

**E-LIT WORKS AS ‘FORMS-OF-CULTURE’:
ENVISIONING DIGITAL LITERARY
SUBJECTIVITY**

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Building on J. Hillis Miller’s 1995 article ‘The Ethics of Hypertext’, Gary Hall argues in *Digitize This Book!* that digitization, open-access and web self-archiving interrogate the limits of cultural studies ‘by positioning the normal and the usual – in this case, cultural studies and the more conventional modes of “doing cultural studies” – in a “strange and disorienting new context”, thus helping us to see cultural studies again “in a new way” (2008: 202). A related compelling question that the present paper asks is whether a similar (but reverse) operation might be practicable, i.e., if by positioning our concepts of the machinic and of the digital/computational literary within the frame of cultural studies it might be possible to see new media studies again in a new way. If we were to apply Gary Hall’s analogy in a rigorous way, however, we should first look at the *conventional modes of doing new media studies* before putting them in the disorienting context. As Noah Wardrip-Fruin and Nick Montfort remark in their co-edited volume, *New Media Reader*, breakthroughs in the field ‘have [usually] come from thinking across disciplines, from rethinking one area of inquiry with tools and methodologies gained from another...’ (2005: xii). As a consequence, trans-disciplinary laboratory conditions can be said to have generally represented some sort of methodological norm for new media studies scholarship. In order to bring estrangement to a further level, I here therefore attempt to put selected issues pertaining to critical debates on digital literature, such as medium-specific materiality and interactivity, against the background of an *already* hybridized theoretical setting.

In order to shed light on the nature of such hybridization, we can start from pointing out that the ‘forms-of-culture’ of my title refer to a conceptual point of intersection I envision between Ludwig

Wittgenstein's late philosophy and reconfigurations of our notion of subjectivity as emerging from various scholarly contributions which focus on aspects and debates specifically related to American culture. In disciplinary terms, such junction can appear contingent and far-fetched, if not overtly and bluntly artificial. Whereas, according to Francois Cusset, American scholars have carried on a general 'displacement' and 'reconstruction' of French Theory in order 'to confront specifically American questions' (2003: xiv), they seem to have very rarely regarded Mitteleuropean analytic philosophy – not to mention the controversial position of Ludwig Wittgenstein's philosophy¹ in relation to it – as similarly 're-usable' materials. Outside the specific field of philosophy,² in fact, Wittgenstein's conception of the mind, of language, and of the specific qualitative difference of philosophical thinking (and of the humanities in general) from scientific research seem to have traditionally been of little help to scholars interested in understanding American historical and cultural experience, let alone American technological modernity. On the other hand, it is possible to argue as a counterpoint that, although digital media scholars have often examined electronic literary works produced in the United States and characterized by diversity of topics and concerns that can be reconnected with the multicultural diversity of US literary productions, they rarely claim either for these digital forms of expressions or for the methodologies employed in their analysis any characterization germane to American culture. As a result, rather than rethinking the so-called digital literary with tools and methodologies borrowed from another cohesive discipline, I am here adopting the analytical lens of an already imagined trans-disciplinary encounter that has, in concrete terms, rarely occurred in the history of Western contemporary thought.

Although the complex relationship between American studies and Wittgenstein's philosophy cannot, of course, be properly addressed within the article-length format, we can list at least two reasons for an attempt to bridge such culturally-specific intellectual disconnection in relation to digital studies. First, the fact that many a critic has stressed how Wittgenstein's philosophy brought about a 'community account' of the mind³ makes his remarks particularly suitable to be put in conversation with the foundational work on distributed cognition in digital environments provided by N. Katherine Hayles. Second, the loose character of Wittgenstein's philosophical observations typical of his late writings opens a space for intellectual explorations reaching well beyond the limits of strict textual exegesis. As Pierre Bourdieu observes, 'a foreign reading is

sometimes more *free* than a national reading of the same text' (1999: 223), but in re-examining Wittgenstein's late philosophy through American cultural concerns such *free* readings might be doubly legitimated. Beside the unconfined limits of Wittgenstein's unfinished project, revisiting the Austrian philosopher's *Weltanschauung* within the American intellectual domain might be put in line with accounts of American culture that see it as characterized by a 'historical tradition of subversive counterreadings, a quintessentially American tradition that started with the Founding Fathers and their interpretation of the Bible' (Cusset, 2003: xvii). Much as Chantal Bax does in her 'Inner and Outer, Self and Other: Wittgenstein on Subjectivity', therefore, rather than pursuing hermeneutical activity on Wittgenstein's philosophy, I am here (purposefully) working out a Wittgensteinian account of subjectivity that is suitable to productive interconnections with digital studies. Such an account, when connected to specific theoretical insights in contemporary cultural studies such as Paul Gilroy's discussion of so-called *infrahumanity*, or Fred Moten's emphasis on object's resistance, might then be put into a fruitful conversation with the current discourses about digital textuality – discourses that frequently relate to e-lit works produced in North America.

The aim of this paper is to explore unforeseen outcomes of positioning the analysis of electronic literature within the ideal conjunction of the methodological approaches discussed above. Wittgenstein's philosophical perspective on language as the *use* of performative words, and American cultural studies' attention to pluralistic repurposing and re-appropriation of established meanings of cultural 'objects' (and therefore also including digital media 'artifacts') under the agenda of *enacted* subjective identities converge in offering an opportunity to imaginatively rethink the subject/object dichotomy in relation to digital literary works. The heuristic value of my discussion lies in possibly bringing to light – through the interaction of such perspectives – unexpected relevant consequences for the current conceptualization and preservation paradigms of electronic literary works. One of such (implicit) consequences is the positioning of electronic literature as a chore site to possibly re-orient current perspectives from which we look at digital humanities as 'increasingly integrated in the humanities at large' (Liu, 2011). As the Mission Statement of Alan Liu's *4Humanities* project reads, today

[digital humanities] catch the eye of administrators and funding agencies who otherwise dismiss the humanities as yesterday's news. They connect across disciplines with science and engineering fields. They have the potential to use new technologies to help the humanities communicate with, and adapt to, contemporary society. (2011b)

Reconsidered within Wittgenstein's philosophical frame, e-lit works can function not only as testing grounds for innovative computational academic activity but also as entities whose textual and algorithmic behaviours can be approached as marks of cultural difference and subjective identity – in other words, as entities which are able to 'capture the sense of social and cultural entanglement that is implicit in the word "subject"' (Mansfield, 2000: 2). By means of the Wittgensteinian account of inter-subjectivity as relational interactions based on 'language games', we can re-imagine the – often interactive, time-based, algorithmic – digital work as a simulation of a narrating, textual, literary subject. Such basic re-conceptualization process would encourage, I hope, a more insistent focus of digital humanities on issues such as the notion of identity formation, the problems of trans-cultural relationships and our ways of negotiating literary content in the *contact zone* of the man-machine interface. As Katherine Hayles points out, electronic literature can be seen as 'a cultural force helping to shape subjectivity in an era when networked and programmable media are catalyzing cultural, political and economic changes' (2008: 37). Indeed, Alan Liu has argued at MLA 2011 for the need on the part of digital humanists to 'move seamlessly between textual analysis and cultural analysis' (Liu, 2011a). It is in the hope of making e-literature the locus of a radical structural change that I suggest we might need to put, alongside the scientific-oriented use of digital technology aimed at producing new (i.e., previously unavailable) knowledge,⁴ a conscious willingness to use technology for developing *imaginative* forms of knowledge, ones that will facilitate a better understanding of the *human* component in the 'digital *humanities*' terminological construct.

Resisting the object

A good starting point in evaluating the extent to which the theoretical frame of subjectivity might help us with understanding

our current relation to digital literary works can be the renewed critical consideration the term 'object' is undergoing in contemporary digital studies. Noah Wardrip-Fruin's concept of the 'textual instrument' (Wardrip-Fruin, 2005), Matthew Kirschenbaum's idea of digital text as 'material inscription' (Kirschenbaum, 2008), Hayles's definition of digital-born literature as a 'first-generation digital object' (Hayles, 2008), and Michael Mateas's Expressive AI artistic 'artifacts' (Mateas, 2001) can be seen as different constituents of a theoretical constellation reflecting a fundamental object-driven conceptualization model of digital text-based works. As a counterpoint to the frequent use of expressions such as 'digital object' and 'digital artifact', however, new media scholarly contributions are paying more and more attention to theorizations of digital works that seem to transcend 'objectual' characterizations. Davin Heckman's discussion of the so-called *e-ject* as a digital entity situated on the borderland between the two states of object and subject (Heckman, 2009), or the role of 'Object-Oriented Ontology' (and, in general, of 'Speculative Realism') in Ian Bogost's work, for example, are revealing of an increased attention, in the digital field, to qualities of *things* that have commonly been downplayed by our traditional focus on human values and concerns.

Endowed with equal status with other existing entities, things or artifacts can be viewed as expressing that rather ineffable 'before and after of the object', that 'thingness' that, in Bill Brown's terms, 'amounts to a latency (the not yet formed or the not yet formable) and to an excess (what remains physically or metaphysically irreducible to objects' (2001: 5). Digital objects, in Bogost's words, for example, prove to be 'irreducible to the uses to which humans like philosophers might put them'⁵ and it is precisely in the move away from the human-centered paradigm that we can allow for the emergence of a shifting attention towards *inter-objective* dynamics. As I argue elsewhere (Carassai, 2009), however, such reconceptualizations of objects as irreducible to mere things have rarely led digital scholars to move towards a philosophically-grounded *subject-ification* of the electronic textual artifact. In other words, interactive, algorithmic, and time-based affordances of digital works (such as guard links in Michael Joyce's *Afternoon*, text animations in Judd Morrissey's *The Jew's Daughter*, rule-guided responses in Michael Mateas and Andrew Stern's *Facade*, for example) have hardly ever been conceived of as sufficient conditions for imagining any actual forms of *subjectivity* embodied by digital pieces. Rather than as virtual textual *subjects*, electronic literary works – often featuring algorithm-based, time-based, expressive AI

modalities – have mainly been analyzed as textual objects and framed within digital media discourses that have revolved with remarkable recurrence around issues of *materiality*.

As Hayles justly argues, before the renovated focus on materiality encouraged by digital literary productions, ‘with significant exceptions, print literature was widely regarded as not having a body, only a speaking mind’ (2008: 32). However, Wittgenstein’s late philosophical view moves from a fundamental rejection of the idea that meaning and thought can reside in any metaphysical locus prior to enacted language-based interactions aimed at meaning production. Much as electric polarities-based digital responses, Wittgenstein’s theory of ‘language games’ does not build on the hypothesis of a locatable ‘speaking mind’ which is able to perform thought processing in the absence of language (i.e. before any actual behaviour-based language manifestations). Any mental process, in Wittgenstein’s terms, ‘takes some shewing [sic]’ (1972: §14) and – more generally – any ‘inner process stands in need of outward criteria’ (1953: §580). A Wittgensteinian understanding of the subject implies therefore an attention to the prominence of relationality over issues concerning the essence of the single Cartesian subject. In its characterization as a rule-guided activity, language becomes for Wittgenstein the set of relational phenomena (multifariously connected in a texture of family resemblances) that shape our inter-subjective activity. Language has no essence but ‘is part of an activity, or of a form of life’ (1953: §23) and our language games are interwoven with non-linguistic practices in a totality which is at the same time contingent and embedded in them. In the *Philosophical Investigations*, he ‘call[s] the whole, consisting of language and the actions into which it is woven, a “language-game” [emphasis added]’ (1953: §7) and explains that ‘to imagine a language means to imagine a form of life’ (1953: §19). As a result, from a Wittgensteinian point of view, considering e-lit works either as literary digital objects or as textual post-machinic subjects is contingent on the extent to which we allow electronic literary works to change the rules of our language games – rather than on any pre-defined ontology of the digital. As Wittgenstein puts it, ‘essence is expressed in grammar’ (1953: §371) and grammar sanctions ‘what kind of object something is’ (1953: §372). Insofar as we recognize e-lit works (and the behaviours their interfaces encourage) as changing grammar propositions (sentences that express a rule) governing the language games that define, for example, our concept of reading and writing, we should grant them an inter-subjective role in modifying our ‘form of life’.

Digital text-subjective identity

As we can infer from the considerations above, Wittgenstein's late philosophical work can provide a suitable frame to elaborate a critical process which potentially leads to the envisioning of a digital textual subjectivity for digital-born literary works and, ultimately, to the conceiving of electronic literary works as textual post-machinic subjects. Although subjectivity – as a social, political, and philosophical category – often works as a conceptual frame against the particularities of separate *selves*, the matrix of relations within which subjects develop context-dependent identities usually allows for discourses of diversity and individualization. Although in apparent contradiction with the universalizing abstraction and flattening standardized reduction operated by binary encoding processes on the wide range of informational modalities (sound, images, words), diversity and individualization do not seem to be in any unsolvable or fundamental contradiction with digital media discourses.

As Kirschenbaum acutely shows in *Mechanisms*, it is possible to distinguish between *formal* and *forensic* materiality, i.e. between 'the imposition of multiple relational computational states on a data set or digital object' (2008: 12) and 'the amazing variety of surfaces, substrates, and other material that have been used over the years as computational storage media' (2008: 10).⁶ In his enlightening treatment of the digital document as 'material inscription', Kirschenbaum observes how 'forensic materiality rests upon the principle of individualization (basic to modern forensic science and criminology), the idea that no two *things* in the world are ever exactly alike. ... this extends even to the micron-sized residue of digital inscription [emphasis added]' (2008: 10). It is interesting to observe that Kirschenbaum's recourse to magnetic force microscopes (MGM) might be construed as responding to a cultural condition that poses as implicit the need to elaborately and clinically *argue* about objects' unique identity. In the case of subjects (and of their theoretical fetishization in cultural theory), we conversely take the principles of individuality, oneness, and singularity (and consequent mortality) fundamentally for granted. As a result, we assume by default that individual subjects are unique also in relation to the fatality of the duration of their existence. Figuratively speaking, our efforts to preserve digital textual 'objects' – carried on by means of the use of open source software, subsequent content migration to new systems/platforms, and eventual emulation (i.e., software emulators that recreate the experience of accessing

unavailable *editions* of digital works)⁷ – could be seen as marking our resistance to accept the inevitable disappearance of the hypothetical digital textual ‘subject’. Questions arising from such a line of inquiry would be concerned with an extent to which our preservation approaches and methodologies are a legacy of objectification inherent in print culture. As Howard Besser has suggested, electronic works share several features with performance art pieces and usually challenge the search for the reproducible textual experience that we normally associate with the textual stability of print (see Besser, 2004). Unlike printed text, digitality transforms the textual instance from a typographic object into an *event* in the electronic environment. As Hayles points out, ‘a digital text exists as a distributed phenomenon’ (2006: 185). The data files can be on one server and the actual machine creating the displayed text in another location; the user’s browser can display the same text with different colors and different formats; moreover, there are ‘programs that call and process the files, hardware functionalities that interpret or compile the programs’ and so on. It is for these reasons that ‘it would be more accurate to call a digital text a *process* rather than an object’. As Hayles goes on to explain,

The machine produces the text as an event; the reader interacts with that event in ways that significantly modify and even determine its progress; these readerly interventions feed back into the machine to change its behavior, which further inflects the course of the performance.
(2006: 187)

In electronic textuality, then, the event-like instantiation of digital text shifts the literary negotiation between human and machine towards the realm of *performing* language games that we increasingly struggle to identify as traditional *reading*. In Wittgenstein’s terms, the crucial aspect about rule following in a language game does not lie in the ever-changing diversity of situations, but re-occurs in any occasion in which the rule-following performance is required (re-reading is, from this point of view, not so different from the game re-calculating, for example). Reading digital literary works allows us to put to the test our Wittgensteinian rule-following activity in the interface condition as much as it allows us to test the relationship between the self and the (machinic) other within the intermediation feedback dynamic described by Hayles. Insofar as e-literature has a role in testing behavioral responses that might generate a reconfiguration of the rules of language games, we as critical digital

theorists should ask how long we can afford to keep our interactions with digital literary works locked outside the circle of *inter-subjective* relations.

Digital behaviour

Theoretical insights that might encourage a reframing of electronic works as subjectivity-endowed entities seem to come from some of the most relevant contemporary scholarly contributions to digital media studies. For example, Noah Wardrip-Fruin observes in *Expressive Processing* that ‘rather than defining the sequence of words for a book or images for a film, today’s authors are increasingly defining the rules for system *behavior*’ [emphasis added] (2009: 3). And, more generally, Kirschenbaum points out in *Mechanisms* that ‘what is unique about computers as writing technologies – [is] that they are material machines dedicated to propagating an artificial environment capable of supporting immaterial *behaviors*’ [emphasis added] (2008: 158). Literary authors operating in/with digital technologies with the purpose of creatively exploring the specific features of the medium in the production of text-based electronic works seem therefore likely to be involved in designing behavioral entities within an ambience that encourages behavioral procedures. Behavior design, however, implies – among other things – an artful conception of conditions for the generation of textual expressions in the form of a rule-guided activity. A digital entity whose procedural behavior relies on an activity instantiated by rules can be construed as family-resemblant with Wittgenstein’s conception of ‘form of life’. In other words, designing behaviors for the performance of ‘language games’ can be conceived of as designing behaviors for the post-objectual abstraction I am setting up here when I refer to digital textual subjectivity in terms of a Wittgensteinian *form of life*.

When behavior enters the stage, however, *culture* is to be recognized as a crucial factor, alongside the technical and/or the biological. Although Krkac and Lukin discuss in ‘Forms of Life as Forms of Cultures’ the identification of the term ‘form of life’ with ‘form of culture’ from a philosophical point of view, we should not forget that Wittgenstein’s later philosophical attention to language as community practices in everyday life took place at a historical moment when anthropology and ethnographic studies in Britain were undergoing a heated debate concerning their critical disciplinary and methodological reconfigurations. As Ben Highmore remarks in *Everyday Life and Cultural Theory*, ‘the debates not only

concerned how to attend to “a culture” (the meanings and beliefs of everyday life), but included questions of what a “culture” was’ (2002: 99-100). Although Wittgenstein himself treats the fundamental notion of ‘forms of life’ as synonymous with ‘forms of culture’ only once in his entire oeuvre, Greg Hill observes in his ‘Solidarity, Objectivity, and the Human Form of Life: Wittgenstein vs. Rorty’ how many a commentator has interpreted the ‘form of life’ expression as a shorthand for ‘culture’ and ‘way of life’. Wittgenstein’s use of such words, however, must be distinguished here from Raymond Williams’s treatment of such terms as synonymous for intellectual, spiritual and – above all – *aesthetic* developments within a community (Williams, 1985). The ‘way of life’ Wittgenstein is referring to is related to the set of language games which we – as humans – are inclined to *perform*. Wittgenstein’s famous remark, ‘if a lion could talk, we could not understand him’ (1953: §223), relates, in Hans-Johann Glock’s terms, to the fact that ‘if lions had a *feline* language of complex growls, roars, etc. we could never come to learn it. Why? Because their form of life, and their behavioral repertoire, are so alien to us. We could not make head or tail of their facial expressions, gestures and demeanour’ (1996: 128). In other words, our form of life denotes our ability to interact inter-subjectively by means of the performance of language games.

The rise of identity politics and the re-contextualization of anthropology within the multifarious settings of modern urban life in the 1980s can be seen as two elements that marked both cultural studies’ and American studies’ recent focus on identity-based groups and their cultural *performances*. As Susan Manning argues, American cultural studies have considerably rethought new uses for the verb ‘perform’: ‘in its new usage, the connotation of the verb shifts from the achievement of an action to the embodiment of an identity. ... scholars today talk about how social actors perform race, ethnicity, gender, sexuality, class profession, region, and nationality’ (2007: 177-178). As a consequence, there seems to be more than one reason to translate the family-resemblant linguistic and extra-linguistic practices multifariously tangled in our human condition (as envisioned by Wittgenstein) into the complex interconnection of ethnicity, identity, belonging, and intercultural responses that characterize modern subjectivity – especially in its relationship to the recent appearance of technologies of digital communication. In our contemporary times in which communities imagine themselves across the fluid borders or so-called *glocal* (global *and* local) connections, electronic forms of representations such as e-lit works

might increasingly play a non-trivial role in promoting trans-cultural processes of identification. Such processes are likely to involve dynamics of literary negotiation that readers experiences at interface⁸ level as performances of language games in their interaction with the behavior of e-lit works.

Rather than on any underlying systemic essence characterizing the complex of cultural behaviours which define our 'forms of life'/'forms of culture', Wittgenstein's perspective, however, focuses on the intrinsic relationality among the various language games, and on how they can possibly change. As Wittgenstein highlights, language games are interwoven by means of manifold connections and 'this multiplicity is not something fixed, given once for all; but new types of language, new language games, as we may say, come into existence and others become obsolete and get forgotten' (1953: §23). Such position is key here if we are to understand the extent to which e-lit works such as *Afternoon*, *The Jew's Daughter*, and works of interactive fiction, such as *Zork* and *Adventureland*, are changing the rules of our language games of *reading* and *writing*. From this point of view, our increasing daily exposure to digital, digitized, and virtual representations marks our implicit, so to speak, Malinowskian⁹ condition of 'participant observers' in the digitally and technologically mediated practices that inform the production and consumption of digital entities. In describing Karl Sims's *Evolved Virtual Creatures*, Hayles highlights, for example, how 'viewers attribute to these simulated creatures motives, intentions, goals and strategies' (1999: 1), even if they are perfectly aware that these creatures are only computerized visualizations. The system required to enact the creatures' simulation is considered by Hayles as involving 'three modes of interrogation: what it is (the material); what it does (the operational); and what it means (the symbolic)' (1999: 2).

From the point of view of the renovated attention to the cultural construction of identity circulating in contemporary American cultural studies, however, any treatment of a digital literary text as an entity endowed with subjectivity would call for an inherent dismissal of essentialism by shifting the focus on the cultural specificity and context-dependent particularity embodied by the digital work. A rejection of essentialism, in our specific case, would likely lead to a deep and articulated questioning of the first mode (what it *is*). Applying the ontological dissection down to the 'bottom of the hierarchy', where 'electronic polarities join the material and operational to create bits, the semiotic markers of one and zero'

(Hayles, 1999: 2) – an approach reminiscent of Kirschenbaum’s intention to ‘go down to the metal’ in his *Mechanisms* – would mean, in fact, going down in an obscure area reminiscent of what Paul Gilroy in *Against Race* calls ‘infra-humanity’ in the case of human subjects. An aberrant outcome of ideological discourses whose hidden assumption is that the human can exist at different (usually progressively lower) spectrums of frequency, qualitative difference of digital artifacts tends to conversely establish itself virtually unchallenged in current new media discourses along the lines of algorithmic complexity, file size, up-to-date format, proprietary or open source software, and so on. An instantiation of such categorization can be seen in the concept of hash algorithms in computer forensics, for example. Kirschenbaum uses hash algorithms to show that ‘electronic objects can be algorithmically individualized’ – where individualization ‘is the principle underlying standard identification techniques like *fingerprinting* and *DNA*’ [emphasis added] (2008: 56). To the extent that we use subject-related language expression, a whole range of subject-oriented concerns could ideally follow. Can problematic issues of ‘infra-digitality’ exist as a genuine cultural concern in our practices of using, reading, experiencing, but above all cataloguing and archiving digital ‘artifacts’? What kinds of relationship might we be establishing (either consciously or unconsciously) between inner code complexity and output textual renditions? And how do such connections relate to the symbolical mode of the literary?

Assuming such issues are worthy of investigation, a whole set of conceptual concerns might follow. The frame of subjectivity would call here, for example, for a theoretical equivalent in digital textual theory of Gilroy’s objection ‘to the reduction of individual human particularity to the “maps” of its DNA sequence’ (2001: 40). As Richard Lewontin explains, ‘the organism does not compute itself from its DNA. A living organism at any moment in its life is the unique consequence of a developmental history that results from interaction of and determination by internal and external forces. ... Nor is “internal” identical with “genetic”’ (1991: 63-64). In both biological and cultural terms the word ‘behaviour’, in fact, always includes issues of *external contexts* as inextricably connected with the circumstances of behaviour. As Bax explains in her ‘Inner and Outer, Self and Other: Wittgenstein on Subjectivity’, we rarely judge (and react to) a person’s behaviour in a void, and we tend to have very different speculative responses ‘whether I see him or her cry during an award ceremony or whether I observe these tears during a funeral’ (2007: 327). As we can easily grasp, however, these different

responses account for that characteristic uncertainty that is constitutively inherent in our relationship to other *minds*.

In interpreting our relationship with the machinic *other* as a mind-to-mind kind of relation, scholars seem to be usually comfortable in granting the machine some level of ‘cognitive intelligence’, especially in relation to internal processing of information. Although moving from very different perspectives, for example, Raymond Kurzweil’s characterization of digital machines as currently on their way to reach the 20-million-billion-calculations-per-second capacity of the human brain and Hayles’s observation that ‘any entity that can perform these tasks [information filtering, data selecting, neural nets decision-making] should *prima facie* be considered thinking or intelligent’ (2006: 35) can be considered relevant instantiations of such theoretical bias. However, the same does not usually apply to machines’ storytelling performances. While we frequently invoke computable machinic inner states in the form of internal algorithmic processes as responsible for the ongoing comparing/testing/double-checking activity which occurs *behind* final textual outputs, we tend to characterize as less prominent the fact that, as readers of e-lit works, we do not encounter the machinic mind at the level of code but rather deal with the textual responses on our screens. Moreover, from a Wittgensteinian point of view, some language games do not necessarily imply a concern for the mental as a hidden dimension behind the surface. As Wittgenstein writes, ‘there is a game of “guessing thoughts”’ but ‘if I see someone writhing in pain, with evident cause I do not think: all the same, his feelings are hidden from me’ (1953: §223). How can we then relate our experience of machinic behaviours and of digital textual subjectivity to the language games we have been initiated into by our (human *and* technological) interactions within our pre-existing specific cultures or communities?

Let us consider here as a sample model of the larger range of contextualized digital behaviours a common phenomenon of electronic environments: unresponsiveness. From a cultural/language-game-instantiated point of view, digital/machinic unresponsiveness during storytelling should be ideally regarded as very different from unresponsiveness occurring, for example, during software launching or maths calculations. The first case can be hypothetically associated with a set of responses that, in the case of subjects, might include: traumatic difficulties, some form of hesitant temper, or even rhetorical awareness of pauses in narration. The latter might get conversely associated with possible poor cognitive

abilities or with unexpected complications arising during problem-solving-oriented *computational reasoning*, but would hardly (or, at least, very rarely) be interpreted in conjunction with moral and/or ethical qualms. Since I am using unresponsiveness here for mere illustrative purposes (i.e., without going into further analysis), I would urge the reader – in a typically Wittgensteinian colloquial style – not to identify time gaps as merely the visual equivalent of the *inner* computational process, but to ‘look and see’ (1953: §34) what consequences they have on the surface. Think about what rhetorical effects interruptions often produce in relation to the development of a narrative. Think about how relevant pauses can be in poetry. Think about how intense pauses can become in theatre performances. Now think about why such elements – for us as interpreters – should not play a role as forms of ‘imponderable evidence’ that no longer concern exclusively textual content but also textual *behaviours*. If specific features of electronic literature such as multi-media, time-based and interactive components are assumed to be transcending the traditional affordances of printed literature, then it becomes hard to imagine reasons why the textual behaviours we associate with digital literary works should not be legitimately included within our interpretive affordances and critical responses as readers.

Post-machinic cultural studies?

I have been drawing on an ideal conjunction between American cultural studies and Wittgenstein’s specific philosophical vision, but I have not addressed subjectivity in any anthropological or philosophical sense. The purpose of this paper has not been to identify theoretical assumptions that might allow us to start contemplating the possibility of an ontology either of the *human* or the *machine*, or to highlight how, as Luciano Floridi observes in his ‘Artificial Intelligences’ New Frontier’, ‘we are now slowly accepting the idea that we might be informational organisms ... not so dramatically different from clever, engineered artefacts’ (2008: 1). I hope my reflections might have shed some light over points of intersection between the human and the digital when approached from the point of view of the complexity of procedural inter-relations exhibited by both in terms of language-game performance. Such inter-relations, however, need not be understood in any way as essential(ized) substrata constitutively shared by machines and humans alike. Readers and e-lit works meet one another at the level of the performative rule-following of language games and, as Wittgenstein remarks, ‘it is in language that an expectation and its

fulfilment make contact' (1953, §445). From this point of view, I have also suggested how a neat theoretical division between *object* and *subject*, *mechanism* and *organism*, in the specific case of text-based digital works might be characterized as hardly sustainable at the level of literary criticism, especially when the frame of subjectivity reconfigures traditional notions of *product* and *process*, or *artefact* and *performance*.

As a disciplinary field still in search of its own institutional status and its own methodologies, the study of new media 'artifacts' cannot but proceed by means of a constant updating process of its scholarly agenda and terminological paradigms. The teleology of such virtual updates seems to point toward an apparent reconfiguration of humanistic and speculative concerns under a renewed positivist call for digital humanities as *augmented* humanities (humanities + empirical scientific digital object's analysis). If we seem to live less and less in a time in which poets are 'the unacknowledged legislators of the world', it might be because, in our urge to *understand* the nature of the digital, computational theory legislators might be eventually destined to replace them. This is of course part of a more general tendency within the humanities at large. As Joseph Tabbi remarks, 'theory – not fiction, not poetry, not the wide-ranging cultural essay or editorial – has become the new vernacular of "popular culture". We might find "literariness" circulating through the mediasphere, but rarely references to literature; "fictionality" but not fictions; "autopoiesis", but not much poetry' (2008: 312).

The attempts in new media criticism to find an operative terminology for 'such amalgams as "electronic literature" or "e-poetries"' (Morris, 2006: 5) seems to encourage a vision of language as an (often inadequate) representational mode to picture what we see and do *within* the digital. As literary/cy scholars committed to ascribing highest power to verbal metaphors and to seeing language as an irreplaceable tool for *poiesis*, we should take full responsibility for what we, as critical minds, can allow to exist as cultural entities. To an imaginative literary mind a textual system that evolves in ways which are unexpected even to its own creator *can* already be interpreted as a 'textual organism'. To an imaginative literary mind software emulators that, in Terry Harpold's terms, replicate 'features of one computing system using the resources of another so as to imitate *behaviours* of the first system as closely as possible' [emphasis added] (2009: 4) should evoke the role of actors in enlivening inert written drama scripts. To an imaginative literary mind the algorithmic possibilities of the digital texts in

envisioning the simulation of a virtual narrating subject could link the ancestral birth of African-American literature of the first slave narratives – all based on the reworking of the metaphor of the ‘talking book’ trope¹⁰ – to the twenty-first century literary canon in terms of digital interactive *dialogical* narrative modes.¹⁰ Today’s digital narratives *do* actually speak to the reader. ‘Follow me before the choices disappear’, says *Twelve Blue*, with a fatality typical of existence itself (at least within the realm of the single reading session).¹¹ Bolter and Joyce’s reported comparisons of the Storyspace software ‘to oral narrative and to jazz improvisation’ (Kirschenbaum, 2008: 172) – two forms of expression that have received extensive treatment in cultural/American studies – is central here to recognizing the imperative culturally-oriented dimension of digital humanities. The (implicit) connection to black performance bears particular significance here since, in Fred Moten’s view expressed in his *In the Break*, the historical interarticulation of black expression (from Frederick Douglass to Max Roach) can be thought as bearing ‘the trace of a subjectivity structure born in objection’ (Moten, 2003: 13) precisely to objectification/commodity processes. In questioning the idea of isomorphism between space, place and culture and in reconfiguring the American experience in terms of transnational spaces, contemporary American studies address more and more subjectivity structures constructed *in transition*. According to Paul Gilroy, ‘diaspora accentuates *becoming* rather than *being* and identity conceived diasporically, along these lines, resists reification’ (1996: 24). As authors and critics of e-literature become designers and decoders of the behaviour of (digital) systems, the corresponding reification paradigm of the bibliographic *object* seems less and less adequate to capture the full complexity of the cultural transformation we are experiencing in our shift from literacy to ‘electracy.’¹³ From this point of view, Gloria Anzaldúa’s points concerning storytelling in her *Borderlands: La Frontera* might stand as a precious reconfigurational possibility for future research on digital literature:

My ‘stories’ are acts encapsulated in time, ‘enacted’ every time they are spoken aloud or read silently. I like to think of them as performances and not as inert and ‘dead’ *objects* [emphasis added] (as the aesthetics of Western culture think of art works). Instead, the work has an identity; it is a ‘who’ or a ‘what’ and contains the presences of persons, that is, incarnations of gods or ancestors

or natural and cosmic powers. The work manifests the same needs as a person, it needs to be 'fed', la tengo que bañar y vestir. (1999: 67)

Conceiving digital literary works as entities provided with a set of 'behavioral' reactions through the use of algorithm technology, time-based processes, Expressive AI and hypertext adaptivity (to name a few) could greatly help in investigating our processes of identity formation in the specific case of the human-machine interface borderland and our inter-cultural negotiation of literary information. The path toward such re-conceptualization is, of course, unpredicted and unpredictable. Cultural and American studies could provide an enormous amount of scholarship in channeling current technology-driven textual transformations into 'mak[ing] "human" the new discoveries' (Liu, 2011a). In rethinking ways to integrate computers and programming languages within humanities paradigms, Kirschenbaum observes in 'Hello Worlds: Why Humanities Students Should Learn to Program' that:

computers should not be black boxes but rather understood as engines for creating powerful and persuasive models of the world around us. The world around us (and inside us) is something we in the humanities have been interested in for a very long time. I believe that, increasingly, an appreciation of how complex ideas can be imagined and expressed as a set of formal procedures — rules, models, algorithms — in the virtual space of a computer will be an essential element of a humanities education. (Kirschenbaum, 2009)

Such an emphasis on model-making can probably function at its best in conjunction with the wide range of American cultural critical works that have seen and still see literature as *social* practice and performance. As Hayles points out in her discussion of *Evolved Virtual Creatures* mentioned above, 'when we "see" the virtual creatures engaging in these activities, we have models in our minds for what these behaviors mean' (1999: 12). However, such models might not be readily available to *every* reader indiscriminately since model-making itself is necessarily culturally filtered through both trans-cultural and inter-cultural concerns. From this point of view, when Kirschenbaum considers that 'virtual worlds are sites of exploration, simulation, play' (2009), he is productively opening up

the possibility for such list to stretch indefinitely to also include sites of: political commentary, ideological contestation, identity formation, cultural negotiation, ethnic hybridity, inter-cultural exploration and many others. Beyond any strict concern for any hypothetical essence of digital technology, these are all culturally-oriented Wittgensteinian 'language games', whose rules cultural studies (in general) and American studies (in particular) have been invested in playing, investigating, and de-coding for a long time before digital textuality entered the scene.

Endnotes

¹ Philosopher Stanley Cavell and other film studies and art history scholars who tried to address philosophical issues raised by visual media (D. N. Rodowick, Garry Hagberg, and Arthur Danto, for example) need to be regarded as a significant exception here.

² On the American reception of analytic philosophy see: Scott Soames's 'Analytic Philosophy in America'.

³ See Meredith Williams' *Wittgenstein, Mind and Meaning: Towards a Social Conception of the Mind*.

⁴ See Franco Moretti's foundational work on quantitative methodological approaches to humanities studies or technological tools which are able to open up a whole range of innovative critical possibilities - such as Google Books Ngram Viewer.

⁵ See Ian Bogost's blog:
http://www.bogost.com/blog/digital_objects.shtml#

⁶ On the distinction between formal and forsenic materiality see *Mechanisms*, 10-13.

⁷ On digital preservation practices of e-literature see ELO white papers 'Acid-Free Bits' and 'Born-Again Bits'.

⁸ See 'Interfaciality' (Chapter 4) in Anna Munster's *Materializing New Media: Embodiment in Information Aesthetics*.

⁹ Bronislaw Kasper Malinowski pointed out in *Argonauts of the Western Pacific* the primary role of participant observation (i.e.

immersion in the culture under examination) in order for the anthropologist to grasp the native point of view, his relation to life, to realize his vision of the world' (25).

¹⁰ The trope of the talking book, recurring in all the first slave autobiographies written between 1770 and 1815, provides 'those formal links of repetition and revision that, in part, define any literary tradition' (Henri Louis Gates JR).

¹¹ I am here referring to the fact that the link becomes no longer visible in future visualizations of the same page during the reading session.

¹² See Henry Louis Gates Jr's *The Signifying Monkey: A theory of African-American Literary Criticism*.

¹³ In Gregroy Ulmer's treatment in *Internet Invention: From Literacy to Electracy*, electracy 'is to digital media what literacy is to print' (2003: xii). Ulmer discusses electracy as an *apparatus*, i.e. like literacy and orality before it, electracy is a social machine that is partly technological, partly ideological, and partly metaphysical.

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