Literary Digital Humanities And The Politics Of The Infinite

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Abstract *In the context of relationships between traditional and digital forms of memory and dissemination, this essay discusses two key positions in the digital humanities. The aestheticist position is broadly defined by the extension of literary values into the digital milieu, as it is articulated in the work of Johanna Drucker, N. Katherine Hayles, and Jerome McGann. The populist position rather emphasises engagement with contemporary social media, as it is represented by the work of Pierre Lévy and Henry Jenkins. This comparison is designed to analyse a problematic parity between the two positions that is couched in their conception of archives and texts as being infinite; an infinitude that is political in the sense that engagement with it may facilitate or prohibit subjective agency and collective knowledge. Yet, through deconstruction, this analysis is designed to propose an alternate conception that negotiates the difficult relation between the finite and the infinite aspects of technological memory accumulation, and that poses the possibility of an alternate politics that problematically links the poles of engagement and disengagement with such accumulation.*

Keywords archive, deconstruction, Derrida, digital humanities, Drucker, Hayles, Jenkins, McGann

INTRODUCTORY REMARKS: QUANTITATIVE AND QUALITATIVE INFINITES

As Johanna Drucker aptly summarises, *digital humanities* broadly thought concerns the 'migration of our cultural legacy into digital form and the creation of new, born-digital materials and tools'.[1] This field of study then necessarily concerns differences between mnemotechnical forms - technologies of cultural memory and dissemination. The mnemotechnical shift indicated here is thus not only from the codex form to digital media of inscription, but a shift from the library to the database. These are, of course, institutions of the material and structural accumulation of knowledge - that is: *archival* forms. In the digital humanities generally speaking, we might polarise two forms of activity in relation to such archival accumulations: the *functional*, and the *interpretive*. While both are linked in their practices, the former prioritises technical methods of accreting and structuring information; the latter prioritises engagement with the epistemological, cultural and political meaning of such accumulations. Nevertheless, both aspects are

1. Johanna Drucker, *SpecLab: Digital Aesthetics and Projects in Speculative Computing*, Chicago and London, University of Chicago Press, 2009, pxii, henceforth *SL* in the text.

necessarily entwined, and at this intersection, this article is concerned with two kinds of discourse.

In the main part of this essay, the understanding of mnemotechnics pertains to a mode of analysis that might be designated as *aestheticist*. Broadly put, the aestheticist approach here is characterized by a specialist attention to traditional and digital literary texts, bibliographic and fictional, and by an affirmation of individual interpretive agency. It is also explicitly wary of the commodification, capitalisation, and instrumentalisation of knowledge. In the first main section and the conclusion to the essay, this literary digital humanities discourse will be compared to another that is defined by attention to popular media use in convergence culture studies, and by an affirmation of the creation of collective, dispersed knowledges. This involves an engagement with capitalized systems of information and communication, in order to assert democratic principles. This mode might then be referred to as *populist*. Each discourse thus refers to a different ethos - that of an extension of literary values in the digital world; that of an immersion in capitalised forms of online engagement.

Yet I want to suggest that despite their institutional, methodological, and cultural divergences, both these discourses are linked by a problematic parity. This association is couched in their shared conceptualization of texts and their accumulation, as being, in various ways, from the ideational to the material, *infinite*. Simply put, the representation of traditional or digital mnemotechnics in both discourses tends towards the rhetoric of infinity and its cognates - the indefinite, the incommensurable, the endless, for example. There are a number of permutations and valorisations in this rhetoric that should be abstractly schematised here prior to their more concrete articulation in this article.

Traditional or digital texts may be thought of, qualitatively speaking, as being endless in their interpretive possibilities. Likewise, the quantitative accumulations of written texts, or digital files, may be thought of as an endless extension. Such infinitude may be positively or negatively valorised. The infinity of the text and the archive may appear as the positive possibility of subjective agency, and ongoing cultural production considered as the generation of multiple meanings. On the other hand, it can be negatively valorised as a multiplicity that defers determinate knowledge. Clearly, this opposition between the positive and negative valorisations of determinacy and indeterminacy could be thought of in terms of the split between some humanities discourses and scientific positivism.

But we must also recognize that the affirmation of the infinity of texts or archives, qualitative or quantitative, must be understood in complex relation to ideas of finitude. In order to indicate more concretely how such complexity concerns us here, we should refer to *Writing Machines* (2002), where N. Katherine Hayles explicitly engages with the issue of such infinity in terms of discursive conflicts between science and art:

As practiced in the sciences, theory distils from experience a few underlying regularities, thus reducing a seemingly infinite number of particularities into a parsimonious few. The more instances that can be reduced, the more powerful the theory is meant to be […]. Reduction is good, proliferation is bad.[2]

In literary study, conversely, such a programmatic function of interpretation 'represses the text's power to generate new meanings and so to renew itself'. Hence, 'reduction is bad, proliferation good' (*WM*, p104). Hayles' understanding of this difference is that science can colonize new phenomena in order to maintain its institutional persistence - in other words, it extends itself indefinitely by advancing beyond the ground it has seemingly regularized. Literature conversely has 'an established canon of a finite number of texts', such that their 'inexhaustibility' has a positive value: 'Rather than trying to eradicate noise', as in scientific practice, 'literary scholars have a vested interest in preserving it' (*WM*, p105). Thus, the mnemotechnical archive of canonical literature is materially finite in a quantitative sense, yet qualitatively and ideationally infinite. The economic dimension implicit in Hayles' description makes this finitude, this scarcity, the material basis of critical interpretation, a precious commodity. But we should also recognize here that, despite the quantitative finitude of the literary canons invoked here, the purpose of affirming the qualitative indeterminacy of its texts must necessarily be linked to the accumulation of their interpretation: the qualitative infinity of the quantitatively finite canon gestures toward the quantitative accretion of (no doubt, ultimately, qualitatively indeterminate) critical texts - an endless, if dispersed and fragmented archive.

However, the affirmation of endlessness as represented here by the literary is not a universal feature of the digital humanities. As Hayles discusses, in *How We Think: Digital Media and Contemporary Technogenesis*, 'poststructuralist critique', with its 'hermeneutic of suspicion' toward capitalism, can be opposed by elements within the digital humanities that desire research development to be facilitated through commercial and corporate support. Indicative of an antipathy toward post-structuralism in this context, Cathy N. Davidson and David Theo Goldberg are quoted as arguing: 'What part of our inability to command attention is rooted in humanists' touting of critique rather than contribution as the primary outcome of the work? … Is it not time we critiqued the mantra of critique?'.[3] 'Contribution', and what is referred to as 'productive theory', here suggests that, inversely, post-structuralism is merely negative, a discourse that stymies, or unmakes. In extrapolation, this suggests, through Hayles' association of poststructuralism with the 'close scrutiny of individual texts', that poststructuralism would only *defer* 'contribution' through an endless proliferation of detailed negations; a proliferation that would also logically gesture toward an endless archival accumulation.[4] Yet Hayles' association of poststructuralism and close reading is problematic where deconstruction

2. N. Katherine Hayles, *Writing Machines*, Cambridge and London, the MIT Press, 2002, p104, henceforth *WM* in the text.

3. N. Katherine Hayles, *How We Think: Digital Media and Contemporary Technogenesis*, Chicago and London, University of Chicago Press, 2012, p41, henceforth *HWT* in the text.

4. In terms of institutional politics, collaboration becomes a necessary response to the glut of digital information in Hayles' pertinent and incisive discussion of relations and differences between two digital humanities institutions in regard of their various relations to corporate support. See Hayles, *How We Think*, op. cit., p34, p37, pp53-4.

is concerned. It perhaps renders deconstruction too easily amenable to traditional conventions of the reading practices and institutions of literary study. As I will come to argue in this essay, such an association misses the necessary differentiality of deconstruction, and, in this context, its relation to one of close reading's binary opposites: not reading *at all*.

Specifically, then, this essay concerns the institutional and political implications of the ways in which digital humanities discourses conceptualise and valorise quantitative accumulations of knowledge and qualitative understandings of texts within wider understandings of epistemological, cultural, and political value. In order to approach these issues, I will begin by providing an articulation of the finitudes and infinitudes of the text and the archive in the thought of Pierre Lévy. Using key concepts and structures from Lévy's work, the main parts of this essay will discuss positions in the digital humanities that are defined by literary-theoretical traditions focused on the construction and analysis of metatextual digital archives. Much of this discussion will concern what I take here to be the canonical work in this context - that of Jerome McGann, Johanna Drucker, and N. Katherine Hayles. This discussion is divided into four sections, which concern: the issue of the quantitative finitude and infinitude of the archive, traditional or digital; the qualitatively infinite ambiguity of the literary text and its relation to the role of human thought; the relation of the digital and the human conceived in the idea of autopoietic systems; and the status of the database in terms of its closure or finality, and its relation to subjective agency. The concluding section of the essay will compare the literary conceptions of these issues to the convergence culture analyses of Henry Jenkins, in comparison to Ted Striphas and Mark Fisher, in terms of popular forms of engagement with online memory and communication. In order to polemically suggest an alternative to the shared problems of such theories, and practices, this essay will finally turn to a deconstructive interpretation of the notion of the archive, and the necessity of a complex relation to it that requires not only its close reading and attention, but a specific and problematic mode of its obviation and forgetting.

CAPITALISED ARCHIVES AND KNOWLEDGE ECONOMIES

In order to establish some parameters for understanding the epistemological, cultural, and political ramifications of the text and the archive as mnemotechnical forms, an extended example should here suffice: Pierre Lévy's *Collective Intelligence: Mankind's Emerging World in Cyberspace*. This book finds its place here in part by being the theoretical background to Henry Jenkins' *Convergence Culture: Where Old and New Media Collide*, which I will come to discuss toward the end of this essay. *Collective Intelligence* finds part of its own basis in the work of Humberto Maturana and Francisco Varela, who are also referents for McGann and Drucker, and in Bruno Latour, who

is a referent for Hayles. As a work emerging from continental thought, it also finds its place here because it is structured by a traditional philosophical conception of the accumulation of material memory, despite its new ageist techno-politics. This conception will provide a schema for understanding the thought of the digital archive in the literary digital humanities discourses analysed in this essay.

In *Collective Intelligence*, Lévy states that 'conventional writing is by nature a system of static and discontinuous traces', 'an inert body, fragmented, dispersed, ever growing'. Thus, while writing is limited by its discontinuity, it nevertheless continues to accumulate problematically as such. Interpretation of its inscriptions is an act of mind 'attempting to coax the inert body of the letter into graceful motion', the 'evocation of an author's breath in the presence of dead signs'. In terms that should inevitably incite specific reference to Lacan, as much as the idealism of so much of Western philosophy, 'living spirit' is here opposed to 'the dead letter'.[5] This antipathy toward written memory is articulated at an archival level: in his defence of a mobile 'nomadology' as against the territorializing strategies of the state, Lévy describes individuals' relation to the earth as one determined by the records of land survey - the 'register of orthodoxy', the 'great book of civil government', the 'tax roll'. Stifling territoriality is thus intimately bound up with the material accumulation of bureaucratic, administrative archival records (*CI*, p152, p160).[6]

We might contextualise this antipathy toward the written archive and mark the possibility of its transcendence through electronic media by noting Lévy's description of four successive epistemological spaces: 'earth', 'territory', 'commodity space', and 'knowledge space'. In the first, 'The substrate of knowledge, the encyclopedia of the earth, is the earth itself. But it is our physical bodies […] our memory and repeated actions that bear the world's knowledge. On earth, when an old man dies, a library goes up in flames' (*CI*, p209). In the second space, this organic encyclopaedia is displaced by 'the Book' - 'the Bible, the Koran, sacred texts, the classics, Confucius, Aristotle' - 'the infinitely interpretable book or utterance that contains all, explains all, can interpret all' (*CI*, p211). Such desire for power and totality finds its development in commodity space, but with paradoxical effect. For Lévy, the French Enlightenment 'marks the end of an era in which a single human being was able to comprehend the totality of knowledge'. It also marks the end of systematic epistemological order:

> Diderot and d'Alembert have now abandoned the architectonic diagram, the well-ordered hierarchy, since the *Encyclopédie* is now arranged in alphabetical disorder. A hypertext, organized according to its network of internal links. The encyclopaedic library pushes the Book aside. And the library continues to expand, overflow, attempts to find its way through file cards and indexes. […] Soon, scientific journals will grow in number,

drowning us in seas of articles, which will in turn supply innumerable databanks (*CI*, p213).

This image we might refer to as the *archival sublime*, specifying that as such it relates to what Burke describes as the 'artificial infinite', what Kant refers to as the 'mathematical sublime', and what Hegel refers to as the 'spurious infinity' of the *ad infinitum* - an endless extension without closure or resolution. The 'bad' sublime is, in this endlessness, distinct from the transcendental force of the sublime proper - Kant's dynamical sublime, for example; and we should also think here of Hegel's image of the development of absolute knowledge.[7] Yet the kind of excessive accumulation indicated by Lévy swamps the possibility of determinate meaning, deferring it in an endless linear extension. Indeed such linearity defines the encyclopedia of the commodity space for Lévy: it connotes only an 'operation of indefinite referral' (*CI*, p215). Against the traditional, codexical form of the encyclopaedia and its repository, the library, Lévy posits the electronic 'cosmopedia' of the fourth kind of epistemological space - knowledge space - a shared, dehierarchised, dispersed repository of living human knowledge. It is technologically facilitated, but not determined: 'For the virtual world is no more than a substrate for cognitive, social, and affective processes that take place among actual individuals' (*CI*, p216, p112).[8] Thus, while electronic media transcend traditional forms of inscription, they are still secondary in comparison to human thought and action.

The salient points of the idea of the cosmopedia for this essay should be marked here in a gesture of summarisation. It is a multi-platform, multimedia assemblage which, by reducing the importance of traditional writing in favour of the visual, allows for 'a new kind of simplicity' - that of 'implication'. Thus, for Lévy, 'It is through the process of implication that we filter the large numbers typical of the commodity space. It is through the simplicity of our immersion that we escape its complexity, its labyrinthine networks' (*CI*, pp218-9). *Collective Intelligence* thus claims technological communication as an escape from commodity space, and its negatively infinite accumulation of written archives, and an entry into the 'indefinite variety of collective intellects' (p222). The collective intellect is, for Lévy, 'its own formal cause' - 'it is born from the will of its members and not from some outside impulse' - a 'creative circularity' that 'is inherent in all autonomic or autopoietic production' (*CI*, p114). We should note here that this knowledge does not oppose capital, which, Lévy claims, is 'eternal' (*CI*, pp136-7). Rather, towards a 'generalized liberalism', Lévy aims to escape mere commodification through engagement with the very forms of capitalist techno-communication (*CI*, p34, p234). Hence, in terms of politics, Lévy argues that 'the canonical form of politics in the knowledge space is a kind of direct, computer-assisted democracy no longer based on the representation of statistical majorities but on the self-organization of intelligent collectives, in which minorities have an opportunity to experiment and take initiatives' (*CI*, p229).

7. I discuss the figure of the archival sublime more fully in terms of the history of philosophy in 'Consigning Badiou to the Past: the Encyclopaedia and Philosophy's Gendered Relation to the Legal Archive', *Cultural Politics* 5, 1 (2009).

8. This affirmation of the neutrality of the substrate could be usefully questioned through Derrida's discussion of the paper support in 'Paper or Me, You Know … (New Speculations on a Luxury of the Poor)' [1997], in *Paper Machine*, 2001, Rachel Bowlby (trans), Stanford, Stanford University Press, 2005, pp53-4. Here Derrida links the idea of the historical retreat of the dominance of paper-based technologies to the idea of the retreat of the substrate behind the inscriptive mark. In this sense, then, and like the discussion of the *khora* as the original surface of inscription in *Dissemination*, 1972, the substrate is not entirely neutral - indeed, it may be resistant.

Collective Intelligence thus indicates a certain hierarchical organization in which technological forms of memory and accumulation are subordinate to various conceptions of 'life', movement, and circulation. This hierarchisation involves the conceptualization of the written archive as a site of endless accumulation opposed to the positive infinitude of human thought and praxis, as facilitated by engagement in digital communication. The following section of this essay, then, specifically negotiates this antipathy toward the material accumulation of written texts, and the prioritization of digital forms of memory and communication. As we will see through this discussion, the digital archive, as conceived in the aestheticist discourses of the literary digital humanities, pertains to a greater complexity and difficulty that significantly problematises the epistemological and political claims made by Lévy. Yet what follows will also indicate the proximity of literary digital humanities to the opposition between the encyclopaedia and the cosmopedia, to the idea of the mnemotechnical substrate, and to the idea of the autopoietic.

QUANTITATIVE ISSUES: LIBRARIES AND DATABASES IN THE LITERARY DIGITAL HUMANITIES

The relation between codexical and digital forms of technological memory is articulated in Jerome McGann's *Radiant Textuality: Literature after the World Wide Web*. As McGann states, the Internet, 'an archive of archives', 'originally designed precisely as a decentred, nonhierarchical structure', 'resembles our oldest hypertextual structure, the library, which is also an archive (or in many cases an archive of archives). As with the Internet and hypertext, a library is organized for indefinite expansion'.[9] However, we should note that there is a complex *finitude* to the book form and its archival collection. It is this finitude that partly necessitates the shift toward the kind of metacritical digital archives represented by McGann's *The Rossetti Archive* project, and its effort to bring together 'archival and editorial mechanisms with their critical and reflective functions' (*RT*, p17).

9. Jerome McGann, *Radiant Textuality: Literature after the World Wide Web*, New York and Basingstoke, Palgrave, 2001, p72, henceforth *RT* in the text.

> Editing in codex forms generates an archive of books and related materials. This archive then creates its own metastructures - index and other study mechanisms - to facilitate navigation and analysis of the archive. Because the entire system develops through the codex form, however, duplicate, near-duplicate, or differential archives appear in different places […] If the coming of the book vastly increased the spread of knowledge and information, history has slowly revealed the formal limits of all hardcopy's informational and critical powers. The archives are sinking in a white sea of paper (*RT*, p56).

With evident comparability to Lévy, then, the problem is that the limitations of the codex form produce a proliferation of variously differentiated and

disconnected other editions of codices - a bad form of proliferation gesturing toward the bad archival sublime. The power of the electronic edition, in comparison, means that 'the book's (heretofore distributed) semantic and visual features can be made simultaneously present to each other' (*RT*, p57). Unlike a traditional library, in which there are foci of attention governed by definitive texts, but like the Internet, 'every documentary moment in the hypertext is absolute with respect to the archive as a whole, or with respect to any subarchive' within it (*RT*, pp73-4). This positive shift from the traditional definitive edition to the electronic text and its accumulation is also marked by McGann's sense that the codex form is *closed* by its covered bindings, while the digital archive is *open* - it 'can be indefinitely expanded and developed' (*RT*, p69).

Something like this relation between traditional and digital archives is also stated by N. Katherine Hayles in *How We Think: Digital Media and Contemporary Technogenesis*. Here, Hayles marks key differences between the traditional and digital humanities' relations to the collection, analysis and dissemination of archival information. As she argues, the shift from the traditional to the digital involves a shift in research location from the library to the Web and Internet; and a shift in recording from narrative to database (*HWT*, p2, p4, p16). In this context,

> The constant expansion of new data accounts for an important advantage that relational databases have over narratives, for new data elements can be added to existing databases without disrupting their order. [….] This flexibility allows databases to expand without limitation (subject, of course, to the amount of memory storage allocated to the database) (*HWT*, p182).

In this description, then, and with some comparability to McGann's sense of the finitude of the codex, while narratives are finite, databases are, in potentiality, if not in practice, quantitatively infinite. Indeed, Hayles' description of quantitative digital accumulation necessarily encounters the problems of excessive accumulation - of million plus online book searches 'limited only by ever-increasing processor speed and memory storage' (*HWT*, p27). There is thus also a shift in attention from close reading to distant reading, including hyper reading and machine reading (*HWT*, pp12, 17, 28-31). The latter forms of attention are, clearly, designed in various ways to finitise or commensurate the glut of data.[10] Not only are such accumulations too vast for close reading analysis: 'Machine queries frequently yield masses of information that are incomprehensible when presented as tables or databases of results. Visualization helps sort the information and makes patterns visible' (*HWT*, p33).

Issues of this shift toward digital archiving also concern *SpecLab: Digital Aesthetics and Projects in Speculative Computing*, where Johanna Drucker indicates that it has a dual possibility. On the one hand, the 'aggregation of information, access to surrogates of primary materials, and the manipulation of texts and

10. Literature's relation to such glut, as Hayles indicates, may be opposite. In the writings of Mark Z. Danielewski that Hayles analyses, two, polarized attitudes toward such massive information accumulation should be noted: 'a novel that attempts to incorporate all different kinds of discourses, sign systems, and information into itself, engorging itself in a frenzy of graphomania (i.e: *House of Leaves*) and a novel that operates through severe constraints, as if keeping the information deluge at bay through carefully constructed dikes and levees (i.e: *Only Revolutions*)'; ibid., pp16-17.

images in virtual space all provided breakthrough research tools' (*SL*, p3). On the other, it involves a certain risk:

> Digital projects are usually defined in highly pragmatic terms: creating a searchable corpus, making primary materials for historical work available, or linking materials to an interactive map and timeline capable of displaying data selectively. Theoretical issues that arise are, therefore, intimately bound to practical tasks, and all the lessons of deconstruction and poststructuralism […] threaten to disappear under the normalizing pressure of digital protocols (*SL*, p7).

The conflict between the technical and the theoretical here can be broadly characterised as one between two conceptions of order in Drucker's terms. *Mathesis* signifies an instrumental, totalising, objectivising formal logic marked in its relation to the history of rational mechanicity. *Aesthesis* signifies the partiality of subjective imagination linked to the traditions of aesthetics. The polarity here is complex, because, as Drucker argues, the extension of data-processing models into the visual arts, for example, renders the distinction problematic (*SL*, p182). Thus, this difference is, clearly, a matter of politics: it concerns the problem of formal logic and computational protocols being used to 'justify decisions about administration and management of cultural and imaginative life' (*SL*, p5).

We need to note, then, that the move toward digital archival forms has its own problems. As McGann puts it, while computerization has made available 'vast amounts of data in forms - relational as well as facsimile, that were previously unimaginable', it has disappointed scholarship as 'a tool for rethinking these materials' (*RT*, p16). If the question is, thus, 'Who will determine how knowledge is classified in digital representations', Drucker positions *speculative computing* in opposition to a *digital humanities* conceived as the attachment to unambiguous, objective data championed by 'computer culture' (*SL*, pp6-7).[11] Hence, generally speaking, the literary discourse of the digital humanities positions aesthesis against mathesis, partly, as I will now proceed to indicate, through a recursive *poeticisation* of the digital sphere.

QUALITATIVE ISSUES: INFINITE DETAIL AND THE AESTHETICS OF THE SUBLIME

The problem, as with Drucker's thoughts on the totalizing and objectivising claims of mathesis, is that the digital realm of memory may be seen as being qualitatively finite, in the way that such information may be subject to disambiguating simplification. In computation, McGann states:

> A formal 'language' is imposed upon natural language or on real objects that licenses a computer to manipulate the marked materials. Whatever

11. This schema appears complicated by the association of 'speculative computing' with mathematical mechanicity as against 'generative aesthetics' in Johanna Drucker (and Bethany Nowviskie), 'Speculative Computing: Aesthetic Provocations in Humanities Computing', in Susan Schreibman, Ray Siemens and John Unsworth (eds), *A Companion to Digital Humanities*, Massachusetts, Oxford and Victoria, Blackwell Publishing, 2004, http://doi.org/cs9m4s

is not formally marked is not merely unapparent, it is computationally nonexistent […] But text - even printed or scripted text - is foundationally ambiguous. The ambiguity results not merely from the formidable complexity of every material textual form but because such forms only function in use (*RT*, p226).

Indeed, for McGann, traditional poetical texts are the 'most advanced' way of modelling textual codings, and are thus essential to 'understanding the structure of digital space' (*RT*, pxi-xii). As this prioritization of the poetic suggests, McGann's discourse is structured by a series of hierarchical oppositions: between science and art, quantity and quality, and instrumental and intellectual interest (*RT*, pp54, 16, 214). Such oppositions, as with the distinction between mathesis and aesthesis, are also associated with those for and against totality: 'disambiguated, fully commensurable signifying structures' and 'human ambiguities and incommensurables' (*RT*, pxiv).

In his engagement with Dante, McGann discusses how the meanings of the poetic text emerge from the way in which it can be infinitely divided into different units and relations. Thus, *infinite divisibility* is the effective substrate of interpretive meaning, which also means that the text is endlessly self-differential (*RT*, pp196-7, 206). McGann's sense of the analysis of such infinite divisibility furthermore attends to microscopic subdivision. The place of 'quantum poetics' appears as a reimagining of traditional literary close reading: it is an interstitial term at the convergence of art and science - where art has rigor, and science has vagueness; where both have ambiguity (*RT*, p228). Attention thus shifts away from the 'gross - even Newtonian - levels' of the poetic analysis of 'macrosopic' linguistic codes that assume words as atomic units. Rather, 'even the most pedestrian scrap of prose text - oral or typographical - might *and should*, for critical purposes, be investigated with a passion for fine, microscopic, for subatomic discriminations' (*RT*, p229).

In the face of the loss of the aesthetic dimension of ambiguity performed by computational simplification, then, McGann's electronic text fields attempt to archive ambiguity, rather than leaving it located merely in the contingencies of subjective intuition. In this sense the metatextual digital assemblage of *The Ivanhoe Game* attempts 'to expose to our thinking aspects of our own thought that would have otherwise remained only intuitively or randomly available to us' (*RT*, p227). The function of the digital archive might thus be equated with the function of poetry given to it by I.A. Richards - to preserve a way of complex *thinking* being lost by the standardizing drive of commercialisation and industrialisation.[12] Indeed, contiguously with Richards' intentionalism (the idea that the object of poetic analysis is to decode the author's intended meaning), McGann states that 'The subject of IVANHOE, after all, is not the subject of (say) physics or computer science - the natural world, digital order - it is the mind of those who have imagined and created those kinds of intellectual prostheses' exampled by literary texts (*RT*, p230).

12. See, for example, I.A. Richards, *Practical Criticism: A Study of Literary Judgment*, 1930.

This attention to the microscopic, and the endlessness of literary language as the substrate of creative agency, are also principles of Drucker's thought, as represented by *SpecLab*. In terms of the computer screen interfaces which mediate between database and user, Drucker argues that the rapid conventionalisation of Graphical User Interface elements (sidebars, hotlinks, tabs, etc) means that 'their character as representations has become invisible'; a mark of the 'smooth functioning' and 'efficient operation' of mathesis (*SL*, p9). The task of the design of the interfaces discussed by Drucker is thus effectively to interrupt such invisibility. This emphasis on the graphical quality of the user's interface with the database perhaps has some comparability to the Russian Formalist's attention to 'roughened form' - the formal qualities that mark a text as poetic, as against the content-centred meaning characteristic of practical language.[13] Thus, Drucker posits *graphesis* - a term that recognises the rhetorical force of visual design (*SP*, pxv). Here 'properties of visuality' appear 'unassimilable into either traditional linguistic and mathematical knowledge systems or digital systems'. As Drucker argues:

> Inherent to visual mark making, expression, are the qualities of infinite variety and greater specificity, properties that allow graphical marks to register subjective inflection yet resist the premises of finitude and closure (*SL*, p132).

As the terms 'infinite variety' and 'greater specificity' indicate, this difference between mathematical and the graphical bears strong resemblance to the idea of subatomic infinity in McGann's work, both offering a reworking of the traditional aesthetics of *infinite detail*.[14] Comparably, as Lévy puts it, 'Within the domain of intellectual technology, progress consists in visualizing the very small or the very far, […] in diagramming the inextricable complexity of process' (*CI*, p110).

We might also see this kind of engagement with the traditional aesthetics of the sublime in Hayles' work. In *Electronic Literature: New Horizons for the Literary*, Hayles discusses the author Brian Kim Stefans' aesthetic of 'recombinant flux', where 'algorithms or programs that tap into real time data flows […] create an infinite number of possible combinations'.[15] Hence, 'The ontological security of the self is constantly threatened by this prospect of limitless information and limitless recombination' (*EL*, p156). We should also note here the argument, in reference to the works of James, Conrad, and Fitzgerald, that 'Narratives gesture toward the inexplicable, the unspeakable, the ineffable'. Updating this evident articulation of the development of the sublime proper in literature, Hayles also comments that 'Alan Liu, discussing the possibilities for this kind of gesture in a post-industrial information-intensive era, connects it with "the ethos of the unknown", and finds it expressed in selected artworks as a "data pour," an overflowing uncontainable excess that he links with transcendence' (*HWT*, p179).

13. See, for example, Boris Eichenbaum, 'Theory of the "Formal Method"', 1926.

14. See Naomi Schor, *Reading in Detail: Aesthetics and the Feminine*, New York and London, Methuen, 1987.

15. N. Katherine Hayles, *Electronic Literature: New Horizons for the Literary* [2008], Indiana, University of Indiana Press, 2010, p58, henceforth *EL* in the text.

These intersections with and re-workings of the discourse of the sublime specifically lead us here to questions of romantic thought, and its conceptions of the relation between subject and world. In order to understand the conceptions of this relation in the literary digital humanities thinkers thus far discussed, we need now turn to the theory of autopoiesis - remembering that Lévy defines it as 'the process of continuous self-renewal' in the collective intelligence (*CI*, p263, n7).

AUTOPOIETIC AND AUTOIMMUNE SYSTEMS OF KNOWLEDGE

In terms of the polarity between classically objective and romantically subjective ideas of where meaning comes from, McGann discusses the quantum approach in the context of *The Ivanhoe Game* - a multifaceted digital text that allows for the recording and archiving of literary texts and inter-subjective interpolations. McGann here understands a given interpretive meaning as 'a line in the (interactive) system's own development possibilities, within which the "interpreter" is immersed'. The perceiver thus becomes part of an '"autopoietic" reality that sustains itself by communicating with itself' (*RT*, p218). With some difference in terminology, Hayles' attachment to ideas related to the autopoietic is articulated through the claims to 'epigenesis' and 'technogenesis'. Epigenesis refers to genetic changes driven by the environment rather than by the genetic code itself, and it thus indicates 'neural plasticity' - the ability of the brain to adapt to its environment (*HWT*, pp11, 82). Technogenesis is a theory of the 'coevolution' of humanity and technology, and the thought of nonhuman 'technical individuals' (*HWT*, pp10, 13). Similarly, Drucker's sense of the aesthetic specifies that the relation between entity and system is 'codependent', such that subject and object cannot be considered 'discrete' (*SL*, p27).

The issue of the coevolutionary significantly bears on the conception of language in *How We Think*. As remarked here, the shift from Saussure to Lacan is one from an understanding of the unity of the sign to the priority of the signifier, and to its 'infinite chains of deferrals' (*HWT*, p216). Hence, as Hayles speculates in her discussion of *The Raw Shark Texts* (a multimedia agglomeration with a printed novel at its core):

> What if language, instead of sliding along a chain of signifiers, were able to create a feedback loop of continuous reciprocal causality such that the mark and the concept would co-constitute each other? Such a dynamic would differ from Saussure, because there would be no theoretical distance between mark and concept; it would also differ from Lacan, because the signified not only re-enters the picture but is inextricably entwined with the signifier. Defying Lacan's logic of displacement, the result might be to enable an impossible desire to be realized, albeit at a terrible cost (*HWT*, p216).

16. Analogously, Lévy claims that the successive knowledge spaces do not destroy each other: 'existential configurations are put in reserve, stored in memory. And since they are always operational, they are available at all times. Everything is always present', Lévy, *Collective Intelligence*, op. cit., p227. This dream of total recall

In Hayles' discussion of this text, which is defined as being opposed to databases, this desire for linguistic presence is linked to an antipathy toward the excessive proliferation of writing (*HWT*, p16). With some comparability to Lévy's opposition between written and digital memory, one of the characters in *The Raw Shark Texts* finds, in a 'labyrinth of written material', an encyclopaedia that describes an '"ancient Native American belief that all memories, events, and identities consumed by one of the *great dream fishes* would somehow be reconstructed and eternally present"', creating '"eternal vision-worlds recreated from generations of shared knowledge and experience"' (*HWT*, pp214-5).[16] Thus, the desire for the immediacy of language, the nonseparation and co-originarity of signifier and signified, is linked to an idea of the total archive: the absolute presence of language and the presence of the archive to the subject converge. Such an idea is, in Derrida's terms, one of *archive fever*. To have this condition 'is to have a compulsive, repetitive, and nostalgic desire to return to the origin, a homesickness, a nostalgia for the return to the most archaic place of absolute commencement'.[17] Yet, as Hayles indicates, the text returns to difference and ambivalence: 'the doubled ending inscribes an ambiguity so deep and pervasive that only a reader's projections can give it final shape. The ambiguity highlights another way in which narrative differs from database: its ability to remain poised between two alternatives without needing to resolve the ambiguity' (*HWT*, p218). This ambiguity comes down, in the end, to whether one of the characters is understood to be a hallucination of another character, or 'an authentic subjectivity' (*HWT*, p218).

In terms of this kind of affirmation of the subject, *SpecLab* positions itself in relation to the historical existence of two forms of art formed through different perceptions of rationality. One is 'antilyrical, antisubjective', and aspires to science. The other is 'humanistic, lyrical' - a 'subjective romanticism that has opposed emotional, natural, and chaotic forces to those of technologically driven progress' (*SL*, p190). The remit of *SpecLab* clearly diverges from such a simple opposition between these two forms of reason, and from such a simple romanticism. Nevertheless, the tendency of the book is toward the subjectivist position. Subjective interpretation is argued to be 'central to the concept of knowledge as interpretation', 'the core of knowledge production' (*SL*, pxiii). Thus, despite the general claims of the autopoietic qua the indifferentiation of subject and object, it is clear that the human remains in some sense separable, and, indeed, prioritized. Hayles, for example, argues that 'People - not the technologies in themselves - will decide' how to 'redirect and reinvigorate humanistic enquiry' (*HWT*, p18). Likewise, 'narrative remains a uniquely human capacity', but something of the human precedes it: narrative is said to be a linguistic technology 'almost as old as the human species' (*HWT*, p219, 179).[18] The point is that there appears to be an *inconsistency* between the radical implications of the autopoietic as demoting the subject to a genuine, interconnected, cybernetic equivalence with the system, and the affirmation of a prioritised, separable human agency - an ironic affirmation

sounds perhaps like Freud's model of the infinitely receptive unconscious prior to the publication of 'Beyond the Pleasure Principle', 1920. In the later model, as Derrida discusses in 'Freud and the Scene of Writing', 1966, the unconscious is subject to death drive, erasure, and technological finitude. Thus, the unconscious is not infinite, nor finite, but *in-finite*. This argument would have us recognize that the digital archive is structured likewise: its information is both indeterminate and partial, and its lapses and losses nevertheless leave traces that disturb any sense of complete absence or total plenitude.

17. Jacques Derrida, *Archive Fever: A Freudian Impression* [1995], Eric Prenowitz (trans), Chicago and London, University of Chicago Press, 1996, p91, henceforth *AF* in the text.

18. Such speciesism might be questioned by invoking cybernetics: if an animal nips another as a warning, it is an act of communication and a use of language that clearly involves the idea of a sequence of events - a narrative. Comparatively, the 'IF … THEN' command in basic programming might be significant in this regard.

when coupled with reference to the Oulipo group, considering their intent to eradicate subjectivity from aesthetic production.

Hence, and despite the various references to poststructuralism, and to deconstruction more specifically in the literary digital humanities discourses under consideration in this article, we would have to note a certain limit to the amenability of these discourses. Where deconstruction is understood to affirm *originary technicity*, this would entail that the codependence or co-originarity of the human and the machine, claimed by Hayles for example, could not be supported. Originary technicity indicates that there is no human prior to *arche-writing*, or *gramme*, or *trace* - that is, 'writing' in the expanded sense given it by Derrida, which destabilises the polarity of the natural and technical. Indeed, the human is but an episode in the histories of such arche-writing, and in this context we would also have to recognise that the particular technologies associated with the human are also subjunct to the histories of the trace.[19] Arche-writing thus stands as the basis of the human, but in the sense of an original impurity that is structured by *différance*. It is thus the condition of the possibility *and* impossibility of the human. The idea of autopoiesis would then find its problematisation in Derrida's related notion of *autoimmunity*, which argues that systems are ultimately subject to their own disruption by an exteriority that yet emerges from within; that all systems are thus necessarily bound up with their own *non-dialecticisable* self-destruction.[20]

This distinction between the autopoietic and autoimmune is no doubt extremely complex, and depends upon the specific conception of difference in their articulation of system. Nevertheless, in general terms, where capital is understood qua system, it may be autoimmunity that gestures toward an exteriority internal to it that thus may not be simply capitalised. As the unfolding of a differential yet positively productive process, the idea of the autopoietic might thus be seen as a repression of more problematic systemic alterity. Indeed, the sense of an autopoietic system, as an unfolding of *its own* immanent possibilities, perhaps suggests in this context the continuing extension of capitalism. Such extension might be seen in the contradictory claim that technological system is directed by human agency, to the extent that it might reiterate a bourgeois form of individualism. In order to unpack these issues I want now to turn to Hayles' discussion of database ontology. Two, linked issues are at stake here: firstly, the question of the autoimmunity of database systems to their own closure - that is, their *différance* - and, secondly, the question of the programming of the human by such machinic indeterminacy.

THE NULL VALUE AND THE QUESTION OF THE SUBJECT

We might recall here McGann's argument that 'Whatever is not formally marked […] is computationally nonexistent' (*RT*, p226). Against such totalisation, Hayles states the opposition between narrative and database in

19. Concerning originary technicity, and the complex priority of the trace, see: Jacques Derrida, *Speech and Phenomena and Other Essays on Husserl's Theory of Signs* [1967], David B. Allison (trans), Illinois, Northwestern University Press, 1973, pp84-5; and Jacques Derrida, *Of Grammatology* [1967], Gayatri Chakravorty Spivak (trans), Baltimore, Maryland, The Johns Hopkins University Press, 1974, p84. Nevertheless, it has been tendentiously claimed that deconstruction is haunted by a residual humanism, as with other discourses of technology; in that 'something - or rather someone - always precedes or exceeds technicisation'. See Arthur Bradley, *Originary Technicity: The Theory of Technology from Marx to Derrida*, Basingstoke and New York, Palgrave Macmillan, 2011, p15.

20. See Giovanna Borradori, *Philosophy in a Time of Terror: Dialogues with Jurgen Habermas and Jacques Derrida*, Chicago and London, University of Chicago Press, 2003, pp85-136.

a language reminiscent of the sublime: 'No longer singular, narratives remain the necessary others to database's ontology, the perspectives that invest the formal logic of database operations with human meanings and gesture toward the unknown hovering beyond the brink of what can be classified and enumerated' (*HWT*, p183). Comparatively, and in line with McGann's use of Rosetti's dictum of the centrality of the subject, speculative computing for Drucker 'posits subjectivity and the inner standing point as the site of interpretation' and 'attempts to open the field of discourse to its infinite and peculiar richness' (*SL*, pp29-30). Yet we must recognise here Drucker's characterization of mathesis as a 'mythic ideal' (*SL*, p4). Indeed, Hayles' discussion of database search programmes, significantly problematises the very conception of the database as being totalizing or unambiguous other than in misrecognition or desire.

Hayles states that 'databases rely on enumeration, requiring explicit articulation of attributes and data values', but with one exception - the *null* value:

> Indeterminate data - data that are not known or otherwise elude the boundaries of the pre-established categories - must either be represented through a null value or not be represented at all. Even though some relational databases allow for the entry of null values, such values work in set-theoretic operations as a contaminant, since any operation containing a null value will give a null value as a result (*HWT*, p178).

The null may in fact refer to missing or inapplicable information, that is, either the nonexistent or the unknown - that which does not fit into the database typology at the point of data input. In terms of the three logical positions allowed by Structured Query Language (SQL) programming, which performs database searches, its value is thus 'Unknown' rather than 'True' or 'False'. There are a number of subqueries in SQL that may refine results to some extent, but such cannot eradicate the indeterminacy of the null value responsible for the contamination. Where such searches are conducted, the null value causes a specific type of human interpretive action effectively *generated* by the indeterminacy of the system. Such an inversion of agency might then be linked to McGann's sense that human interpretation materializes the infinitely immanent possibilities of a system, but in a way that would significantly problematise the idea of the active role of the subject and the neutrality of such a substrate.[21]

Those attempts to resolve the indeterminacy of the null are, in Derridean terms, attempts to close the system that nevertheless add more to it, and thus endlessly deny its totality (*AF*, p68). In other terms, the qualifying search tries to form a *hors-texte* that would neutralize ambiguity. And the infamous phrase implied here - Derrida's 'Il n'y a pas de hors-texte' - means that there is no final metatextual commensuration of textual indeterminacy. As Rodolphe Gasché

22. Rodolphe Gasché, *The Tain of the Mirror: Derrida and the Philosophy of Reflection*, Cambridge and London, Harvard University Press, 1986, p282.

23. 'On the level of conscious thought, attention […] selects from the vast (essentially infinite) repertoire of physical attributes some characteristics for notice, and they in turn constitute an object's materiality', Hayles, *How We Think*, op. cit., p14.

24. Jacques Derrida, 'Force of Law: The "Mystical Foundation of Authority"' [1994], in Gil Anidjar (ed), *Acts of Religion*, New York and London, Routledge, 2002, p244.

25. Jacques Derrida, 'Structure, Sign, and Play in the Discourses of the Human Sciences' [1967], in *Writing and Difference*, Alan Bass (trans), London, Routledge & Kegan Paul, 1978, p289.

articulated this issue: 'The absence of all extra-text […] is so not because of the general text's semantic wealth or unfathomable depth, nor because of the finitude of its human decipherer, but for structural reasons'.[22] It is not a matter, then, of the 'infinite richness' of the field, or of the finitude of the human.[23] Similarly, as Derrida argued in 'Force of Law', concerning problems of judgment, 'we know that these problems are not infinite simply because they are infinitely numerous, nor because they are rooted in the infinity of memories and cultures (religious, philosophical, juridical, and so forth) that we shall never master'.[24] Rather, it is because the very structure of *any* text, traditional or digital, aesthetic or formal, must be indefinite - positioned problematically between metaphysical concepts of the endlessness of the ad infinitum and the totality of the absolute infinite. As it is put in 'Structure, Sign, and Play in the Discourses of the Human Sciences': 'If totalization no longer has any meaning, it is […] because instead of being an inexhaustible field, as in the classical hypothesis, instead of being too large, there is something missing from it: a centre which arrests and grounds the play of substitutions'.[25]

Significantly, then, the problem of the null bears on the issue of the idea of the totality of a database. Because the idea of the closed database requires that every element within it be 'true' (assigned an actual value, including numerical zero (0) or 'empty string' (' '), this cannot be the case where there are unknown values within the system. The null, thus, is what denies totality, opening the closed world of the relational database back onto an open world. Hence, the null appears to operate in a similar manner to that described by Hayles as the function of narrative: it must also 'gesture toward the unknown hovering beyond the brink of what can be classified and enumerated' (*HWT*, p183). The ensuing point, in deconstructive terms, is that it is these linguistic forms of quotidian transcendence that are the motor *of* the transcendent. We might also say that the idea of the absolute, the total, etc., are merely the inverse image of the reality of systems which, 'essentially', by their originary, internal, and consistent indeterminacy, produce, as their other, the idea of their own (impossible) completion. The mere pretension of a replete database in this example, problematising its difference to narrative, thus calls into question the schema of *all* of the associated oppositions that this difference heads: determinate / indeterminate, totality / selection, quantitative / qualitative, machinic / subjective.

We have to recognize here, of course, that these issues are those of a particular technology of database searching that is itself in a process of contestation and development. Nevertheless, the null will stand here to question the ultimate possibility of systemic closure *in general*, as much as it also serves to question the problematic *generativity* of technical-linguistic machines. The null, then, indicates a doubled inversion of the humanist position: the systemic machine precedes the human, and the human may be determined, or indetermined, by it. We must consequently question whether the affirmation of the individual subject's priority thus becomes a matter of idealist affirmation.

Given the intersections with romanticism thus far indicated, this then also raises the question of whether this is a matter of a specifically bourgeois thought, a matter of capitalism. We need to remember here that capitalism is *also* a system that valorises the subject; indeed, capitalism's ideology *is* that of a specific articulation of the human subject. So, while I have been discussing the conceptualisation of the relation between the subject and digital mnemotechnical assemblages as autopoietic systems, I will now turn toward their place in the contemporary system of capital.

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CAPITALISM AND THE INFINITE

In order to contextualise these questions, I want now to move toward a comparison between the aesthetic relation to literary texts and populist analyses of cultural engagement with capitalized forms of communication and memory. To some extent the praxes indicated by these positions operate in different spheres - the professional and the amateur, the academic and the popular. And while the academies are increasingly being structured by private finance, these spheres are also, to some extent, defined by the difference of state funding and corporate investment in the possibilities of freely given leisure-time work. Nevertheless, such differences are perhaps less important, in the context of the overall argument here, than their general ideological orientation. What is at stake is the manner in which capitalized texts and their accumulation are envisaged as the substrate for individual interpretation and collective politics. While Hayles' engagement with the institutional and social politics of the infinite archive has been marked, such attention is rather more gestural in *SpecLab* and *Radiant Textuality*, but what this comparison aims to bring into question is the possibility that the populists' model of politics might be the logical extension of the aestheticians' theory of subject and system, as figured by autopoiesis. The relevance of this comparison, as I will now show, is located precisely in the shared conception of the subject's relation to the infinite archive.

In Jenkins' *Convergence Culture*, commercial video games are discussed as ways of 'expanding the storytelling experience' as an element within a number of linked platforms - film and video, web, traditional mass media, merchandising, etc. - that is, as 'transmedia storytelling'.[26] Such is described by one of the Microsoft team responsible for putting together a transmedia experience connected to the Spielberg film *Artificial Intelligence: A.I.*

> Create an entire self-contained world on the web, say a thousand pages deep, and then tell a story through it, advancing the plot with weekly updates, concealing each new piece of narrative in such a way that it would take clever teamwork to dig it out. Create a vast array of assets - custom

26. Henry Jenkins, *Convergence Culture: Where Old and New Media Collide*, New York and London, New York University Press, 2006, p8, p21, henceforth *CC* in the text.

27. Ibid., p128. In this context, I might refer to Feltes' materialist analysis of the economic dimensions of nineteenth-century print publication forms. Its grounding in the legacies of Althusser's theoretical assemblage would require negotiation of its theoretical inconsistencies, and its historically necessary attention to the role of the author-as-producer would need to be inverted to consider the role of the reader in the production of surplus value. Nevertheless it would be generative in thinking the specifities of digital forms of writing through their traditional precursors. As Feltes states: 'The series writer in the capitalist mode, however the task may be perceived ideologically, must produce or discover in each successive book, or instalment or part, that "virtually limitless multiplication" of ideological "inventions and combinations and configurations" which interpellate by constituting the bourgeois subject'. See N.N. Feltes, *Modes of Production of Victorian Novels* [1986], Chicago, University of Chicago Press, 1997, p9.

28. '"The Ivanhoe Game" is […] a difference engine for stimulating self-reflection through interactive role-playing', McGann,

photos, movies, audio recordings, scripts, corporate blurbage, logos, graphic treatments, web sites, flash movies - and deploy them through a net of (untraceable) web sites, phone calls, fax systems, leaks, press releases, phony newspaper ads, and so on ad infinitum (*CC*, p128).[27]

In Jenkins' account, the transmedia elements of the film *The Matrix* induce audience interaction conceptualized as 'knowledge communities' who 'dig deep into their libraries', and analyse texts as a 'bottomless pit of secrets'. Because 'The deeper you drill down, the more secrets emerge', 'The sheer abundance of allusions makes it nearly impossible for any given consumer to master the franchise totally' (*CC*, p101). Digital media are thus thought of in their 'encyclopaedic capacity' (*CC*, p118). But 'encyclopaedic', as against that totalizing dream of the Enlightenment, is in this sense incommensurable by a single user, or, indeed, by collective users. Furthermore, the total possible meanings of the assemblage are also beyond the bounds of its creators, 'since fan speculations and elaborations also expand on the world in a variety of directions' (*CC*, p116). Indeed, in Jenkins' discussion of fanfic, one adherent states that 'we have the ability to keep changing our characters and giving them new life over and over. […] We can give them an infinite, always changing life, rather than the single life of their original creation' (*CC*, p267).

Hence, we might begin to think about the parallels suggested here between popular, digital archival engagement and its literary-aesthetic other: an (apparently) infinitely reconfigurable, multiple text allows for what appears as the insertion of endless subjective agency and creativity that has nevertheless been induced by the system. Fanfictional activity might thus be not absolutely unlike McGann's adoption of and invention of personae in the context of *The Ivanhoe Game*.[28] We thus return to the issues of the subject / object relation as figured by the autopoietic conception of system. If capitalism is considered autopoietic, the question is whether what appears as agency will only be a reflection of the immanent possibilities of that system, and thus be interior to its own unfolding - despite, for example, McGann's sense that autopoietic systems may be self-transformative. In order to indicate how such might be the case for the populists, we should now turn to the image of politics as given in *Convergence Culture*.

The issue of information glut in the context of popular engagement is here specifically political and collective: 'the vast proliferation of specialized information serves only special interests, not the community'; and 'being deluged by undigested information on a vast unedited electronic blackboard' problematises possibilities of democratic consensus (*CC*, p248). On the other hand, citing W. Russel Newman, Jenkins counters that 'new developments in horizontal, user-controlled culture that allow the user to amend, reformat, store, copy, forward to others, and comment on the flow of ideas do not rule out mass communication' (*CC*, p254). Hence, the contradiction of digital media that runs through the book is that:

on the one hand, new media technologies have lowered production and distribution costs, expanding the range of available delivery channels, and enabled consumers to archive, annotate, appropriate, and re-circulate media content in powerful new ways. At the same time, there has been an alarming concentration of the ownership of mainstream commercial media, with a small handful of multinational media conglomerates dominating all sectors of the entertainment industry (*CC*, pp17-18).

Jenkins articulates a synthetic position between the poles of individual and mass communication (associated respectively with total fragmentation and centralizing oppression in their extreme forms). Thus, democratic participation operates between the *diversification* of grassroots public culture and the *amplification* of ideas allowed by top-down commercial broadcast media (*CC*, p268). Participation in this sphere, understood as gesturing toward the 'deliberative democracy' of the 'monitorial citizen', is understood specifically as an engagement with the capitalism of communications media. As Jenkins states: 'A politics of participation starts from the assumption that we may have greater collective bargaining power if we form consumption communities' (*CC*, pp246, 237, 260).[29] We should note here that the individual archives indicated here gesture to Lévy's idea of the collective intelligence, and to the cosmopedia, which appears as the fantastical presence of the total archive: it is 'the sum total of information held individually by the members of the group that can be accessed in response to a specific question' (*CC*, p27). Indeed, as with Lévy's ideas on this subject, which are consistently and explicitly recognized as the theoretical reference of Jenkins' book, commodity culture thus provides the framework for 'restoring democratic citizenship' (*CC*, p29).

In order to mark such an image of the political as a product of the system that it claims to mediate, we might refer to it, following Ted Striphas' invocation of Foucault, as 'neoliberal governmentality'. Here, claims to 'unprecedented levels of freedom, interactivity, and customization', must be qualified by the way in which such engagement might obscure 'the extent to which we're surveilled, mined for data, and compelled to act in ways contrary to our own interests'.[30] We might also think this situation through Mark Fisher's discussion of *precorporation*: 'the pre-emptive formatting and shaping of desires, aspirations, and hopes by capitalist culture. Witness, for example, the establishment of settled 'alternative' or 'independent' cultural zones, which endlessly repeat older gestures of rebellion and contestation as if for the first time'.[31] In this example of pre-determined recycling and modification, Fisher's conceptualisation of the 'reality' of capitalism is one that is 'infinitely plastic'. Indeed, it is 'akin to the multiplicity of options available on a digital document, where no decision is final, revisions are always possible, and any previous moment can be recalled at any time' (*CR*, p54). In Fisher's thought, then, capitalism is clearly attached to the endless deferrals of the ad infinitum, and it involves 'indefinite postponement', for

Radiant Textuality, op. cit., p222.

29. Ibid., p246, p237, p260. Something like the idea of the monitorial citizen also finds its theorization in Steve Mann's concept of *sousveillance*, See Vian Bakir, *Sousveillance, Media and Strategic Political Communication: Iraq, USA, UK*, London, Continuum, 2010.

30. Similarly, see Ted Striphas, *The Late Age of Print: Everyday Book Culture from Consumerism to Control*, New York and Chichester, Columbia University Press, 2009, pp184-5. Striphas' response to the problem is, in a considered sense, to advocate *hacking* as a political practice - to 'identify and exploit vulnerabilities in the technical and legal infrastructure according to which control sustains itself ', in order to 'actualize absent alternatives, effectively writing them (back) into the realm of everyday existence', p186.

31. Mark Fisher, *Capitalist Realism: Is There No Alternative?*, Hampshire, Zero Books, 2009, p9, henceforth *CR* in the text. This is not only an issue of the right: 'One of the left's vices is its endless rehearsal of historical debates', p78.

32. On eclecticism, see Jean-François Lyotard, 'Answering the Question: What is Postmodernism?' [1982], in *The Postmodern Condition: A Report on Knowledge* [1979], Geoff Bennington and Brian Massumi (trans), Manchester, Manchester University Press, 1984, p76; and on the critical function of *paralogy*, see, in that volume, pp60-67. The theoretical eclecticism of the literary digital humanities can be recognised, for example, in references to the Oulipo group, Alfred Jarry, Humberto Maturana and Francisco Varela, and a plethora of poststructuralist and scientific discourses and thinkers.

33. See, for example, Robert Darnton, *The Case for Books: Past, Present, and Future*, New York, Perseus Books, 2009, pp76-7.

34. Derrida, 'Force of Law', op. cit., p255.

example, in education and work. In addition, here, 'external surveillance is succeeded by internal policing' - the subject internalizes the bureaucratic function of the state (*CR*, p22). As with the productions of 'audit culture', what counts is for the accumulating documents of one's self-reflection to ward off further investigation (*CR*, p51). We might also see such self-documentation as an image of the effectivity of research productivity - part of the logic of techno-capitalist 'performance', as Lyotard describes it in *The Postmodern Condition* (1979). Indeed, given the disparate theoretical references collaged together by the literary humanists under discussion in this article, we might be minded here of Lyotard's distinction, in that book, between the possibility of a *critical* form of postmodernism and a postmodern *eclecticism* that reflects the epistemological fragmentation of capitalised knowledges.[32] Polemically, then, we might bring this description into play with some moves in the digital humanities toward the layered accumulation of texts, analyses, and reflections, particularly as they are conceptualised and valorised through a heterogeneous theoretical matrix. This question concerns not only those archival structures constructed by the aestheticians, but also those convergent archival assemblages of ebooks and pbooks and reflective commentaries envisioned by some as the future of the book.[33]

Engagement with such mnemotechnical forms is thus necessarily problematic: democracy thus thought appears as a part of the 'autopoietic' system of capital, just as knowledge production and distribution is modelled on consumption. I have already opened the difficult question of the relation between autopoietic and autoimmune systems, and the indefinite, rather than infinite, character of systematicity as such; but we might note, finally, that the understanding of deconstruction's engagement with such systems of archival memory is more complex than is sometimes thought. As I indicated in the introduction to this essay, via Hayles, there are those who associate poststructuralism with endless, millimetrically detailed critique. As Hayles says: 'Conditioned by several decades of post-structuralism, many humanistic disciplines associate "theory" with the close scrutiny of individual texts' (*HWT*, p31). Machine reading, as that which might, through further visual abstractions, produce some kind of determinate, functional data, clearly stands in opposition to such close reading. Yet this kind of opposition, which reiterates the association of deconstruction with endless critique, fails to recognise that for deconstruction, emphatic in its affirmation of difference, deferral must be subject to its own opposition, to its own displacement.

In 'Force of Law', for example, Derrida discusses the problematic relation between *calculation* and *decision*. Calculation is associated with 'juridico-, ethico-, politico-cognitive deliberation' that refers to existing knowledge.[34] Such knowledge, of necessity, must be located in mnemotechnical forms. As such forms are indefinite, calculation effectively encounters an endless archival engagement: there is an impossible demand to know *everything* about a situation in infinite, encyclopaedic detail. But, as Derrida also argues,

such descriptive labour is subject to that of the performative: 'the *decision to calculate* is not of the order of the calculable'.[35] That is: any decision worthy of the name must cease the programmes of calculation in a moment that obviates and counters the indefinite accumulations of existing knowledge in order to open the possibility of a different future - different, for example, from the reiteration of the individual, social, and epistemological conditions given by the current relations of capitalism and mnemotechnical forms. Such decisions, by instituting ideas that must have a social or medial inscription, point towards further archival accumulation; and by repeating the gesture of institutionalisation, decision gestures backward toward an archival past. Yet there is thus, in deconstruction, a complex sense in which any just, ethical, or, rather, here, any political engagement worthy of the name, must require this problematic moment of forgetting, this complex point of non-cognition that is *a deferral of deferral*; a retraction from the indefiniteness of existing knowledge that is also a moment of radical archival suspension.

35. Ibid., p252.