

Performing Digital Literature

Interpretando literatura digital

Jerome Fletcher (Falmouth University)

Artículo recibido: 02-01-2015 | Artículo aceptado: 10-05-2015

ABSTRACT: Digital literature is a complex assemblage of related elements –material, spatial, linguistic, performative, textual, cultural, social– each of which is at one time interdependent and detached. This article discusses the literary creation within the cyberculture from the performativity point of view in relation to the textual apparatus. This is done through the analysis of a selection of performances where physical corporeality has a collaborative function with the body to a greater or lesser degree. Therefore, this physical feature can not only change, but stand at three possible and hybridizable axes: 1) the digital text as protagonist, 2) the digital text as counterpart, and 3) the digital text as site.

RESUMEN: La literatura digital es un ensamblaje complejo de elementos que se relacionan entre sí (elementos materiales, espaciales, lingüísticos, interpretativos, textuales, culturales y sociales) siendo, a su vez, interdependientes y separados. Este artículo aborda la creación literaria en la cibercultura desde la clave de la performatividad en relación al aparato textual a través del análisis de una selección de *performances* en las que la entidad física tiene una función colaborativa con los cuerpos en mayor o menor grado. Así pues, esta función física no solo puede variar, sino que se sitúa en tres ejes posibles e hibridables: 1) el texto digital como protagonista, 2) el texto digital como homólogo, 3) el texto digital como sitio.

KEYWORDS: performance, digital literature, cyberculture, cybertheatre, *dispositif*

PALABRAS CLAVE: actuación, literatura digital, cibercultura, ciberteatro, dispositivo

Jerome Fletcher. Profesor de Escritura Creativa en Falmouth University. Ha trabajado como investigador en el ELMCIP (Electronic Literature as Model of Creativity and Innovation in Practice), proyecto paneuropeo de investigación en literatura digital. También dirige el grupo de investigación en textualidad digital de Falmouth.

1. Introduction

This monograph was born at the series of lectures called 'Teatro y cibercultura' (Theatre and Cyberculture). Taken together, these two words comprise a huge area of enquiry and I will begin by narrowing the scope of the latter and expanding the scope of the former.

Under the term 'cyberculture' I will be concentrating on works of digital literature. Some will argue that this does not narrow the focus much as the phrase 'digital literature', along with its counterparts such as digital text, electronic literature, e-lit, digital poetry, etc. are notoriously ill-defined and amorphous. This is true, but for our purposes I am going to take digital literature to refer in a very broad sense to a creative engagement with language in an interactive digital environment. Here there are a number of contentious terms too, but this broad reference specifically excludes discussion of such devices as the kindle which are simply storage devices for print literature.

With regard to the second term, 'theatre', I am going to broaden the application of the term to that of 'performance', or more accurately 'performativity'. This wider sense becomes clearer when we consider that whereas all theatre is performance, not all performance is theatre. Theatre I take to refer to a specialized area of performance. I am using the term 'performativity' in a sense that covers a number of different modes of performance; a spectrum from social and cultural performance to machinic performance, linguistic performance and embodied performance. This again is a huge area to examine, so the following will necessarily be something of a sketch.

The point that I want to argue is that when it comes to giving a full and rich account of digital literature, performance and performativity as conceptual tools produce the most effective and totalizing outcomes. Before we consider this argument, I want to return to the notion of digital literature and give a more detailed sense of how the term is being used here. First and foremost, 'digital literature' goes well beyond simply the form of language which is display on the screen or via projection. It encompasses the whole *apparatus* by which digital text is produced and displayed. In this respect, I am using the term apparatus as a rough translation of the French 'dispositif'¹. It is a wide-ranging and complex term. Foucault describes an apparatus as:

¹ For a fuller discussion of the idea of the apparatus or 'dispositif,' see Foucault (1980), Deleuze (1992), Agamben (2009), *et al.*

A thoroughly heterogenous ensemble consisting of discourses, institutions, architectural forms, regulatory decisions, laws, administrative measures, scientific statements, philosophical, moral and philanthropic propositions—in short, the said as much as the unsaid. Such are the elements of the apparatus. The apparatus itself is the system of relations that can be established between these elements. (Foucault, 1980: 194)

While not covering such a broad area, the 'apparatus of digital literature' is also a thoroughly heterogenous ensemble of hardware, software (codes, programming languages and operating systems), the interface and modes of interaction, the literary language itself, the performer(s) of the text, the site in which the performance takes place and the socio-economic impact of all these preceding elements. In other words, digital literature is a complex assemblage of related elements – material, spatial, linguistic, performative, textual, cultural, social – each of which is interdependent and dispersed. By 'dispersed' I mean that all of these elements are stored or located in different places and in different forms until they are called upon by the user/performer. It is only at the moment of instantiation that the various elements of the assemblage come together to (per)form the work of digital literature. At any other moment, the work simply doesn't exist. Or rather, it exists in such an exploded form that it would be impossible to tell whether the individual elements are part of the work or not. This is why the notion of performativity is central to digital literature. A digital literature work only comes into being at the moment when all its elements are assembled in performance². It exists for a certain period of time and then it disperses.

In its breadth, this view is broadly in line with a Deleuzian notion of the apparatus:

These apparatuses, then, are composed of the following elements: lines of visibility and enunciation, lines of force, lines of subjectification, lines of splitting, breakage, fracture, all of which criss-cross and mingle together, some lines reproducing or giving rise to others, by means of variations or even changes in the way they are grouped. (Deleuze, 1992: 162)

² Consider a theatrical analogy to this. In a production of *Hamlet*, the lighting director, for example, plays a vital role as an element of the production. Outside the duration of performance, when the lighting director has left the theatre and is elsewhere there would be no way of telling that this person is part of a performance of Hamlet. It is only when s/he arrives at a certain place (the theatre) at a certain time and combines with all the other elements of the production that they can be said to be part of the performance.

Deleuze, however, stresses less the importance of the elements themselves than the systematic power relations the elements give rise to. In Alexander Galloway's terms, the object of enquiry must be modes of mediation, not media itself. To give a satisfactory account of digital literature then, we have to show how all the various elements of the apparatus or assemblage interrelate systematically and co-function in order to *perform* the work of digital literature.

2. Live Performance of digital text

To examine the role of performativity in relation to the digital text apparatus, let's begin with the most obvious – digital text in live performance. This is the area of digital text which owes most to theatre. It appears in performance for a specified period of time and in a specific place. It operates in collaboration with performing bodies to a greater or lesser degree. However, its function might vary, and these functions could be placed under three different headings: 1) digital text as protagonist, 2) digital text as counterpart, 3) digital text as site. These are not hard and fast distinctions. The text can take on more than one of these functions simultaneously.

2.1. *Precession* - Judd Morrissey and Mark Jeffery

According to Mark Jeffery's web site, *The Precession* "is a data-driven networked poem being developed simultaneously as both a large-scale installation and live performance. The work makes use of original writing and real-time data collection to create visual-poetic arrangements based on inquiries into architecture and the night sky. The piece mixes databased sources, real-time interruptions, and algorithmic composition in an evolving ecology".





As can be seen from the still images the digital text performs alongside human protagonists. The text does not exist simply to be performed by the human performers. It performs in its own right and occupies its own designated space. It could be best described as just another protagonist with its own voice, its own site and its own set of animated gestures. The performance of the text is partly scripted and partly improvisatory. The data collection means that it is not possible to know in advance what text is going to appear. Nor do we necessarily know its origin as both found and composed text are used. At the same time the digital text acts as a backdrop to the human action – the performance of the

labouring body – and the human performers respond to and tailor their performance in response to the text. In this respect, digital text could be described as scenographic.

2.2. *Conduit d'aération* Lucile Haute, Alexandra Saemmer, Tomek Jarolim et al.

In the live performance version of this dark tale about a desiccated body found in an heating duct, the text is performed by a number of protagonists. But the text doesn't exist as individual scripts given in advance and 'decomposed' in performance. Rather the text is handed from one performer to another via the physical connection of digital devices. The text does not have the same level of autonomy that it has in a piece like *Precession*. The performers become the 'porte-parole' of the text – literally, in that they pass the text from one to another via a digital device. This is a sort of benign viral exchange. The digital text is not assigned to one particular protagonist, as it would be in the theatre. This practice is closer to the live performance of collaborative story-telling.





2.3. The Reading Club. Annie Abrahams and Emmanuel Guez

This performance begins with two well-known text – one French, one English – presented in digital form on a web site and projected into a performance space to be viewed by spectators. For a duration of 20 minutes four writers work on each of the two texts, writing over/rewriting/editing the text until it bears little or no relationship to the original. The changes wrought are projected in real time to an audience who follows the editorial shifts and changes.

KIND. OF. OR A KNOT OF KIND. Raymond Queneau

Texte

Lecteurs

Tchat

Évènement

Plein écran

19/11/2013 19:21:43



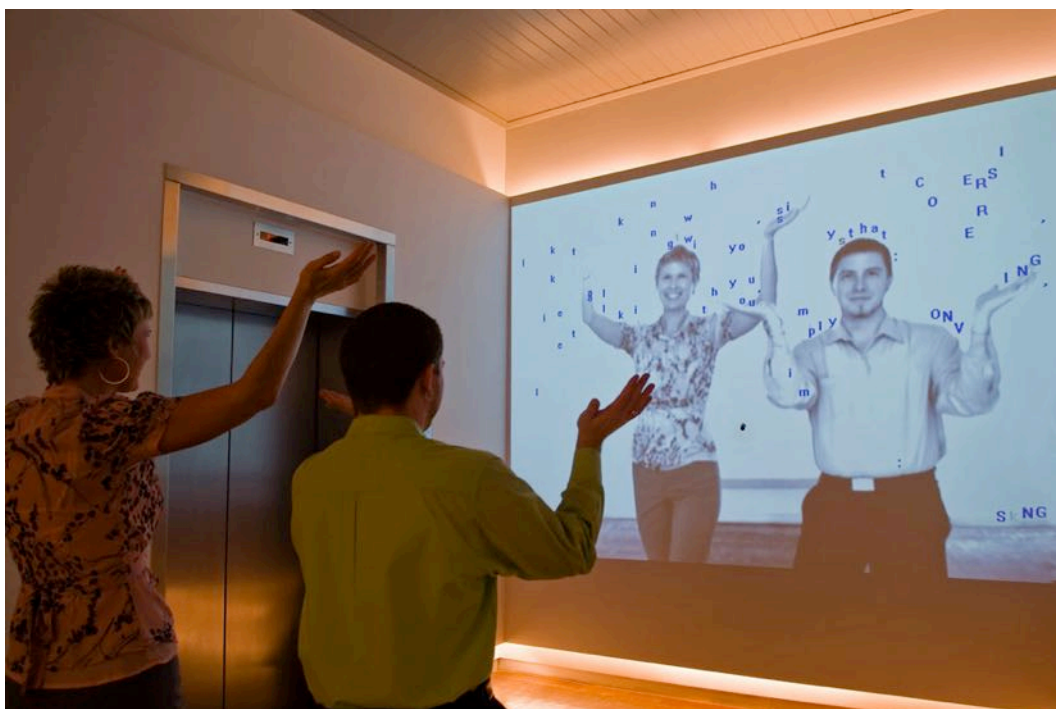
Jeu de Paume - November 19 2013 - 7pm - 20 min. - 4 readers - color.
Readers : JR Carpenter, Jerome Fletcher, Leonardo Flores and Renee Turner.

Rush our. It was 26 inches, we all felt that with a disschordant instead of a ribb, neck of two longer
BUT POKES ITS HEAD OUT, Peppercorn getting off. (sic), Peppermint getting off. She accuses me of
jostling him. A snivelling one who is mean if not, aggressive. A wrestler he throws himself on to him
Hours we m we in the HeartCour degMayaguezide sides of St-Lazaro. He takes. He walkss(
magnifique mais ce n'est 'as la gare (mai (mais)w him too. again last nights with a fiend WHO iwho's
sayingi "What has happened to my 'r? "Youought to need too have ta ought to s to should)
n EXTRAextra nibboni trkentaken or overcoat." He shows WHEREhim wherethe tabelt) and
WHY..why. Perambulator setting off in the direction of the child. (:3[?????????](:3[?????????
????????????????? I could go on. I'll go on.
He's with one BUT NOT THE OTHER. He's with it. Getting off. Standing next. Getting off. Jostling.
The rush. Later. Forever humble: (- -)? What happened to the wrestler?
"You ought to get a VENUS Your Overhead or are you Overheard?." You really should. He shows him.
We, re. (at the lavas)(?????? ?) SERIOUSLY? andWHY?

Here the digital text becomes a body which is worked upon by the four writers. Dissecting it, taking it apart and re-assembling it, in a process of demented surgical intervention. The text becomes a body to be performed upon. It is the *site* of performance in the same way that the human body is a site of surgical performance, although in this case there is no healing process. The team of four writers are not concerned with health so much as creating a new corpus of writing. This is very much digital writing *as* performance, given that an audience is watching the live process of writing and editing. A record or document of the performance is preserved so that it can be replayed as a video. It is important in this sort of work to make the distinction between live writing and the documentation of live writing.

2.4. Text Rain: Camille Utterback and Romy Achituv

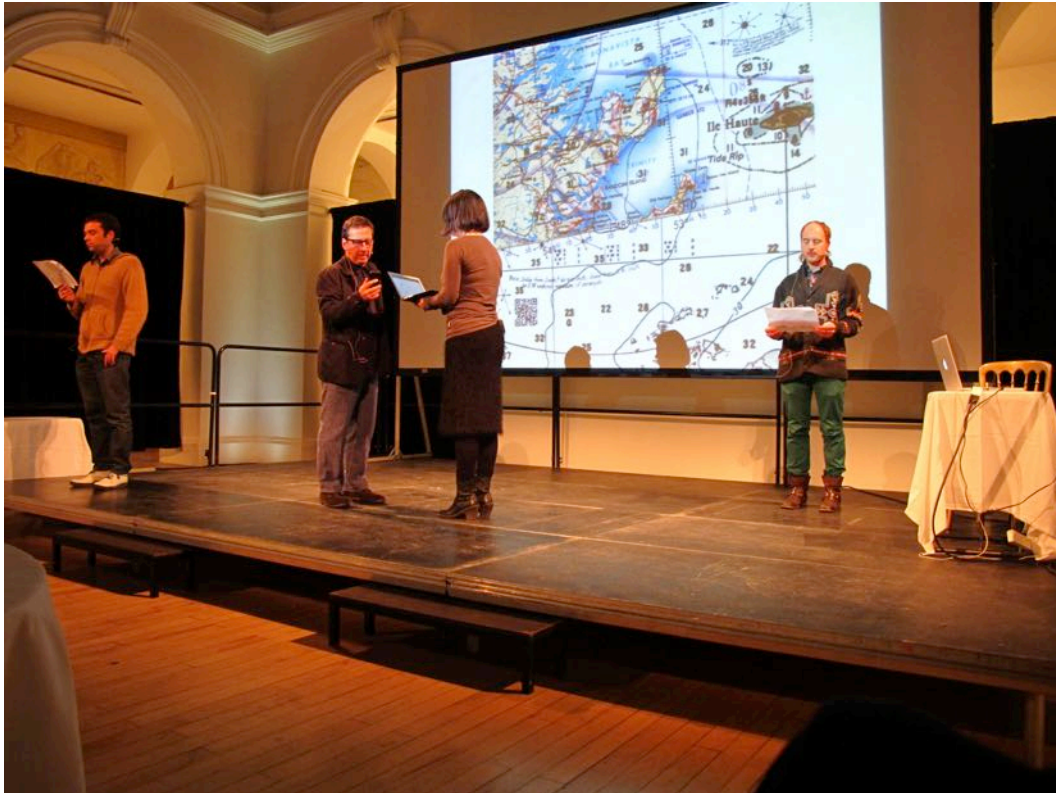
In the digital installation, *Text Rain*, there appears to be no discernible or readable text at first sight. Projected onto a large screen is simply a constant downpour of tumbling letters. It requires the intervention of bodies into the projected space for the text to appear. This it does by lying along the lines of the projected body, creating the allusion that the text is settling like dark snow on limbs and heads.



The digital text installation prompts or generates a series of improvised performances by the bodies in the space. As can be seen in the image, poses and gestures proliferate in an attempt to capture as much of the digital text as possible. The installation space becomes a performance space, and it is the performance of the audience which renders the text legible. Thus the digital text is a counterpart to the audience's performance.

2.5. There he was, gone. J.R. Carpenter

This is a more complex performative piece. Scrolling text is drawn down from a web site onto handheld devices in the hands of the live performers who then read out the 'script' they are presented with as set of questions and answers. The performers do not know in advance the text they will be reading out as it is generated from a set of variables on the site. In addition, behind the performers, a screen shows a projection of digital images and scrolling texts related to the spoken texts. There is a clear relationship between the live 3-D performance and the projected 2-D performance.



2.6. *Firkativ*. Jörg Piringer

Jörg Piringer is perhaps one of the best known proponents of a form of performance where text is performed in response to the live voice. *firkativ*, for example, is a work where image and sound are created live “...by speaking and vocalizing into a microphone and modifying the voice through signal processors and samplers while the software is analyzing the sound to create animated abstract visual text-compositions” (Piringer web site).



Thus sound emanates from the body and generates atomic visual language (often single letters or phonemes) which is in turn animated through the modulation and dynamic of the improvised vocal performance.

This is by no means an exhaustive taxonomy and is intended to do no more than outline some of the ways in which the digital text accompanies and/or directs the human body in the context of a live performance. There is a whole set of practices around locative media, social engagement, etc., which have not been mentioned here³. The important point is that in each of these cases the digital text is a prominent and visible aspect of the performance embedded in a complexity of performative layers and spaces. At the same time, we are not attempting an analysis of what the text 'means' or what it 'says'. Neither are we trying to evaluate these texts as 'good' or 'bad'. This is very difficult, if not impossible, with texts that shift and change all the time as these do. And this is why the literary technique of 'close reading', which depends upon a relatively stable text, is largely ineffective in the realm of digital literature. Here, we are not engaged in a close reading. We are simply attempting to give an account of how the digital text *performs* in these different digital environments.

3. Human Computer Interface. Performative interaction with the screen.

"The H(uman) C(omputer) I(nterface) is the nodal point where two different types of languages (for the computer: vectors, mathematics, programming languages and algorithms);(for the human: linguistics, metaphors, psychology, communication, and body movement) converge to understand each other..." (Mignonneau & Sommerer, 2005)

I would agree with this up to a point. Rather than 'convergence', I would talk of 'merger', with its hint of what 'e-merges'. However, if we add 'integrational' in front of linguistics, and if we accept that psychology and metaphor are fundamentally performative (or at least transformative), then we have a list of performative functions at the interface.

Scratching, clicking, twisting, touching, scrolling, reading; these are some of the performative interactions that take place between the body and the screen. Sometimes these are energetically and fully embodied gestures, such as Philippe Bootz demonstrates in his *Le Robot-poète*

³ For further investigation, look at the work of groups like Blast Theory and Furtherfield, and individual artists like Duncan Speakman.

<<http://epoetry.paragraphe.info/artists/oeuvres/bootz/rabot.htm>>, ⁴ where he has to vigorously move the mouse back and forth in order to scrape away a layer which conceals the digital text on the screen. Any slackening of effort and the text is covered over, becoming unreadable.

These performative gestures often quite literally 'digital' - i.e. gestures of the fingers - a choreography of the hand which brings the text into being. One can argue that the turning of the page also requires a performative gesture, which is true. However, that is a gesture which is repeated so often in the reading of a book that we have become habituated to it. It has effectively become invisible as a performative gesture of reading. The greater number of gestures required of interactive digital texts means that we are constantly aware of the extent to which the body is implicated (folded into) the process of reading.

This point is supported by Maria Engberg when referring specifically to touch-screen apps, such as Eric Loyer's *Rain*. She states that they:

exemplify a changing relationship between the aesthetic artifact and the event it stages for its audience, an event that is perceived -- and received -- primarily as performative. Consequently, the apps should be addressed as sensory, intellectual, and aesthetic experiences rather than genre-specific digital artifacts, such as games... They are, or perhaps more accurately, create, performances that give each user at each separate moment a distinct experience -- a perceptual and creative event, at times musical, textual, visual or gestural, most often all of those things at once. ...The touch interfaces set up complex and multiple sensual relationships that are of course visual but also tactile and proprioceptive. They are mediated as well as immediate -- we are touching interfaces, perhaps even code, as much as we are touching glass after all. (Engberg, 2013: 26-7)

There is much more to be said about the interaction/performance that takes place at the interface. However, Engberg's final point about the porosity or permeability of the screen is important. The interface is a locus of exchange, a frame, a liminal space where exterior and interior create the performative cyborg.

3.1. Performative Language/animated poetry/video poetry

Another area of performativity in relation to digital text entails what might be described as 'language performing itself'. The work of Young Hae Chung

⁴ This is one of a series of *Petits poèmes à lecture inconfortable*. See also my *Pentimento*, <www.jeromefletcher.org/projects/pentimento>.

Heavy Industries or Brian Kim Stefans *Dreamlife of Letters* are examples of work where language engages in solo performance⁵. Such work is not interactive however. The reader sets the piece going and watches it play through. In this respect it is closer in type to video poetry and film. This might be contrasted with Espace Recherche's 2010 project, *Ticker Text*, at Concordia University, Montreal. Messages were sent by anybody to a web site and, after moderation, they were displayed on a scrolling LED panel in a way which is traditional associated with live display of prices in the Stock exchange. (This scrolling LED display has also been widely used by such text artists as Jenny Holzer). Again one could characterise this as an example of the performativity of language. Rather than language providing the pretext for live performance as the script functions traditionally in theatre for example, the live performance of unknown texters provides the content for a live performance of language.

3.2. Performatives and speech act theory

At this point I want to introduce into the mix a particular theory of language that, it could be argued, perfectly complements a performative approach to digital literature. This is based on the work of ordinary language philosopher, J.L. Austin. Writing in the 1950s, Austin developed a theory of language in his book *How to Do Things with Words*, which began to undermine the predominance of truth conditional semantics. Whereas much of the early 20th century 'turn to language' in philosophy had focused on questions of meaning and truth, Austin made the point that many utterances in language have nothing to do with truth and falsity. They don't state or describe; they do things. In saying something you are doing something. A clear example of this is the uttering of a wedding vow. These locutions Austin referred to as 'performatives'. This work was later expanded upon and developed by philosophers such as John Searle in his work on speech act theory, such that any utterance, indeed language itself, has to be understood as performative in some sense. This understanding of language as an event, rather than an object, ties in with the integrational linguistics developed by Roy Harris which stresses the primacy of context in the communication process. Language is always embedded in multiple contexts of communication. Context here is not an afterthought, not a mechanism which adjust an already established meaning to words. Context actually determines meaning. This has two important consequences. Firstly,

⁵ For a discussion of the way in which language 'performs' on the page in print-based poetry, see Johanna Drucker's 'Visual Performance of the Poetic Text' in *Close Listening: Poetry and the Performed Text*. (1993) ed. Charles Bernstein. New York. Oxford University Press.

‘there is no text without context’ and ‘if you change the context of an utterance, you change its meaning’. For a full understanding of digital texts it is vital then to understand the multiple, complex, dispersed and varied contexts in which they are embedded. This ties in with my point above about digital text being an apparatus, a performative assemblage, an event that unfolds in time, rather than an object.

4. Code performance

Another area of clear connection between performance and programming – one which sits within the embodied and the digital – is live coding. This is a practice which centres on improvised programming that takes place in real time and often in conjunction with a dancer, musician or other live performer. The work of Alex Mclean is a particularly good example of this. His role as a real-time programmer, sharing the performance space with a collaborator, is to generate text, images and music on-the-fly. Customarily the code which Mclean is generating is also projected into the performance space and functions in a similar way to animated poetry.

Once we begin to consider the performativity of code, our analysis starts to infiltrate the processes of the machine itself, as if entering in through the screen. And from inside the material apparatus we can see a variety of performative digital writings taking place, beginning with the codes. N. Katherine Hayles makes this point unequivocally:

The importance of active code to the production of digital texts cannot be over-emphasized; it is one of the distinctive ways in which electronic literature differs from print. The fact that all texts **performed** in digital media are coded implies that reader and writer functions are always multiple and include actions **performed** by human and nonhuman agents. The machine reads and writes, as well as the programmers who compose its coded instructions, the writers who use these programs to create artistic works, and the users who employ “reveal code” functionalities to understand the instructions that **perform** the text as it appears on screen. Working in these multilayered environments, readers and, even more so, writers develop a nuanced sense of code as a form of writing with its own stylistic elegances and formal possibilities. (2006; my emphasis)

Thus, there is an obvious sense in which coding or programming is always already performative. Active codes perform the digital text, or rather allow⁶ the

⁶ Permission is an important element of digital writing. See Charles Baldwin Performance Research Journal. Writing and Digital Media (2013).

digital text to be performed. They are written instructions which have to be executed. And for these reasons the process of coding cannot be ignored or regarded as extraneous to an account of the performance of digital literature.

In a more nuanced way, there is a link between coding and Austin's notion of performatives. This link is made explicit by Geoff Cox in his book, *Speaking Code* (2012).

Whereas Hayles above still talks of writing and reading as the basis for the performance of digital literature, Cox argues that code in particular is a form of speech. He writes: "Once code is likened to speech, it also provides the possibility of new forms of criticism that combine natural and artificial languages into new speech acts".

Cox makes explicit reference to John Searle's speech act theory and by extension to Austin's theory of performatives in this passage. And more importantly he does not separate out artificial and natural languages, but rather calls for a mode of analysis which would show how they interpenetrate each other and act integratively. This brings us back to Harris's understanding of language and the pre-eminence of context in the making of meaning.

This link between code and Austinian performatives is not universally accepted. A theorist like Florian Cramer denies such a connection, arguing that the latter exist in a social context whereas code does not. (Certainly Austin himself was at pains to make a distinction between ordinary language and specialised forms of language, for example, the literary which cannot be described as performative.) Such a view is in turn countered by Scott Dexter who claims that code, and in particular the practice of coding, is a highly socialized form. Using Linux as an example, he shows that it is precisely in social communities that much code is produced. Others, such as Peter Seibel, want a clear distinction between code and literature; the two should not be confused with one another. He makes a distinction between *reading* literature and *decoding* code. This is a reasonable position, but from a performative perspective, you cannot ignore the role played by code in the construction of the digital apparatus. and the creativity of coding as a performance writing practice.

5. Machinic performance

At this point we have examined, or rather touched upon, the performativity of digital text in relation to the live and the embodied, in relation to the performativity of language itself, and in relation to coding and programming. But what of the hardware? Does it make sense to examine performance in the context of the circuits and wiring, so to speak, of the machine itself? The immediate answer is yes. The word 'performance' for a

computer engineer is readily recognisable, referring to a vital aspect of their work. Two questions arise from this. 1) What does an engineer understand by the word 'performance' in relation to computer hardware, and, 2) does their use of the term 'performance' bear any resemblance to the uses of the term we have examined so far?

Typically, machinic performance will be defined as 'the relationship between the amount of significant work carried out and the resources employed to carry out that work'. In other words, performance is a function of efficiency. In a creative and/or artistic context, at first sight the notion of 'efficiency' would seem to be irrelevant. However, in literary production and evaluation the notion of conciseness, i.e. the efficiency with which language is being used, is something of a commonplace. Often the process of editing a literary text is precisely one of making it more efficient by the removal of unnecessary words or phrases which 'slow up' the reading. Within the literary, the editing process may not be couched in terms of 'efficiency' but in effect that is the quality an editor is after.

5.1. Time, speed and the digital text

Further consideration of the performativity of the machine/hardware typically invokes the following criteria:

- Short response time for a given piece of work
- High throughput rate of processing work
- Low utilization of computing resource(s)
- High availability of the computing system or application
- Fast (or highly compact) data compression and decompression
- High bandwidth/ short data transmission time

Two elements stand out in this list; firstly, that the performance of a computer is based on what can be measured, and secondly, that questions of machinic performance are often tied to notions of time and speed. This, to use Paul Virilio's term, is a 'dromology' and is a key characteristic of the digital era. He writes:

Today we are entering an era of intensive time: that is to say that new technologies lead us to discover the equivalent of the infinitely small in time. No human being can be present in the intensive time that belongs to machines. What we are manipulating is no longer man's time, but machine's time, which I call speed-space, or the dromosphere, meaning the sphere of speed. In conclusion, from my point of view, speed is not a means, but a milieu – another milieu, and one that tends to escape us. (Virilio, 2001: 71)

A consideration of machinic time correlates well with time/duration as a central aspect of digital writing - again a performative quality. This is underlined by Katherine Hayles when she writes in *New Media Poetics*:

It would be more accurate to call a digital text a process rather than an object, an attribute I highlight by referring to the time of performance for an electronic text versus the time of production for print. [...] digital text is more processual than print; it is performative by its very nature independent of whatever imaginations and processes the user brings to it. (Hayles, 2006: 185)

What are the consequences of admitting an idea of textuality that is dispersed rather than unitary, processual rather than object-like, flickering rather than durably inscribed, always differing from itself rather than reproducing itself as a stable entity? An obvious result is the highlighting of the temporal dimension, inviting experiments that play with the flickering indeterminacies of digital texts. (186 - 7)

Less an object than an event, the digital text emerges as a dance between artificial and human intelligences, machine and natural languages, as these evolve together through time. [...] Allowing us to see print with fresh eyes, electronic literature reveals the text as a performance riddled with time even as it also extends in space. (187)

In relation to temporality, what further correlations might we interrogate? There are two in particular that spring to mind: pacing and obsolescence.

We might want to argue that the speed at which the machine operates is unconnected to the performance of digital text given that, as Virilio points out, machinic speed is something we cannot gain direct access to. Yet we can see its effects. In conversation, practitioner and researcher, Alexandra Saemmer, has often made the point that a particular piece of digital work she made some time ago which was designed to run at a certain speed, now runs much quicker due to the increase in processing speed of contemporary machines. This would be the equivalent of a Beethoven symphony taking half the time to perform in a digital recording than on vinyl.

Time however is not an absolute quality in computing. There is the time of clocks, but there is also a notion of perceived time. As computers have speeded up so our expectations have shifted. We may now get impatient with an image or text that does not download almost immediately, whereas previously we might have been content to wait much longer for a download because we did not expect it to happen swiftly. Similarly, an increase in the rate of operation in one area of the machine may result in or depend upon a slowing up of its operation in another area. There is a trade-off.

In addition to speed, we should also consider how time over a long duration effects the performance of digital textworks. In this instance I am referring to obsolescence. Obsolescence is a particular feature of digital literature texts. They are created on certain types of machine at certain moments. As these machines or their softwares become obsolete so these texts are no longer accessible in their original form. This in itself has given rise to is a new area of research and practice in digital literature - the creation of emulators. Leonardo Flores at the University of Puerto Rico is investigating ways of preserving texts and developing methods ways of 'emulating' an original machine. One such project involves b p nichol's work, *First Screening*⁷. This was written in 1984 in Apple basic and stored on floppy disc. It was ported or translated to Hypercard in 1993, but Hypercard was discontinued in 2004, so various attempts have been made to preserve this work and have it accessible again through emulation. Of course this raises the question of what exactly is being preserved here.

My main point here is that any account of digital literature which fails to address the notion of temporality, the centrality and perceptual relativity of time in digital literature is going to be an incomplete account. By the same token, an acknowledgment of time as a central component of digital literature is also an acknowledgment of performativity as a line of force running right through the practice.

6. Cultural performance

At this point I would like to pick up on the second of the terms from our title: cyberculture - in other words, the cultural context in which digital text operates. It requires, as it were, exiting from the machine to look at the way in which the computer as a cultural and economic ensemble performs in a broad socio-political context. Among the metrics which are considered in relation to the performance of hardware mentioned above are two which refer directly to the final category of performativity which I want to address. These are: power consumption⁸ (where the notion of performance intersects with economics, sustainability, etc.) and environmental impact (the ecological effect of a computer during manufacture and recycling as well as in use). These are areas which are not a quality of digital text solely, and it could be argued that this has

⁷ For more details on this project go to: <<http://www.slideshare.net/leonardoflores3/porting-epoetry-the-case-of-first-screening>>.

⁸ There is a much larger discussion to be had about the way in which the digital apparatus is located with structures of power in general, but that is way beyond the scope of this paper.

nothing to do with digital literature per se. However, this does engage with questions of the materiality of digital writing. To what extent does the material substrate of writing influence/determine the meaning or reception of that writing? From a literary (print-based) point of view the answer would probably be quite unequivocal. It has no impact. Whether you read a Dickens novel in hardback or paperback, on acid-free paper or on the screen of a kindle it makes no difference to the understanding of the text itself. This is because the literary text is by and large seen as significantly separate from its material substrate. My argument would be that the digital text cannot and probably should not be considered in isolation from its material substrate. ('Should not' here introduces an ethical dimension). The material substrate is an essential component of the assemblage (dispositif) and the digital text is embedded and performs within the context of that assemblage.

But there is a more telling politico-cultural point to be made here, which I will leave it to digital writer and activist, Eugenio Tiselli to set out. In early 2011 Tiselli was working with groups of subsistence farmers in Tanzania. The project aimed at developing a database of traditional agricultural practices and knowledge which could be used to facilitate communication between the farmers and agricultural scientists/researchers. This objective was based on the findings of various reports to the effect that scientific knowledge alone was not capable of resolving the complex challenges of global agriculture. As a result, Tiselli became deeply skeptical about the capacity of "the dominant knowledge system ... to engage in true interdisciplinary, cross-sector research, [so that] most scientists have effectively become the blind leading the blind" (2011).

This skepticism in turn led Tiselli to a re-consideration of his role over the previous decade in the field of electronic/digital literature to which he had been a significant contributor. This is the conclusion he came to:

By its own definition, electronic literature "lives" within electronic media. But have we, as an academic community, realized what electronic devices are doing to the environment? Do we know where the minerals that are necessary to manufacture computers come from, and under what conditions they are extracted? What about the slave labor involved in the manufacturing process? Have we deeply studied the economic implications of using computers as literary tools, in a time in which all our economic systems are collapsing? In one word, are we being responsible? (2011)

And the upshot of these thoughts was...

As of today, I have decided to temporarily stop creating new works of e-Lit. I feel that the issues involved in creating artworks with computers are too important to be ignored. So I call for a truly trans-disciplinary, cross-sector research on electronic literature: one that also involves a profound understanding of its environmental and economic effects. One that doesn't ignore the social and cultural contexts which are being effectively destroyed for the sake of our technology. I am thinking specifically about Africa, and many other places around the world in which land is being grabbed and exploited, and where societies are being condemned to suffer so that we, the lucky ones, can remain connected. Is it a mere coincidence that e-Lit is not being produced or studied in those places? I don't think so.

Furthermore...

I feel an urgent need to achieve a more complex and holistic vision of what I am doing and reflect on its implications, unless I agree to just blindly collaborate in the vertiginous destruction of our world. I finally wish to reach out to those of you who also feel this need.

These are not issues that we ponder every time we produce or access a piece of digital text, and Tiselli is not advocating for a complete moratorium on the making and distribution of digital text. However, for our present purposes, he raises some vital issues. Digital literature defines itself by being programmable and networked. This means that it is firmly based in very specific modes of production and distribution, and these modes are not innocent. They bring with them significant political, economic and social ramifications. Therefore, the ways in which the machine/hardware upon which digital text depends for its production and dissemination *performs* in political and economic contexts need to be carefully considered as part of a comprehensive, holistic and performative account of digital writing.

7. Summary and conclusions

As I mentioned at the outset of this paper, such a survey of the relationship between performance/performativity and digital literature was only ever going to be delivered in broad brushstrokes. The following set of conclusions are expressed in the same spirit.

In digital text, language/writing is an event, not an object. It is determined by both time and space in ways that a literary (book-based) text is not. On a

different machine with different software, for example, a digital text will perform differently. In a different space or context, the text will be read differently.

A number of performances take place; some visible/on the surface, others invisible/within the device. These performances are machinic, visual, verbal, gestural, technological. In other words, performance is not an add-on to the digital text. It is not an event that takes place after the text is complete or to accompany the text. Performance/performativity is integral to the digital mode of writing.

Digital text is never a single text. It is multiple texts with multiple writers. Each of these texts is itself performative. Another element which could be thrown into the mix here is transformation. Many of the texts within the digital are designed to transform, or perhaps translate other texts. Transformation is, by its very nature, performative.

Digital text comprises an assemblage of dispersed performances which only come together at the moment of inception. Before the digital performance takes place and after it is over, there is no digital text to examine. It is dispersed throughout the machine, ready to re-assemble when the performer/machine calls forth its component elements. The individual elements are less important than the relationships and lines of force that takes place between them.

There is often a tension between the different performances which take place within the device; for example, between the desires of the human performer and the logic of the software. This creates an aesthetics of frustration. It is always worth asking, who or what is in control of the performance, and where is that control located?

We cannot separate the machine from the performer. They form a single performative unit. There is always a body there. We should then be considering two related questions; to what extent do we make the machine perform and to what extent does the machine perform us?

A final question which arises from these observations is what are the evaluative criteria that we should invoke for a performative, dispersed, complex, multimodal form? In terms of an analysis of the writing event which is digital text, we cannot hope to come to any unequivocal conclusions. The mutability of the text does not allow for a close reading in the literary sense. All we can do is to give an account of the whole apparatus at a particular moment and in a particular place. This sets particular problems for scholarship in relation to critical evaluation, archiving, cataloguing, authorial ascription, etc. However, despite these difficulties, it is important to understand digital literature on its own terms and not shoehorn it into existing and ultimately inappropriate models.

Written references

- Agamben, G. (2009). *"What is an apparatus?" and other essays*. Trans. D. Kishik & S. Pedatella. Stanford: Stanford University Press
- Austin, J. L. (1975). *How to do Things with Words*. Cambridge, Mass.: Harvard University Press.
- Baldwin, C. (2013). "R/W/E/ or CHMOD – 777". *On Writing and Digital Media - Performance Research Journal* 18 (5).
- Cox, G. & A. McLean (2012). *Speaking Code*. Cambridge, Mass. MIT Press
- Deleuze, G. (1992). "What is a dispositif?". En *Michel Foucault, Philosopher*. Trans. T. Armstrong. New York: Routledge.
- Dexter, S. (2011) "Toward a Poetics of Code". *Academia.edu* <http://www.academia.edu/2860624/Toward_a_Poetics_of_Code> (17-12-14).
- Drucker, J. (1992). "Visual Performance of the Poetic Text". Ed. Charles Bernstein. *Close Listening: Poetry and the Performed Text*. New York. Oxford University Press
- Engberg, M. (2013). "Performing Apps: Touch and gesture as aesthetic experience". *On Writing and Digital Media - Performance Research Journal* 18 (5).
- Foucault, M. (1980). "The Confession of the Flesh". Ed. Colin Gordon. [Interview in] *Power/Knowledge Selected Interviews and Other Writings*. New York: Vintage
- Galloway, A. (2012). *The Interface Effect*. Cambridge: Polity Press
- Harris, R. (1998). *Integrational Linguistics*. Oxford: Pergamon
- Hayles, N. Katherine (2006). "The Time of Digital Poetry: From Object to Event". Eds. A. Morris & T. Swiss. *New Media Poetics*. Cambridge, Mass: MIT Press
- Sommerer, C.; L. Mignonneau & D. King (eds) (2008). *Interface Cultures* Bielefeld: Transcript Verlag
- Searle, J. R. (1969). *Speech Acts: an essay in the philosophy of language*. Cambridge: Cambridge University Press

- Seibel, P. (2014). "Code is not literature". *Gigamonkeys* <<http://www.gigamonkeys.com/code-reading/>> (17-12-14).
- Tiselli, E. (2011). "Why I have stopped creating e-Lit". *Netartery* <<http://netartery.vispo.com/?p=1211>> (14-12-14).
- Virilio, P. (2001). "Interview". Ed. J. Armitage, J. *Virilio live: Selected interviews*. London: Sage Publications.

Online links to digital text performances referenced

Alex Mclean: Live coding:

<http://yaxu.org/projects/>

Conduit d'aération:

<http://hyperfictions.org/index.php/Conduit-daeration>

frikativ:

<http://joerg.piringer.net/index.php?href=performance/frikativ.xml>

Le rabot-poète:

<http://epoetry.paragraphe.info/artists/oeuvres/bootz/rabot.htm>

Pentimento:

<http://projects.falmouth.ac.uk/digitallit/pentimento/>

Precession:

<http://vimeo.com/18579865>

Strange Rain:

http://erikloyer.com/index.php/projects/detail/strange_rain/

Text Rain:

<http://camilleutterback.com/projects/text-rain/>

The Reading Club:

<http://readingclub.fr/info>

Ticker Text:

<http://tickertext.concordia.ca/>

There he was, gone:

<http://luckysoap.com/therehewasgone/>

Young Hae Chang Heavy Industries:

<http://www.yhchang.com/>

Este mismo artículo en la web

<http://revistacaracteres.net/revista/vol4n2noviembre2015/performingdigital/>