations among surface, tool, and symbol to that of the technical relations it seeks to describe. Hence, I have tried to propose a concomitant analytical frame to that of inscription, to deal with these relations by outlining three possible versions of the anscription concept. In the first, anscription appeared as a translation between body and space mediated through informational variation. Since it does not cut deep, anscription may move among various surfaces, be transformed among various levels or devices, and, as a result, supplement the sensations of the body. In the second, anscription described the extent to which writing expands beyond the historical contours of inscription, beginning to describe a practice specific to digital media that activates the fantasy that all bodies may be equally written across systems of meaning-making which have information at their base. Finally, anscription was enacted in a strategic system of writing; it is writing as imperative and diagram, chalked up and played out ‘within the chalked borders of the playing field’ (DeLillo 2011, p. 3). In this form, as DeLillo instructs us, it produces an absurdity that is located in informatics—that is a property of the fissure between information’s technical usefulness and semiotic irrelevance. Reading DeLillo alongside Siegert’s account of the digital’s emergence, we may reflect on the way this absurd form restages the tear between the symbolic and the real. Perhaps, as inscription is to writing, anscription is to *calculating*: in its restaging of the ontological fissure of the digital, anscription might represent one way to imagine the mode of scripting native to the computer, both as a technical object and as an ever-widening metaphor for our present epistemic moment.

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