# Hyperrhiz 16

# Zoom In, Zoom Out, Refocus: is a Global Electronic Literature Possible?

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## Abstract

The question of world literature highlights the tension between hegemony and diversity: if, on one hand, addressing a global literature is addressing the west's hegemonic power, on the other hand it implies attention to the specificities of the local. As Vilashini Cooppan noted, globalization bears "unprecedented economic and cultural forces of connection (if one is utopian) or homogenization (if one is dystopian). Fredric Jameson suggests that the distinction may depend on whether one focuses on the cultural or economic axes of globalization" (2001). Similarly, digital technologies of inscription are at once tools for connectivity and for homogenization, as they enable the voice of otherwise silent actors to emerge, while also imposing the same models for communication — those of technics, where meaning is information and expression becomes noise. Today, we witness a growing concern with decentralization, as the recent interest in post colonial canons seems to highlight. But how global and decentralized is our globalized world and in what way may electronic literature be global? Is there really a world literature? And, if there isn't, why should electronic literature, specifically, be global? And perhaps more importantly: should it? There is at least one way in which electronic literature could grow into a global phenomenon: insofar as digital writers remain attached to the bureaucracies of the *apparatus*. This would of course be (and is already) a problem for literature, since the logic of literalizing the technical device is not the same of the literary: literature has never been a question of filing in the spaces left empty by technique, but something *else*. On another hand, we may also argue that the digital may perform a role opposite to the one just described, acting as an emancipating tool and destabilizing the hegemony of western neo-liberal cultures. Dual and contradictory, globalization thus asks for a theory of the literary able to articulate its divergent dynamics, considering hegemony and nationality, the common and the particular, and the constraints and possibilities of literary practice in the age of networked digital media. In this article I intend to reflect on these problems by articulating these two perspectives in

order to see how they are entwined when we ask the following question: Is a global electronic literature possible?

## 1. Zoom in: decentering world literature

A look at the keywords that classify the works presented on the first volume of the Electronic Literature Collection reveals a curious, if not disturbing, tag: "Authors from outside North America". This distinction between North American authors and the rest of the world is in itself a good indicator of the cultural (and economical) hegemony that emanates from the USA. On the second volume, this keyword is no longer present but another, similar, remains, namely "Multilingual or Non-English"[1]. This strange taxonomy, which places nationality and language borders in relation to an explicit center, raises important questions that must be addressed while reflecting on a "global electronic literature". As Torres and Baldwin already argued, the North American theoretical paradigm "determines conditions of recognition and evaluation of all electronic literature (…) the forms, technologies, and historical moments — linking structures, hypertext, the 1980 — are the exemplars against which all else are understood" (2014: xiv-xv). But there are of course other genealogies and perspectives, pragmatic and theoretical, which place electronic literature in a much wider context than that of hypertext, both in geographic and temporal terms.

So what do we mean by a world, or global, electronic literature? If we mean a decentralized literary production within digitality, we should broaden our perspective. *PO.EX.: Essays from Portugal on Cyberliterature and Intermedia* is a good point of departure to think about a global electronic literature precisely because, as its editors state in the introduction, it argues "against" both Portugal and the USA. Against Portugal because it dismisses picturesque or ethnographic amplifications of stereotypes, and against the USA because it dismisses "an imperialism of electronic literature", arguing for "a cosmopolitan view" (2014: xv), re-situating electronic literature in a wider paradigm than that of hypertext, as proposed by prominent scholars like Katherine Hayles and replicated by institutions such as the Electronic Literature Organization.

In "Electronic Literature as World Literature; or, The Universality of Writing under Constraint", Joseph Tabbi writes that

> [T]he ideas of cybervisionaries Paul Otlet, Vannevar Bush, and Ted Nelson (…) go beyond practical insights and can be seen to participate in a long-standing ambition to construct a world literature in the sense put forward by David Damrosch (2003: 5): "not an infinite ungraspable canon of works but rather a mode of circulation and of reading (…)" (Tabbi, 2010)

Rather than situating the conditions for the emergence of electronic literature in the technical insights that reshaped contemporary digital writing, Tabbi proposes "the literary practice of writing under constraint, developed long before the Internet but suited to its computational impositions and gamelike literary presentations" as the point of departure for a global literature and, more specifically, for electronic literature as a global literary practice. Tabbi's proposal highlights the importance of procedural writing practices which foreground the computational dimension of contemporary digital writing, rooting it in forms of textuality previous to the digital age. Other authors have stressed the importance of the Oulipo while at the same time situating combinatorial

approaches to language in traditions as early as the middle ages, like for instance Florian Cramer, who, in his *Words made flesh,* starts by stating that "executable code existed centuries before the invention of the computer in magic, Kabbalah, musical composition and experimental poetry" (2005: 3).

What *PO.EX: Essays from Portugal* proposes goes in that direction, avoiding to point to an unique origin and, rather, showing how the different threads that characterize digital writing are re-imaginations of several past literary traditions. *PO.EX.* places an emphasis on intermediality, which, "especially as archaeologically set out in the commerce between Brazilian and Portuguese concrete poetry, activates the semiotics of character and image rather than the structures of juxtaposition implicit in hypertext", as well as on cybertext, "concerned not only with the jumps of linking but also with text as computation and procedure" (2014: 15). The Portuguese tradition thus highlights not the *hyper* but the *cyber* structures of textual composition, privileging internal combinations more than external connections; and the importance of visual traditions in the work of experimental poets in the 60's, already expressing the non-linear, kinetic and open-ended structures that would later inform digital textuality. Manuel Portela called attention to the ways in which concrete, visual and sound poetics preconfigured the processual and intersemiotic dimensions of digital textuality, arguing that these experimental texts

> show themselves as products of their own generative procedures, and of the particular perceptual and cognitive motions of reading. The text becomes the place of its own effects, which are structured in a series of intersemiotic echoes (…) It is this awareness of reading and writing codes that gives digital properties to many experimental texts. (Portela, 2009, 2014)

Portuguese experimentalism and critical writing thus show a thread that connects digital experimentation with concretism, with early modernism, with the visuality of the baroque or with the multimodality of medieval poetry. One of the specificities of Portuguese literary avant-gardes is indeed the establishing of bridges between the past and the present, reinventing tradition through experimentalism, and critically re-reading early practices in the light of dialogism and intertextuality.

*PO.EX* collects essays by Ana Hatherly [1975, 1979, 1995], E. M. de Melo e Castro [1965, 1988, 1993] and Pedro Barbosa [1977, 1996], important names in the context of experimental Portuguese poetry, as well as essays from contemporary authors, namely Manuel Portela [2009], Rui Torres [2012] and Pedro Reis [2009]. One of the key features that link digital writing to earlier experimental poetics is processuality, discussed by Ana Hatherly: through experimentation, the poet tests the resistance of the materials of poetic practice, while testing at the same time the resistance to the sameness of everyday life from which s/he tries to escape. This double resistance is thus the paradigm that governs all avant-garde art. In this regard, we may ask how systematically do contemporary digital writers resist to the technical pre-determinations of digital media through their artistic practices.

The presence of combinatorics in Portuguese poetry is highlighted by E. M. de Melo e Castro, who points to the work of authors such as Herberto Helder, who in 1967, inspired by Nanni Balestrini's experiments, engaged with permutational procedures without using a computer, or Silvestre Pestana, who between 1981 and 1983 programmed a series of kinetic and visual poems using a Sinclair ZX-81 and a ZX Spectrum, among others. Videopoetry, in its exploration of verbal language, sound and image in movement, is another example of the precursor character of

Portuguese experimental literature and it finds precisely in Melo e Castro one of its more relevant international names, with the work «roda lume» (1968), a pioneer exercise in the way it antecipated the intermedial experiences that would later be explored in digital literary practices.

A major name in digital writing is Pedro Barbosa, who published his first literary experiments with computers in 1977. Barbosa worked with Abraham Moles, experimented with generativity within poetry, drama and fiction, and developed important theories on cybertextuality, calling attention to the potentiality and virtuality of cybertext, «which contains the genetic program that generates works» (2014: 117), and to the ways in which an automatic generator is at once an «imagination developer and language disarticulator» (2014: 123). Still relevant today, Barbosa's essays call attention to the materiality of computational processes and to the ways in which code participates of the text, while also signaling how the gradual standarization of software made computers increasingly non-programmable and opaque.

During the ELO 2015 End(s) of Electronic Literature Festival, an exhibition entitled "Decentering: Global Electronic Literature"[2] (hosted by the 3,14 gallery, in Bergen) presented historical and contemporary works from places as distinct as Canada, Brazil, Peru, Poland, Portugal and Russia. The exhibition included works from seven Portuguese authors, comprising both early works, such as E. M. de Melo e Castro's "roda lume"(1968) and "Signagens" (1985-89), Pedro Barbosa's "Sintext-W" (1999) and Silvestre Pestana's "Computer Poetry" (1983), and more recent pieces, namely Manuel Portela's "Google Earth: A Poem for Voice and Internet" (2011), Rui Torres' "Amor de Clarice" (2005) and "Poemas no meio do caminho" (2008), André Sier's "BwO" (2008), and Luís Lucas Pereira's "Machines of Disquiet" (2015). This selection highlights the combinatorial and visual approaches to textuality that, instead of hyperlinked structures, characterize the Portuguese experimental tradition. But besides this aspect, is there anything connecting these works to their national origin? And what would that mean, specifically? One of the characteristics of electronic literature is precisely the fact that it is a transnational practice. As stated by Torres and Baldwin, "electronic literature is the forum where subjects in the global network act out and struggle over their location and situation. Electronic literature must be global or it will not be" (2014: 15).

Electronic literature does indeed seem to be concerned with the suppressing of dichotomies between the global and the local, zooming in to the divergent and zooming out to the common, in a double movement able to encompass the contradictions of globalization. But what would such a synthesis mean, exactly? How does the balance between the global and the local happens? Is it possible to think of a *glocal* electronic literature? Or is *glocalization* a kind of light hegemony, a franchization of dominant cultural paradigms that become adapted to different cultures or geographies? Despite the literary community's genuine interest in decentralizing discourses and practices, multilinguism and multiculturalism are often adopted more as a token of political correctness than as factual achievements. In this sense, the discussion on world literature, electronic or otherwise, shouldn't be taken as a way of tranquilizing "western's" consciousness regarding its hegemonic power. As Homi Bhabha wrote, "[M]ulticultural policy entertains and encourages cultural diversity, while correspondingly containing it. A transparent norm is constituted, a norm given by the dominant culture, which says 'these other cultures are fine, but we must be able to locate them within our own grid'" (Bhabha, 1990: 208). In this context, one important aspect to take in consideration regarding world literature is that of translation, a central condition for the establishment of dialogue between literary production in different languages and cultural realities. Translation is an exercise of critical reading and writing. The translator does not read alone, but in a comparative mode, towards an

*other*, in a dialectical movement between the translator's reading and the readings that other languages may generate, taking in consideration the intra and inter-linguistic dimensions of text. In our globalized world, where English has gained the status of a lingua-franca, space for linguistic plurality is also needed.

## 2. Zoom out: the global electronic in electronic literature

There is of course a common ground linking the different nationalities presented in the "Decentering: Global Electronic Literature" exhibition. We may argue that the avant-gardes (and here we could ask if the digital constitutes, or rather if it includes an avant-garde), at least since the industrial revolution, are broadly international phenomena, mainly due to increasing global interconnectivity. But is this international scope enough to explain why we don't witness a focus on the local, or the national, or the identitarian, in the context of electronic literature? Here we may also argue that the transnational ground that unites different literary traditions arises not only from the affordances of digital media[3], but also from its ubiquitous homogeneity. Hence, it becomes important to address the technical and economical dimensions of digital media and their impact on electronic literature.

In what concerns the level of inscription, digital texts do not exist as self-contained objects, they are distributed through a myriad of different software and platforms, resonating through the network to become actualized and readable in a given screen. Digital materiality thus invokes distribution at the most fundamental level. But the technical structures that support digital textuality, albeit being usually thought of as rhizomes, do have centers — from local ISPs to multinational hardware and software companies — that support and regulate digital inscription. In this sense, although we may think of electronic literature as an international phenomenon, we should also note how the technical dimension, or the electronic in "electronic literature", is not only centralized (in Silicon Valley, for instance) but also deeply intertwined with the economical and political dimensions of culture, radiating from its centers towards the globalized tissue (or *textum*) of our interconnected digital world.

All literature is language specific, since it stems from inside each language's contextual particularities. Electronic literature, where language meets technology, raises questions that arise from the tensions between the local specificities of human language and the global common aspects of digital technologies. The relationship between human language and digital technologies thus implies a transformation of language's ontology: through its coupling with technology, language becomes computable, processed and transferrable between humans and machines, and between machines and other machines.

We can think of this computation of language at least in two different ways: at a micro level, verbal language is converted into code (operating within the realm of software) and electricity (operating within the realm of hardware), as verbal signs are translated into mathematical ones, and meaning becomes data and information. In this process, language is digitized, quantified, discretized and categorized according to a communication system (cybernetics) in which language is treated as information. At a macro level, and as Sandy Baldwin argues in *The Internet Unconscious*, the computation and networking of language implies its subjection to an ensemble of protocological regulations, permissions and predeterminations that are not just technical but also institutional and political, obeying to an administrative logic that entangles, or constitutes, the digital subject, thus acting as a precondition of electronic literature. Moreover (and articulating the micro and macro

levels of the computation of language), the messy variability and the exceptionalism that results from the contextual particularities of each language tend to disappear when language becomes computationally processed. Indeed, computation cannot cope with ambiguity, which is precisely the regime within which poetry exists, exploring language's amplitude and resonance or, in informatics' terms, "noise".

In the regime of computation (that of information theory), language is a tool for communication, where the goal is to reduce the uncertainty (through calculus of probability) that stems from noisy transmission channels. If, from a literary perspective, language is not a tool for information exchange but rather for expression[4] (being explored in a creative and self-reflexive way), from a cybernetic perspective, expressiveness belongs to the realm of disorder. Hence, when writing is subject to an informational regime, it is reduced: in this digitization process, language becomes a sample of itself, as happens when one converts an analogue object into digital form. Reduced to information, this cyborgian digitized language has already become a post-language, or a posthuman language. To the machine, language is an ensemble of signs that represent values and functions, whereas to the human language is meaning, it is a plastic material with historical, cultural, emotional and aesthetic aspects that are not reducible to the pragmatic and functionalist dimension of information. There is thus a conflict and an incompatibility between language as meaning and language as information, between expression and communication, or between the context of aesthetics and that of information theory and cybernetics. So what transformations does this recoding, digitizing and posthumanization of language imply in a literary context? How does the computation of language affect literature?

Poets have always worked within the realm of disorder, exploring language's plasticity as a way to explore its grammatological constraints, or as a way of working against the rules and structures of discourses. In the context of digitality, the task of the poet remains the same it has always been: testing the resistance of the abstract *apparatus* (in an Agambenian sense: the apparatus of language's constraints, both grammatical and discursive). The question is that the *apparatus* against which the poet works as s/he works with language in a digital context is not only internal, since language already became a digital technology, a tool for communication with and between machines (software, hardware and communication networks) which embody a concrete and external *apparatus* (in a Foucauldian sense: the apparatus of social institutions and power relations).

But if "the possibility to write anything at all is a fundamental condition of literature" (Baldwin, 2015: 13), how can we produce the literary within the regulated space of digital devices and networks? And if we write under permission, with tools which we do not control, are we still writers? As Baldwin states, "electronic literature is a dutiful part of the bureaucracy, and all existing discussions of electronic literature imply some version of this managerial logic" (2015: 1). Let us think of some of the keywords on the Electronic Literature's collection, such as Flash, Java, or Quicktime, corporate brands used as taxonomical tags for the curated works. And let us think of software's programmed obsolescence, for instance, and how writers are led to run after the last software upgrade in order to keep their works legible, falling in a capitalist logic of permanent change. As a consequence, the innovative character of digital literary works often ends up as a result of technological upgrades sustained by the commercial logic of corporations, rather than being the result of an aesthetic approach to textuality and mediation. Scott Rettberg already called attention to the "tension between continuous innovation and meaningful literary expression", arguing that "there

are problems with the innovative aesthetic use of the device for the sake of innovation alone" (Rettberg, 2015).

We may add that there sometimes seems to be a confusion between change and innovation, as not all change is innovative *per se*: if a given company decides to put a new product or technology on the market, not all the aesthetic experimentations with it will be innovative, rather, there will often be works that simply adapt to a new technology, literalizing it, *filling* the technical with the aesthetic. Hence, we often see sameness in the avalanche of change. A permanent change which ends up functioning as a prevention of true disruptions. As noted by the French collective Tiqqun, "[T]he rhetoric of change is used to dismantle every custom, to break all ties, to unsettle every certainty, to discourage every solidarity, to maintain a chronic existential insecurity. It corresponds to a strategy that can be formulated in these terms: 'Use a continuous crisis to avert any actual crisis'" (2014).

In this context, regarding the *electronic* in electronic literature, and as Baldwin suggests, digital writers are indebted to the technical *apparatus*, a problem that is inconsistent with the freedom of the literary gesture: "The Electronic Literature's Organization definition of electronic literature as «works with important literary aspects that take advantage of the possibilities and contexts provided by the stand-alone or networked computer» is a way of saying that such works are obliged and in debt" (2015: 81). Debt to software, to hardware and to communication networks. The presentism and technicism implicit in the term "electronic" were also called into question in the introduction to *PO.EX Essays from Portugal*:

> The rhetorical logic at work is literalization, i.e. taking literary works as the sum of their technical features. This logic is in the service of a technocratic culture where all writing practices fall under corporate and industrial management. (…) The term "electronic literature" is itself a literalization, "electronic" supplying the technical answer to the aesthetic questions of "literature." (…) Literature includes the computer and the web, not the other way round. (Torres and Baldwin, 2014: xvi)

In his essay "Aurature", John Cayley argues that the myth of openness and indeterminacy associated with computers has given rise to a generalized understanding of electronic literature as a (digital) media centered practice, "regardless of how or even whether it's language is read, so long as it gives actual, embodied — if media specific — form to the genii of the myth, so long as it is work that — formally at least — instantiates indeterminacy, openness, freedom, any and all of the new ends of literature". The same logic applies to the "formal bewilderment" that results from the media specificity of electronic literature. In Cayley's words,

> Computation appears to offer us such articulation of recombination and structuring in respect of other media that we begin to think of their composition as events of 'language' in more than a merely metaphorical sense. They become literary in themselves, new ends of literature. It becomes enough, we say, to 'read' this new 'language' and less important to have read any language that happens also to have been written into the work, which language may, meanwhile, have collapsed into the visual or sonic 'images' of other, non- linguistic media, of light and sound (2015a).

Indeed, the logic of literalizing the technical *apparatus* is not the same of the literary. If literature is more than the aesthetization of technique, and if it is irreducible to and incompatible with the latter's constraints, what makes a (digital) text a literary text? Literariness, as discussed by the Russian formalists, is an immanentist approach to literature, autonomizing it from other disciplines. It is

concerned with language's materiality and self-reflexivity, focusing on signs and perception, rather than on what's perceived. One of the most relevant concepts proposed by the russian formalists regarding literariness is that of "defamiliarization" (ostranenie). In Shklovsky's terms,

> The purpose of art is to impart the sensation of things as they are perceived and not as they are known. The technique of art is to make objects 'unfamiliar', to make forms difficult to increase the difficulty and length of perception because the process of perception is an aesthetic end in itself and must be prolonged. (Shklovsky, 1917)

Defamiliarization, as estrangement, as a disruption or deautomation of perception, dislocates the *habitus* and the sameness it encompasses. Shklovsky's view echoed in structuralist and post-structuralist theories of literature, which extended the formalist proposal to include discussions on the status of the author, the text, and the reader. Brecht's epic theatre, Barthe's death of the author or Eco's open work are examples of this thread, which still applies to theoretical questions brought forward by digital literary writing, namely regarding the variability and openness of computational textuality, the distribution of digital inscription, or the becoming collective of the authorial status. Contemporary theories on digital writing have also emphasized the reader's "extranoematic" effort implied in an "ergodic" text (Aarseth, 1997), situating cybertextuality in a context of non-linearity that goes beyond digital media, placing it in a long history of literary experimentation. If the Aristotelian aesthetics of *imitatio* was replaced by the Romanticist emphasis on subjectivism, the Modernist and post-modernist sensitivity extended this divergence from the world as it is to the ways in which it is represented and, later, perceived, by no longer emphasizing the lyrical subject but the sensation of things through the materiality of signs. A literary use of language (be it verbal, visual, aural, computational) is thus concerned with language itself, with its plasticity and performative power, and hence with it's modes of inscription and mediation.

How does this translate into contemporary digital practice? We do indeed find many works of electronic literature which adopt self-reflexive and meta-medial approaches to digital writing, defamiliarizing language and the medium of inscription, thus going beyond a mere aestheticization of computation. These practices show us that there seems to be an electronic *literature*. But these types of works often don't reach the mainstream of digital literary practice, which seems to be at once still enchanted and over-determined by the technical affordances of computation, demonstrating some level of dependence on proprietary digital tools and infrastructures, as argued above, as is the case with electronic literature works that are written specifically for a given device or operating system (such as works that are legible only in iPads, for example), or works which depend on specific software (such as Java or Quicktime) to be processed.

If, around the world, digital media are increasingly becoming ubiquitously homogeneous, how can we have a truly decentralized electronic literature? In fact, that was probably a difficult project even before the standardization of digital technologies, due to the influence of the western cultural, economical and political models of production and consumption upon the rest of the world. That influence began in the Renaissance, when the first steps towards globalization were taken by an emerging bourgeoisie and Europe's imperial quests. With today's increasingly global interconnectivity and homogeneity of devices, such as tablets and smartphones, where the offer of "apps" seems to substitute the possibilities of programming, that influence seems to be much more pervasive. In this context, if writers remain attached to the bureaucracies of technical devices, we risk having a global electronic literature not in the sense of multicultural and decentered production of subjective culture and dialogue, but in the sense of finding the same features everywhere — the

same software tools, the same platforms, the same structures and the same rhetorical tricks. Hence, just as modern literature arose when language broke free from linguistics[5], so must electronic literature break free from the constraints of commercial technologies.

One could counter-argue that just as modernist literature emerged when writers began exploring language's combinatorial structures through the use of a new technical device — the typewriter —, so are contemporary digital writers creatively taking advantage of the technical constraints and affordances of digital media. In this sense, one could ask: how different are typewriters and computers, regarding the ways in which they constitute their subjects? One possible answer would highlight the differences, namely the different layers of translation and mediation that regulate digital inscription, as well as the logic of obsolescence and constant actualization as some of the specificities of digital media. Hence, the technical and bureaucratic constraints of digital media seem to be situated in and conditioned by a political and economical ecology that regulates our technologies of inscription in a way that goes beyond the constraints of print technologies, such as the typewriter. While the typewriter enables an empirical knowledge of writing, computational devices depend on a series of black boxed mediations that create an unsurpassable distance between the writer and the written word. If I write with a typewriter, there is a direct relationship between me and my text, it is there, in a sheet of paper under my control, rolled in a truly transparent machine. On a computational device, the story goes very differently.

In the midst of the layers of translation that occur in the processing of our digital writing, language becomes data, which is categorized and treated, thus becoming metadata and information. All this data is inaccessible to users, all this writing is beyond the writer's control. So, with the digital, we gain external memory but lose access. We gain space but lose control. This dual aspect of digital writing is highlighted by Bernard Stiegler, who considers the digital to be the *pharmakon*[6] (both poison and remedy) of our time (Stiegler, 2012). Stiegler's argument is that we need to transform the digital, making it a remedy more than a poison, by ways of paying *attention* to[7] the digital technologies that surround our lives, through the subversion of the "top down" dynamics that characterize these infrastructures. In Stiegler's words,

> what we must retain from the Platonic critique of the *pharmakon* is the thought that all exteriorisation leads to the possibility, *not only for knowledge but for power*, (…) by mastering the development of categorisation. In particular, since the formation of the Greek *logos*, what is key here is taking control of meta-categorisation (…). This production of criteria is produced in a 'top down' fashion. (…) These institutional controls and the criteria that produce them all come in one way or another from something equivalent to what in the current terminology of relational and attention technologies we call metadata. (Stiegler, 2012)

Stiegler's statement refers to the power of categorization: the power of establishing the criteria that regulates the categories of things is the power of establishing the places and relationships of and between things, their meanings and values. In contemporary culture, this categorization is actualized in metadata. The creation of a "bottom up" approach to digital technologies thus implies taking control over metadata, or over the information and surplus value that all our digital writing and trace generate within the realm of the economics of digital mediation. We may ask how feasible this is in the contemporary context, or wonder how feasible it could be in a context of generalized digital literacy.

## 3. Refocus: literature beyond the *apparatus*

If the technical implies an over-determination that tends both to restrict the literary gesture and to homogenize digital literary works, what chances are there for electronic literature to become decentralized and autonomous? In order to speak of electronic literature, and as Sandy Baldwin argued, we need a philosophy of digital writing: "what if permission were a struggle? (…) To invent permission, what if this were the condition of digital poetics?" (2015: 63). If the composite of institutional agencies that shape digital media conflicts with the freedom literature implies, electronic literature must reclaim agency over the medium of inscription.

So let us think of a philosophy of electronic literature based on the subversive power of the literary gesture: as resistance to the *apparatus*, testing the system's limits, infecting the constraints of the possible with the openness of possibility. In *L'hypothèse cybernétique,* Tiqqun describes cybernetics as a discourse that "postulates a functional analogy between living organisms and machines, assimilated into the idea of 'systems'" (2001: 10), and proposes that "[A]ttacking the cybernetic hypothesis (…) means experimenting alongside it, actuating other protocols" (2001: 35). Let us remember in this regard how in the early 80's Flusser called attention to the problem of technical mediation as a form of human alienation, and to the need for artistic expression to de-functionalize technological devices. But what strategies of resistance to the military, political and economic dimensions of cybernetics[8] could literature enable? What "other protocols" could a digital literary practice propose?

Control and opacity are not intrinsic characteristics of digital media: technologies are not a feature of capitalism, but they are co-opted by power. Technologies reflect the material circumstances under which they are developed and used, simultaneously affecting those circumstances not through the general usage they enable but through the particular usage of those with privileged access to them. As Douglas Rushkoff noted,

> we haven't actually seized the capability of each great media age. We have remained one dimensional leap behind the technology on offer. Before text, only the Pharaoh could hear the words of the gods. After text, the people could gather in the town square and hear the word of God read to them by a rabbi. But only the rabbi could read the scroll. The people remained one stage behind their elite. After the printing press a great many people learned to read, but only an elite with access to the presses had the ability to write. (…) Our enthusiasm for digital technology about which we have little understanding and over which we have little control leads us not toward greater agency, but toward less. (Rushkoff, 2010: 139-40)

Regis Debray has already argued that "[A]s a general rule, usage is more archaic than the tool. The explanation is self-evident: if the medium is 'new', the milieu is 'old,' by definition" (Debray, 1996: 16), and so it seems to be the case with the paradoxical opacity of digital interfaces which are increasingly becoming non-programmable, as tablets and smart phones seem to indicate.

In this context, a critical and reflexive use of digital technologies, such as that implied in a literary approach, would do more than use what is given in a tool, going beyond the tool's "original" or pre-determined usage by addressing technologies in a *poietic* manner, that is, through the *making* of new meanings for each tool, reinventing the tool in the activity of creatively using it. Hence, a literary usage of digital technologies would seem to theoretically imply a praxis of hackerization, rather than one of submission to the commercial dimensions of software and platforms. Thus, the

"other protocols" that literature could propose as strategies of resistance to cybernetics seem to lie precisely in the relationship between literature and digital technologies, as Bernard Stiegler sugests.

Specifically, we can argue that one way to counteract software's over-determinations, dissociating our technologies of literary inscription from neoliberal dynamics, is the subversion of proprietary technologies or the use of free[9] and open source digital media. Such strategies imply the construction of independent and flexible tools concerned with bringing the code forward, avoiding crystallization and the need to upgrade works according to private and commercial interests, potentially contributing to a greater compatibility between platforms and thus facilitating the preservation of digital artifacts. Moreover, as noted by Scott Rettberg, "[T]his also enables scholars to penetrate 'the black box' and to produce readings of work informed by the layers of writing beneath the surface level" (2009). Non proprietary approaches to digital technologies thus give users (turned producers) the possibility of increasing their control over the infrastructures of digital literary production, empowering both authors and readers. The effort made by the Electronic Literature Collection to present works available under non-commercial Creative Commons licenses seems to go in this direction.

The free software movement, insofar as it is able to resist the assimilation operated through political and economical dynamics, could potentially contribute to the emergence of modes of production, distribution and reception distinct from those that have been crystallized by print culture, namely in what concerns intellectual property and authorship. While, on one hand, digital culture shows us how the author's status is disintegrating, on the other hand the author's function, in a Foucauldian sense — as a socially constructed position which is to be considered responsible over her/his discourse —, still applies to contemporary society in what regards legality and property. This contradiction reflects the tensions between the cultural and the economical that seem to characterize any historical moment of technological change. The notion of the author, whose unique and autonomous voice was put into question with Bakhtin's dialogism and heteroglossia[10] and Kristeva's intertextuality[11] has resisted and is still ruling (if not the arts) culture, through the protocols associated with copyright, which, ironically, more than reverting to authors, revert to the institutional structures that intermediate authors and readers, creating surplus from subjective culture (in Simmel's terms), that is, instrumentalizing and objectifying human expression.

On another hand, many artists reinvent already existing tools, through hacking strategies that defunctionalize predetermined uses and biases, deconstructing and deterritorializing a tool's purpose and operating mode. One example of such an approach is *How It Is In Common Tongues* (2012), a work by John Cayley and Daniel C. Howe, which subverts Google's search algorithms to produce a proprietary text, Samuel Beckett's *How It Is*, "regenerated from the commons of language"[12]. A more recent work by John Cayley, *The Listeners* (2015), consists in the programming of a skill for Alexa, Amazon's domestic AI voice assistant: as a meta-writing, this work is a reprogramming of Alexa's original configuration, turning it against itself to enable a reflection on surveillance and technocapitalism while contaminating Amazon's device with a poetically charged language. If cybernetics is the discipline of optimization, these two examples of digital literary work are exercises of excess, rendering digital technologies into something not predicted by the values of the information regime that characterizes digital media, subverting the latter as a way to call attention to the relationships between language, digital technologies and the power structures of contemporary post-industrial societies. In this sense, and to recall Bernard Stiegler's view on the digital *pharmakon*, these two digital literary works are examples of a *pharmakological critique* of digital

technologies, rendering them *therapeutical* as a way to counterbalance their technical, economical and political overdeterminations.

## 4. Conclusion

So what are the conditions of possibility for a global electronic literature? As a possible answer we can propose that, applying Bernard Stiegler's view on the digital *pharmakon* to the problem of globalization, the electronic in "electronic literature" both constrains and enables decentralization: the constraints have to do with the regulatory institutional dimensions that give shape to our digital tools and inscription infrastructures. The possibilities have to do with the emergence of decentralized paradigms brought forward by digital technologies, open sourcing the global technique, and disseminating hacking strategies able to deconstruct and counterbalance the informational regime in which language, technics and aesthetics dwell.

In a cultural moment where the stakes for the literary gesture seem to be in a constant challenge, due to the intermingling of aesthetic practices and economical forces that has resulted from the confrontation between language and technology, it is up to writers to adopt and develop aesthetic and self-reflexive practices able to cope with the contradictions of both globalization and digital technologies. To think of electronic literature as a world literature is to think about language as a posthuman or computationally processed language that embodies the tension between the informational regime and the regime of aesthetics. A global electronic literature is thus possible if digital writers manage to decentralize not only the field of discourses but also that of technique: in order to decentralize discourses, we need to listen to other voices, idioms, geographies and theories. In order to decentralize technique we need to understand and reclaim our digital tools, favoring a truly polyphonic and dialogistic cultural paradigm.

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## Notes

1. In the third volume of the Electronic Literature Collection this taxonomy is no longer present. Several languages are included, in an effort of decentralization, and a there is a focus on the translation of works from different languages into English.
2. http://po-ex.net/exposicoes/exposicoes-colectivas/p2p-polish-portuguese-e-lit
3. Identified by Lev Manovich as numerical representation, modularity, programmability, variability and cultural transcoding (2001).
4. We should add that, from a linguistic perspective, and as Noam Chomsky argues, language is also (and primarily) a tool for thought.
5. Going beyond the constraints of grammar as a way to explore language as a means of expression and creation.
6. When writing was invented, it was considered a *pharmakon*, a poison and a remedy at the same time (Plato, 360 BCE). It was a poison because it would, as Plato stated in *Phaedrus*, lead to the loss of memory. But writing was also a remedy for that loss, since it became external memory, enabling us to register though and to reflect on it, while also allowing the possibility for lasting remembrance, as an archive of culture.
7. "*attention* is a word derived from the Latin *attendere*, 'to shift one's attention to' or 'to take care'" (Stiegler, 2012).
8. As a global system of communication and control, just as Norbert Weiner put it in his seminal work *Cybernetics: or Control and Communication in the Animal and the Machine*
9. See: http://www.gnu.org/philosophy/free-sw.html
10. The chains of dialogues that constitute discourse and culture, in which each voice is confronted with the many voices that inhabit it.
11. The composite of previous voices and texts that constitute each text.
12. John Cayley on *How It Is in Common Tongues*, at the Remediating the Social conference (Edinburgh, November 1-3, 2012). in: http://bambuser.com/v/3115944