Digital Objecthood and Scholarly Publishing[1]

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Today it is a common place to discuss the crisis in scholarly publishing, especially in the

humanities. While the crisis has diverse root causes, disciplinary, institutional as well as

financial, it seems that the emergence of an increasingly pervasive digital environment (by

digital environment I mean a set of evolving tools and the practices they make possible) over the

last few years has heightened the crisis, apparently changing the market for scholarly literature,

modifying the function of the library and ultimately putting in question some of the basic

practices of scholarly production, thus leading many to associate the difficulties faced by

University presses and other publishers with the advent of a ubiquitous digital reality. It is thus

informative to look further into the relations between the digital and the existing practice of

scholarship as well as of scholarly publishing in order to better appreciate the role played by

digital technology, and, more importantly, the practices it makes possible, in reshaping our

literate landscape.

A quick survey of the recent literature of the crisis in scholarly publishing is rather revealing, for

it shows the dominance of institutional perspectives that are, in the final analysis, detached and

ultimately, dismissive of the specificities of current and emerging digital practices. Such an

institutional prejudice, while perfectly understandable, extends even to the history of scholarly

publishing and communication. For instance, a consensus exists that the initial predecessor to our

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current scholarly models saw the light at the end of the 17th century with the first publications

tied to learned societies in France and the United Kingdom (*Journal des Savants* and

Transactions of the Royal Society). One wonders why, to name only one important example, the

Nouvelles de la République des Lettres and its successors is simply left out of the history?

perhaps because it was the work of an individual and not of an authorized and vetted group? Or

perhaps because it was printed and distributed from Holland, the hotbed of copyright

infringement and piracy? For a careful reading of the differences between the official and the

marginal shows a set of similar issues that are the current concerns of institutional scholarly

publishing: evaluation and promotion, recognition and circulation within a restricted economy by

authorized circles based on reference, citability, findability and, ultimately, an established

reputation framework that can be translated into disciplinary status and authority. Furthermore, a

comparative analysis of the early scholarly modes of communication sheds significant light on

broader and ultimately more important problems: the relations between literate and scientific

forms of authorship and their associated economic and legal frameworks; the diversity of

literacies at play in the evolution of influential textualities that are intimately tied to the

materiality of print culture and its extensive epistemological and cultural icons; and ultimately,

the codification of the complex but nevertheless relatively restricted interactions between

authorship and reading. In the scholarly environment, the book and the essay (unfortunately in an

relatively improvised version) emerged as the dominant forms, thanks in large part to the

institutional exploitation of scholarly communication. If Descartes did not hesitate to publish his

work on the passions under the title *Traité des passions*, few if any philosophers today, at least in

the English speaking world, would venture such a daring and risky title. Accepted and significant

forms of intellectually viable and important work were absorbed by an increasingly homogeneous and reduced model for evaluating scholarship. Such a diversion between intellectual production and institutional recognition is obviously not restricted to philosophy as a discipline. We only have to think of the cases of a Leopardi (a philologist), a Nietzsche (an essayist) and a C.S. Peirce (a logician) to recall the at times overwhelming weight of the intimate links between scholarly publishing and learned societies. It would seem that precisely the normative tendency of scholarly publishing is put into question by the digital environment because the digital introduces its own form of literacy that is, at least at this point in time, in conflict with the accepted standards of the scholarly, or so we are often told.

Before discussing some of the literary dimensions of digital literacy and their possible implications for the future of scholarly publishing, I would like to offer a few observations on the associated history of learned communication and copyright, particularly in the United States. For the U.S. is rather unique in that one of its founding documents addresses explicitly the problem of intellectual property and copyright. It does so in a manner that shows the weight of the heritage of the Enlightenment, but also one that tries to preserve older and more flexible ideas about the relations between individuals, intellectual property and the dissemination of knowledge. Article I, Section 8 of the Constitution specifies the need "To promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries." With time and the evolution of the advent of new technologies, "writings" have been expanded to cover an increasingly wide field of activities ranging from architecture to software. But what is perhaps more relevant to our

purposes here today is the dual nature of the clause, for it faithfully mirrors the crisis of scholarly publishing: on the one hand, a utilitarian component that aims at rewarding financially or otherwise the author, creator or inventor, and, on the other, what I would call an Open Source forerunner, the recognition of the equally important need for a free circulation of ideas beyond the restrictions of intellectual property protections. In a similar fashion, scholarly publishing today is torn between being a service or a business, between the promotion and dissemination of knowledge and the requirement to be an independent and self-sustaining enterprise. Furthermore, the divide between the utilitarian and what I called the Open Source highlights the increasing reluctance of Publishers to serve as proxies for universities (proxies in the sense that publishing a book often serves as an evaluation of a individual scholar's work for the purposes of retention and promotion), while pointing out their unfortunate attachment to the fixities of copyright. In a sense, scholarly publishers, much like the disciplines in the humanities, have surprisingly failed to appreciate and accompany the evolution of the digital environment. One would have expected that disciplines that are firmly grounded in the practices and subtleties of reading would be the first to work with tools that are first and foremost reading tools, albeit with new material supports, new forms and formats, and ultimately larger and more diverse audiences.

The institutions as much as the publishers and unfortunately a significant segment of humanities scholars remain prisoners of the Enlightenment's elaboration of copyright and intellectual property, of the monumentalization of authorship in disciplinary rewards and divides and legal frameworks. Such a blindness to the realities of the new digital objects, their properties and, in my opinion, their literate dimensions, have led to a conservative reaction to the emergence of the

digital, a reaction that mostly tries to preserve the objects and the models of print culture into the new digital age. Thus, the prominence of the book and the essay in the efforts to transition into the new environment.

A cursory look at the book will I hope suffice to give an example. Most publishers, when they accept to make available part of their catalogue online, opt for a PDF version of the texts. The choice of a format in this case is most instructive because it reveals a set of assumptions and choices that are an integral part of the current publishing situation. PDF, whether of a printed book or of a digitally produced text, implies a model of *restitution*, that is to say an archival model, a desire for an exact reproduction or a preservation of the original. It also is, at least currently, the preferred form for a rather restrictive Digital Rights Management that often restricts access if not the manipulation of the document. But what is perhaps most significant is precisely the fact that the format, a digital format, actualizes a conception of the digital environment that is simply no longer valid: it ignores the evolution of the network from a site for finding and consulting documents into a space of interactivity and productivity, with its own virtual urbanism and sociability, its own literacy. While DRM may be justified by the need to protect the rights of authors and their control over their material, it nevertheless carries within it a limited conception of the book and of reading as fixed objects. Even more, it ignores emerging digital formats (especially but not exclusively Microformats to which we will return later) and it merely seeks to transport the print components into the digital. I will not bore you with the details, although they are quite fascinating, but it suffices to say that the insistence of an exact cover, font, typography and pagination, only strengthens the divide between print and digital instead of allowing for a convergence. The model of preservation or restitution while ideal for

print is the least optimal from the perspective of a digital reader: it is, first and foremost, in contradiction with the most common practices in the digital environment. For under the guise of the faithful reproduction of the original lurks a more problematic and dangerous, for the long term future of scholarly publishing, desire: the will to control the digital object, well beyond its printed version. While the printed book or essay is relatively fixed, their digital equivalents cannot and in my opinion should not be mirrors or reflections of the originals, an archive of the print. Instead, they have to be able to function within an environment where the norm is interactivity through complex manipulations of documents that have become digital objects. The dominant is no longer preservation of the original, it is rather the exchange of newly generated information and its transmission in endlessly convertible but not equivalent formats.

In a way, scholarly texts, whether books or an essays, have become, within institutional contexts, fetish objects and objects of resistance. Fetish objects, because in large measure they are the site of a conflict between print and digital, a conflict that is firmly grounded in the perceived necessity of the fixity of the book, its associated form of authorship (we will not go here into scientific authorship and the re-emergence of a collective form of authoring that has many echoes in forgotten ancient models), and particularly in the status granted the book not only as a valued measure of achievement but as lacking any significant equivalent in the digital environment. The book is also unfortunately the last *pièce de résistance* of our model for the production, dissemination and recognition of knowledge within the humanities. It is a monument to the figure of authorship and its everlasting institutional powers. But such powers come at a price: they are also the space of another conflict, one between two literacies, print and digital.

Scholarship in its modern form has relied, as much as publishers, on literacy in order to evolve and especially to produce value. If scholarship, at least in the humanities, resists and ignores digital literacy, it will inevitably contribute to its own impoverishment and decline. By digital literacy, I do not mean only the knowledge required to access and manipulate the basic tools of the digital environment. Instead, digital literacy is the sum of evolving practices that are essentially cultural. They are cultural because they both *inform* choices and *shape* perceptions. Choices can be those of formats, modes of access (usually multiple, from desktop to the mobile and the Cloud) and of exchange, while perceptions are first and foremost of users who are also *readers*. Such choices and perceptions are intimately linked to digital objecthood, to the specificities of digital objects, their convertibility, their time-sensitivity, their tendency towards miniaturization, the ways in which they modify our perceptions of ourselves thanks to digital identity, digital privacy and security, but also the manner in which the new cultural choices produce new landscapes formed with text, image, multimedia and their potential for circulation and digital representation. In short, the selection of format stands for a larger choice that represents also an instance of a growing digital divide, not the divide between those who have access and those who do not, nor the one between, shall we say, every day users and "nerds", but instead a divide grounded in the politics of digital formats, their implications for activity in the digital environment and their ultimately economic consequences.

Digital culture has its objects and those objects, while at times they resemble those we are familiar with, whether from print or other media, come with their own properties and territories. The bring with them new realities that often disturb our comfort zones and challenge some of the

most basic concepts we work with. The digital divide I just mentioned is perhaps most visible in the emerging relations between author and reader, between authorship and reading. Many tools have codified this change (Wikipedia, etc.), but their popularity conceals two basic facts. First, the weakened distinction between author and reader is the direct consequence of the nature of the digital object itself. Second, the redeployment of the author-reader couple into the digital environment derives from the specificity of code itself, especially of literate code (think of the contemporary extensions of Knuth's *Literate Programming*). Literate programming insists on the necessity of legible code, that is to say code accompanied by commentary that explains intention and method adopted by programmers, thus making it easier to reuse or modify existing code thanks to the convention of a readerly community. Circulation of code objects thus follows the path of a generalized economy of *scholia*.

It is no coincidence that all the cultural wars occasioned by the digital environment have been conflicts started over a format. MP3 was at the origin of the Napster generation and the conflict between the Music industry and users. DVDs and their associated CSS (Content Scrambling Scheme, ie encryption that protects access to material stored on the DVD) was at the origin of the conflict between the Motion Picture Association of America (MPAA) and both the hacker culture and the users. These conflicts all focus on the impossibility of extending current understanding and implementations of copyright and intellectual property rules and concepts into the digital environment. It is so because the digital object is simply a container that is infinitely convertible: an MP3 file can easily become a WAV, OGG or Quicktime file, appearing to be the same while, from the perspective of the machine, it is fundamentally other. The same goes for

Multimedia, but especially for text. Curiously enough, there has not been a single dominant format for text responsible for a defining digital presence (HTML is an exception and it is being transitioned), except indirectly, as is the case with PDF, Microsoft Word or the new Open Document Format (an Open Standard). The publishing industry, both commercial and scholarly, has tried until very recently to model its strategy exclusively on that of the entertainment industry, thus focusing on copyright and its protections in digital formats. As you can imagine, it success is similar to the Recording Industry Association of American and the Motion Picture Association in modifying in any significant way online practices. But perhaps it would be more useful to look into those practices as readerly practices, as digitally literate practices. In this case, two properties or characteristics emerge. One I would call Anthological, the second is the forthcoming Semantic Web, or the Ontological.

A significant dimension, and one that has become perhaps the most popular and the most debated, of the current generation of Web platforms, is represented by the diverse forms of group publishing or, in some cases, of what is best described as collective generation of content, or the user generated content distinctive of Web 2.0. For texts, Wikipedia is perhaps the most well-known instance of such tools (Flickr for images, YoutTube and similar hosts for video, Ning for Mashups, etc.), thanks to its remarkable success and to the various controversies it has generated. These controversies focus mostly on the reliability and validity of some of its content and the unavoidable comparisons to the more conventional sources of collected knowledge, normally authored by specialists. Wikipedia is the heir of a long tradition of encyclopedic works from the Middle Ages to the Early Modern period, and to the *Encyclopédie* of D'Alembert and Diderot, and finally to their more modern variations. But Wikipedia, much like other similar

tools that allow for distributed and constantly changing models for authorship and publication, is, in my opinion, fundamentally different precisely because of its production model. In this respect, and despite its specificity (predominantly textual and relatively anonymous, topic or subject oriented and organized, different versions available in different languages thus marking cultural specificities, etc.), it is still characterized by what I call an assembly model of authorship. Wikipedia, curiously enough and because of its ideological commitment to the "wisdom of crowds", functions as an anonymizer and points to the complex politics of authorship in the digital age, especially within the context of the emergence of a *de facto* reference that is often used by surfers without any discrimination. Such politics are most visible within the polemics surrounding the content of Wikipedia as a conflictual space (and this can relate to an article covering a standard, a historically disputed event or an individual biography) that is often presented (mostly by the press) as a process whose defining principle is to harmonize content and knowledge over the long term and to eventually produce an acceptable consensus. Google's recent *Knol*, while trying to remedy some of the perceived faults in Wikipedia's management of authorship and authority, has so far failed in providing an alternative.

The assembly model of authorship is perhaps most visible in other popular Web platforms, such as *Flickr* and *Del.icio.us*, to name only two. The model prescribes assembly in the sense of a collection, a grouping that is defined by an initial selection but one that is also open to modification and adaptation. Ultimately then, the model yields an anthology that is tailored at once to the current tools and to content and taste. It is this anthological turn that I would like to discuss briefly in order to highlight both the literary dimension of much of the

digital norms currently in vogue and that are shaping both the technological development as well as the economic models underlying the deployment of the latest generation of large scale web hubs. For the current success and popularity of social networking relies on such an anthological extensibility of all available material online. This extensibility covers selected and edited data, personal identity related information (generation of contacts from previously available information on the desktop or in the Cloud, and the use of OpenId on all major social networking and Cloud platforms). Whether the anthology is initially put together by a single individual or researcher or by a group of disparate readers, the anthological model makes it possible to transform collected items into a dynamic and open publication of potentially new knowledge and to present them in their extensibility. This anthological sharing is, in my opinion, a surreptitious selection and dissemination of apparently unrelated snippets or fragments as meaningful collections, where meaning is largely derived from an apparently arbitrary association of content controlled by users and the diversity of their web presences. It is not necessarily, then, a meaning tied restrictively to authors, their identity or intent. The emergence of Tagging has only increased the importance of this anthological turn, strengthening an already visible departure from the hierarchical search structure defined by an ordered meaning and grounded in a pre-established set of values and norms.

While anthologies, at least in their classical forms, were always sites for the expression of individual tastes and opinions reflected by the organization, order and selection of assembled fragments as well as the use of commonly available and shared sources, the digital anthological practice accentuates the inherent tendency of the anthology to minimize if not

collapse the differences between authors and readers. If the anthology silently marks the 'incestuous' links between readership and authorship, the digital anthological phenomenon celebrates the unbound potential for reading to modify, manipulate, redefine and appropriate content. But, in this instance, both authorship and reading have been if not reinvented at least displaced and remodeled. First, the new anthological turn has been extended to new media, most notably images and videos, thus allowing for a more complex interaction with content that in the past had kept the reader or the spectator at a distance, or in some ways, in a relatively passive position. The current anthological practice is immensely successful owing to the ways in which it exploits the interface between the technological (easy access, authoring tools, tagging, etc.) and an individualistic drive to distinction. It also illustrates some of the literate features of the new digital literacy and the ways in which it recuperates and appropriates established print culture models. It also points out, in practice, some of the difficulties that will face scholarly publishing and the need to rethink the models and the ways in which to publish within the digital environment. Without necessarily completely abandoning authorship, what is needed is a thoughtful hybrid structure that can allow for subtle negotiations between the needs of the scholarly and the uses and expectations of the digital. The format of a digital book cannot be simply a closed and protected PDF that will allow no interaction between the reader and the text. While the integrity of the initial document is essential, its digital viability is equally significant if we are to avoid creating inaccessible islands of information (which is what we have at this point within the rights-controlled and access managed limits of institutional repositories), islands that will only attract intrusion and threats to the integrity of the archived material.

A second aspect of the anthological is again embodied by the current uses of access and reading technologies, technologies that shatter further the differences between authors and readers, but do so especially in the ways in which they threaten the homogeneous formatting and presentation of data online. Rich Site Summary or RSS is a simple technology that in principle allows users to subscribe to feeds of information from various sources (text, blogs, video, podcasts, images, etc.). It is also powerful technology first because it is an opt-in service and second because it is geared towards the anthological tendency of the current digital environment. It is available online on the Cloud via services like Google Reader, on the desktop via a variety of stand-alone applications or through a browser. All versions of the current RSS clients allow for synching between resident and mobile reading thus reducing the differences between various modes of managing reading texts or interacting with any other form of digital data. But RSS also eliminates the importance of the initial presentation of the material conceived by the author or the producers of the data. Instead of compelling the user to visit a website and experience its environment, RSS makes readers *de facto* authors. It also makes them *historians* of what they are reading in a very specific sense of the term historian. In the case of RSS, the tools as well as the practices distinguish the digital from the print models demonstrating the importance of formats and their flexibility within the digital environment.

For our discussions today, I will retain only 2 features of RSS Aggregators: the optional reader's control over the look and feel of the interface and the display of all recorded and archived edits of a page. Through simple, custom CSS (Cascading Style Sheets), the reader chooses his own look and feel and selects the overall layout and aesthetics of his interface with the material he is reading. Obviously this is possible because the online page is a digital object

but also because such an object occupies a position within the growing digital environments. As for the display of archived edits and modifications, any reader can see, if he chooses to do so, the edits of every text available via an RSS Feed. Edits are color coded and provide a visual history of a text or entry: they retrace modifications, corrections, editorial interventions, and so on. It is a structuralist's dream, but it is also the site of a new transparency made possible by the properties of the digital object, one that used to be reserved to drafts and manuscripts. Furthermore, it can become the site of new readings of authorial and editorial interventions. How will publishing in the digital age address the issues raised by the potential of such relatively simple digital tools available to all users and not requiring any advanced or esoteric knowledge of coding? More importantly, how will the humanities as a discipline respond to the new digital realities? Will they choose to lead a double life, one concerned with the conventional and well established methods and issues, the other more in harmony with the digital not somehow kept autonomous and separate? It seems to me that as a collection of disciplines largely founded on reading, the humanities have a tremendous opportunity if we humanists are willing to negotiate with the digital and not simply either to resist it or try to shape it into conformity with inappropriate models.

Nietzsche said one should read newspapers, the Bible, philosophy or the weather in the same way. Perhaps he was right in not accepting a hierarchy of methodologies tailored to the perceived value of their subjects. RSS is, in any case, a Nietzschean tool par excellence, for it allows access to all who are willing to read and see, to the archeology of a document. It transforms the surfer

into an active reader and into a voyeur, a hidden but omnipresent observer of the inner workings of digital writing.

A further dimension of RSS aggregation lies in what may be best described as digital *alienation* characterized by a diminished form of interaction between readers and sites, shifting the interaction into the social networking hubs and tools, the sites of the anthological. Digital alienantion also means the need to revisit web and interface design in order to take into account the growing importance of the digital tools that are not exclusively passive but instead ones that encourage the particular forms of authoring currently prevalent online.

Since I started the discussion of the anthological in reference to the importance of the format, it is useful to recall the exponential growth of the new microformats, represented by the mobile platforms and services like Twitter. While Twitter restricts the number of bytes that can be transmitted in a message, thus modifying writing, and encouraging not only the use of conventions and abbreviations but also the development of new literary forms, if we are to judge by the popularity of some of the texts, it also serves as a model for the new form of the anthological, one that takes into account the need to harmonize different tools and platforms (desktop, mobile and the Cloud) and especially the ability to move seamlessly between them. Interactivity depends on portability and interoperability and publishers need to rethink their production as well as their protection models in order to take into account such user/reader expectations. In Japan, where such tools are more pervasive and ubiquitous, the most important best sellers are novels written by teenagers (the digitally native) on their mobile phones. The success of teen novels lead also to the unexpected success of classics on mobile platforms (Rin's

Moshino Kimiga has sold over 500,000 copies outpacing a new and highly popular translation of Dostoevsky). One can imagine what a Perec or a Queneau would have done with such tools. These new narrative forms do not necessarily lead to the demise of the monograph; instead the phenomenon invites a renewed reflection on how fragments of texts circulate, how they interact with other material in order to create new objects. The fragment does not have to be the remnant of a lost whole; it can be also a powerful form of thinking and writing. The digital anthology can also become the site of new and powerful productions. Material limitations within the digital domain produce new forms and formats: they also open up new possibilities for critical discourse that is informed by what we already do in the humanities.

Since we are discussing publishing, let's consider one interesting snippet from the copyright notice of the mobile edition of Augustine's *Confessions*: "Project Gutenberg Etexts are usually created from multiple editions, all of which are in the Public Domain in the United States, unless a copyright notice is included. Therefore, we usually do NOT keep any of these books in compliance with any particular paper edition." Ebooks editions are thus mostly collated copies from existing public domain editions; they are constituted as an anthology where the editor chooses the best or most appropriate parts from the variety of available editions. The online archive, and especially the mobile archive, not to say the library, are being stocked by a method that is digital through and through. It goes without saying that such editions do not meet our current scholarly standards but they do form an alternative that we ignore at our own risk. Gutenberg's policy, allowing its volunteers to form editions and books, is but another instance of the specificity of the digital object. But Public domain or Open Source exploitation of the

classics is driving software development that has the potential to shape to a significant degree

reading habits of the future. While not exactly scholarly, it often informs future scholars'

encounter with literary texts. Thus digital literacy paves the way for hopefully a new scholarly

literacy. How should we respond to such a situation? We can either enforce the separation

between the institutionally legitimate and the scholarly and the freely and digitally produced, or

we may choose to rethink our management of copyright and intellectual property in such a way

as to guarantee the viability not only of the canon but of the digital archive that is being accessed

and used the most by users and readers. This obviously goes towards forms of a broader open

access, but also towards a more flexible usability of digital material, whether native or digitized.

Paolo' d'Iorio has compared Heraclitus and Aristotle in terms of their Digital

Rights Management and copyright strategies: the first insisted on keeping and controlling a

single copy, on not allowing his audience to make copies, the second, on the contrary,

encouraged his students to copy his material. The result: a mythical Heraclitus that we can

admire and try to reconstruct but rather incomplete and limited, and a wealth of aristotle that has

survived the ages thanks in large part to the multiple copies and versions of his material. Despite

all the admiration we may have for Heraclitus, I think we have to choose the Aristotelean way in

the digital age. Open access as well as open formats are the best guarantee for the survival of the

digital archive.

A few words about the semantic web. For the humanities, the coming ontologies

are a digital variation on the learned societies of the Renaissance and the Early Modern period.

An ontology is a set of relations, definitions and properties that represent, for example,

scholarship. It can distinguish between different levels of objects (primary and critical) and the relations between them. While ontologies can now describe structured documents, that is to say their type, provenance, history, relation to other documents, they can also describe, but only with the participation of scholars, the more critical dimensions of humanities research: philosophical ontologies representing various schools and theories, literary ontologies reproducing the varieties of reading methods, but most importantly, the digitization of scholarship in its own terms and not according to partial and often reductive representations imagined by outsiders.

Ontologies are also important because they operate at multiple levels: they are machine readable, user specific, granular to the point of generating user interfaces, and, by definition diverse. If the hyperlink defined the first web, the interactive and cognitive context will define the next. Such a technology is not a utopian promise of a distant future: it already exists in small form. RDF, for instance, is used to manage Trackback on blogs and similar software, thus allowing automatic collection and notification of active reading and interaction with published material. But RDF(and XML-RPC) is also open to annotation and tagging, thus allowing for a more complex and a richer dynamic contextualization that is closer to scholarly work. Such an environment is difficult to produce in print. It can, however, be viable within a relatively open access environment, especially for the scholarly world. It also can make it possible to avoid the traps, from the institutional point of view, of the homogeneity of the citation index, for it allows, at the granular level, the distinction between positive and negative citation, or the identification, according to the terms of the applied ontologies, of the kind of citation: rhetorical, philosophical, or whatever is desired. Such formalism seems unavoidable and humanities scholarship will become increasingly detached and isolated from the rest of the

scholarly communities if it chooses to ignore it and especially if it elects not to participate

actively in its creation. Within such an environment, scholarly publishing takes on a new role and

a new function. It can serve as the mediator between the current and the new; it can also, if it

chooses to, reinvent itself beyond the simple print-on demand or the modest adventures into

limited digital editions. Scholarly publishing does not have to abandon scholarship the way we

know it; it needs to accompany it into the digital age. If its main purpose remains the

dissemination of knowledge then it is only logical for it to adopt and adapt to the new

environment, rather than merely trying to dissociate itself from its history. Current scholarly

publishers are the product of the 19th century and the institutionalization of its learned and

scientific disciplines. Some have adapted to the new sciences, although the scientists seem to

have migrated to their own self-managed digital form of publication. The humanities and some in

the Social Sciences have resisted such change, in large part out of either indifference or the lack

of a full appreciation of the new digital literacy and its implications. It certainly is true that the

utilitarian functions of the University have become more assertive, but the part of the institutions

that stands for learning and the advancement of knowledge needs to shed its modesty in the face

of the digital and claim its rightful position. If it does not do so, it risks being reduced to an

insignificant side show, a museum piece or a marginal activity. If scientists and programmers

produce digital code, the humanities are the disciplines that can best describe, understand and

engage with the uses and practices those codes make possible. For code without users, especially

literate and social users, is nothing but a computational exercise. Literary ontologies are being

formulated every day and often without any literature scholars being involved, in part because of

a lack of interest or of digital literacy in the humanities. Such a situation is troublesome because,

as is often the case in the digital environment, one of most factors of the success of a tool or a platform lies in its modeling of the user experience and its interface design. And with the absence of humanists, these designs are left to what we may call "illiterate" programmers or representatives of disciplines that hold rather narrow and overly formalist views of our work (ie Cognitice Science, and here we can discuss the new efforts to define intelligence and its implications for our disciplines).

The digital environment is evolving rapidly into a new territory, with its virtual cities and landscapes, its new economy and new forms of property, and its new objects. These objects are real in a different way, with their materiality, but also they are divisible and convertible. they are abstractions animated by networked interactivity. Artists have been at the forefront of the exploitation of the new digital landscapes and its implications for the body and the mind, to use an old-fashioned expression. So have writers and poets. Ultimately, it seems to me that alongside the debates concerning archives, institutional implications of digital scholarly publishing, it is crucial that humanities scholars, institutions, funding agencies and scholarly publishers pay attention to the digital objects within their environments and not merely as reflections of past activities.

By way of conclusion, I would like to say just a few words about the "natural" similarities between scholarship in the humanities and Free Software and Open Source. We tend to read and reread and we publish interpretations of our double experience of engaging with texts and their critical history and reception. Our work depends heavily on access to sources, their circulation

and reception, and our archives, in this sense of the terms, are constantly changing and being updated. We thus rely on the freedom to read, the freedom to read anew and differently and the freedom to present our readings under similar terms and conditions. Humanities scholarship is open or otherwise it does not exist. We are both readers and writers and we have learned not to overestimate the differences between primary work and critical discourse. What does Free Software propose? Simply put, it offers four freedoms: the freedom to access (code as well as texts or any other media), the freedom to actively read and ultimately re-write or modify, the freedom to publish and re-distribute under the same conditions. It seems to me that Free Software and Open Source which are the engines behind the digital infrastructure and some of its most important platforms share much with our humanities. Furthermore, the digital environment has been characterized so far by a normalizing dynamic of global expansion and the continuous emergence of dissident and original voices. Humanities scholarship and scholarly publishing ultimately serve the same purpose and they need to revisit the digital environment with a more informed and more aggressive attitude in order to help shape its future potential and to ensure a forceful digital presence.