

Final paper: Virtual patrons, catalysts, and virtual libraries

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Abstract

In this paper the following question is investigated: "*under which conditions does a library patron transform herself?*" It is argued that previous approaches to this question are insufficient to address the uncertainty presented by ongoing changes in the structure, economy, and technology of libraries, as well as changes in the conception of the identity of the library patron. After offering a brief historical background of the idea of the modern library the philosophical concepts of *virtual patron*, *catalyst*, and *virtual library* are defined in order to construct a more flexible, dynamic, and up to date account than the dominant Enlightenment and Utilitarian model of modern librarianship. The present model offers a framework in which self-transformation is not regarded as a moral duty of improvement, but as a liberating process inherent to a creative *way of life*.

"Slow in my darkness, I explore
The hollow gloom with my hesitant stick,
I, that used to figure Paradise
In such a library's guise."
(Borges 1964, 55)

Introduction

In this paper the following question is investigated: "*under which conditions does a library patron transform herself?*" Even though this problem is hardly new, it is here argued that previous approaches to this question are insufficient to address the uncertainty offered by ongoing changes in the structure, economy, and technology of libraries, as well as changes in the conception of the identity of the library patron.

It is no secret that the concept of the modern library, as well as of other institutions, is currently in crisis. The profession of librarianship is evolving in remarkable and important ways (Buschman 2003; Harris 2009). Moreover, the physical aspect of libraries is also changing. For instance, there are now libraries that boast not having any printed books on-

site while their collections can only be accessed electronically (Kolowich 2010). It is important to note, however, that this paper does not address empirical problems of librarianship; its scope is, above all, theoretical. The present investigation aims at offering new epistemological and ontological models for the enrichment of Library and Information Science (LIS) theory. This objective is motivated by the fact that, there has been an important concern about the lack of new critical perspectives in LIS theory (Pettigrew and McKechnie 2001; Wiegand, 1999; Hjørland 1998), although, some more recent works (cf. Day 2005; Leckie and Buschman 2009; Pyati 2006) offer a genuine response to this lack of critical perspectives.

The structure of the paper is organised in the following way: section one offers a brief historical background of the idea of the modern library as a transformative agent; sections two through four put forward the three basic concepts used to explain the dynamics of the proposed model of self-transformation: *virtual patrons*, *catalysts*, and *virtual libraries*, respectively. The fifth section describes how the three previous concepts correspond to each other. A conclusion summarizes and briefly evaluates the present work.

1) Historical background: The idea of the modern library as a transformative agent

The thought that libraries have the potential to improve lives has shaped the professional ideology of librarianship since the mid 19th century. In this section some of the most typical instances of such ideology are taken into account, ranging from the origins of the idea of the modern library until our days. The relevance of acknowledging the historical background of this idea is twofold: (1) to show that the issue under study (the transformative interaction between patrons and libraries) is not a new one, and (2) to use this historical background in order to contrast the differences and advantages that our own approach contributes to the issue under study.

The theoretical origins of the idea of the modern library can be traced back both to the Enlightenment and Utilitarianism. Reason, individualism, and the greatest happiness for

the greatest number are the foundations of librarianship, as we know it. Greenhalgh, Worpole, and Landry (1995) state this unequivocally as they write:

The public library was quintessentially a product of the age of Enlightenment - its archetypical institution in many ways The Utilitarian tradition, articulated in part by John Stuart Mill, made a case for the state to provide an environment that would produce the greatest good for the greatest number Libraries were places that could offer opportunities for *individuals* [emphasis added] to realize their individual potential (19-20).

To better illustrate how offering opportunities for individuals has been one of the keystones of librarianship throughout its developmental years it is necessary to look at particular examples of the materialization of this ideal.

As democratic tenets were on the rise in 19th c. America the Trustees of the Boston Public Library produced, in 1852, the well-known report *Upon the objects to be attained by the establishment of a public library*. This document expresses, in a most eloquent style, the thought that public librarianship should aim at the enlightenment of individuals (Johnson and Harris 1976, 267). It is evident that for the writers of this report, such as Edward Everett and George Ticknor, there was

a direct connection between knowledge and virtue, and in their report they stated the very heart of what was to become the public library creed: the future of a democratic republic is directly dependent upon education of its citizenry, and the library is an important element in the educational process (Johnson and Harris 1976, 268).

In the aforementioned report the principle of what a public library should do is openly egalitarian in the sense that it privileges the self-improvement of the majority of individuals, as opposed to the upgrading of an already enlightened minority:

The question is not what will be brought about by a few individuals of indomitable will and an ardent thirst for improvement, but what is most for the advantage of the mass of the community. In this point of view we consider that a large public library is of the utmost importance as the means of completing our system of public education (Boston 1852).

The ideological blueprint for the Boston Public Library sought to improve the lives of those who were willing to help themselves. It aimed at expanding book borrowing services "into the home of the young; into poor families; into cheap boarding houses; in short, wherever they will be most likely to affect life and raise personal character and condition" (Boston 1852).

The endeavour of enhancing political life as a result of the edification of personal character through reading was intrinsic to the idea of the modern library. For Sydney Jackson (1974) libraries in the late nineteenth century were the vehicle for social and political change for the working class: "[l]et us consider . . . what so many library promoters talked about, either bringing the workingman into the stream of opportunity or trying to shape his thinking and behavior at the ballot box, or both" (370).

A different example of the materialization of early library ideals can be appreciated by looking at the remarkable financial and ideological contributions of Andrew Carnegie who, by 1920, had supplied the funds to construct more than 2,500 buildings for libraries, thus becoming one of the most influential forces in the development of libraries in the late 19th c. and early 20th c. (Johnson and Harris 1976, 270-1). Carnegie's effort was clearly motivated by the idea that libraries were fundamental to the self-improvement of individuals with willpower. In his own words Carnegie portrayed free libraries as "the best agencies for improving the masses of the people, because they give nothing for nothing. They only help those who help themselves" (qtd. in Johnson and Harris 1976, 271).

It is crucial to note that Carnegie did not consider his own contribution to the edification of libraries as an act of compassion; on the contrary, he distanced himself from the idea of giving free goods to the hopeless by emphasizing the opportunities of self-transformation that the access to books can bring to those willing to help themselves. In 1889 Carnegie wrote:

The individual administrator of surplus wealth has as his charge the industrious and ambitious; not those who need everything done for them, but those who, being most anxious and able to help themselves,

deserve and will be benefited by help from others and the extension of their opportunities at the hands of the philanthropic rich (1968, 35).

Even though Carnegie's contributions were fundamental both to the materialization of libraries and the development of the idea of modern librarianship, this historical account would be incomplete without the father figure of the profession: Melvil Dewey.

Dewey also shared and helped to build the idea of both reading and access to library materials as an activity of self-improvement. But it is decisive to note that for Dewey, as for most of his contemporaries, self-transformation enabled by access to libraries meant also self-betterment in the moral connotation of the term, as opposed to a neutral modification of character, that eventually resonated in the betterment of society. Such moral connotation was to become characteristic of the idea of librarianship up until our days. For instance in 1899 Dewey wrote:

I doubt if there is one who denies the supreme necessity of the building of character the genealogy is this: reading begets reflection, reflection begets motive, motive begets action, and action begets habit, and habit begets the supreme thing - character. So we have come to recognize that if we are to accomplish the chief end that is before the people, we must strive to *control* [emphasis added] the reading for others (1968, 77).

Special attention must be put to Dewey's suggestion of control over others' reading. This point is fundamental to understand how the idea of libraries as moral guides in charge of the *betterment of individuals* and society diverges from our own suggestion about what libraries should aim to do.

To give a more balanced account of 19th c. librarianship it is also important to note that not all authors see the inception of the modern library with the same enthusiasm. Some, like Black and Crann (2002), are clearly sceptical about the idea that library patrons have regarded the library as a mean for self-transformation: "*Generally*, the working class has rarely looked to the public library as a potential source of improvement" (qtd. in Usherwood 2007, 32; emphasis in the original).

Until now we have sketched a rough idea of the historical underpinnings of the library as a tool for self-improvement in the mid and late 19th c. But how many of these ideals have permeated into our own days? We believe that most, if not all of them.

In a recent compilation of essays analysing contemporary conditions of libraries Feinberg (2001) recounts how Jennie Flexner, New York Public Library's readers' adviser during the early and mid 20th c., "sought to use the library and her individualized reading lists to improve the downtrodden and unfinished immigrant" (3). With this example one can appreciate how the target of the self-improvement discourse has shifted from the betterment of the working class to "finishing" the immigrant class as part of a rectification agenda permeated with a morality of enhancement.

Such rectification agenda should not be a surprise: the immigrant class in 20th c. America has been frequently portrayed as "impure" and in need for "redemption" from uncultivated ideas and uncivilized customs (Garza Wicker 2006). In fact, this moral discourse of immigrant "redemption" has also pervaded the ideology of librarianship of our days. Usherwood (2007) offers a good illustration of the latest reincarnation of the idea of the library as a vehicle for self-betterment: "the needs of the immigrant community are immense and, in many parts of the world, newcomers to a country look upon the public library as a refuge and a conduit to understanding their new home" (33).

But it would be unfair to emphasize the fact that immigrants have become the new target in the agenda of library-induced self-improvement. In current inceptions the library ideal of self-betterment is equally attainable to all who are willing to improve themselves. Rodger (1998) offers an instance of the currency of such proposal: as he attempts to portray the "core values" of librarianship he writes that librarians believe in "the power of words and their ability to elevate the quality of people's lives" (68). Moreover, the perspective about what libraries should do is embedded into the broader programme of American liberalism. In this respect Birdsall (1988) points out:

librarianship reflects a general American political culture that consists primarily of liberal tenets. This liberalism is an admixture of ideas and values that accommodates a wide range of paradoxical political attitudes. Library ideology, and the institutional practices flowing from it, mirrors the broad spectrum of attitudes and paradoxes represented in American liberalism (75).

The American liberal ideology of self-betterment is also reflected in Dewey's aged ALA motto: "the best reading, for the largest number, at the least cost." This slogan was first adopted in 1892 and reinstated by the ALA Council in 1988 (ALA 2010). It is worth noting that Dewey's motto is still in use today despite recent attempts by a member of ALA's Executive Board to stop using it (Berry 2004, 8).

To sum up, the origins of the idea concerning the modern library are deeply rooted in the project of Enlightenment and Utilitarianism. A constant tenet of the ideology of librarianship has been, up until today, the assumptions that the mission of the library is to allow and encourage the betterment of individuals through reading, particularly those individuals who do not belong to the elite and the most educated classes (i.e. the working and immigrant classes). Since the late 19th c. until our days Dewey's portrayal of librarianship as a virtuous occupation that helps patrons to better themselves became a pervasive trait of this activity. It is important to emphasize that the focus of this omnipresent ideology is not self-transformation *per se*, but *self-betterment* of individuals for the good of society. How and why such view is problematic is a topic worth pursuing, however, it is not the focal point of this paper. What we aim at is not criticizing this enveloping ideology but offering an alternative that is better suited for the challenges that librarianship will be facing during the 21st century.

2) Virtual patrons

A pervasive element in the modern library model outlined above is the liberal idea of the library patron as a fixed, individual identity. It is here argued that this modern conception of the patron is insufficient to explain self-transformation in the 21st century. This section

offers an alternative figure to that of the modern library patron, namely, the *virtual patron*, which is strongly based on Gilles Deleuze's concepts of the "virtual" and the "actual" (1994; Deleuze and Guattari 1991).

As opposed to the conception of the traditional modern library patron, the idea of the 21st c. patron is conceived as an unfolding multiplicity with two interdependent components: 1) the *actual patron*, and 2) the *virtual patron* who is the real, constitutive, "morphogenetic," and disclosed component of the person who becomes *actualised* (i.e. becomes an *actual patron*) through the engagement with *catalysts* (this term is defined in the next section).

To understand the Deleuzian notion of *virtuality* it is useful to first look at what it does *not* entail: the *virtual* is neither non-existent, nor necessarily technological; it is not a hologram or the figment of a computer program (DeLanda 2002, 33). For Deleuze the philosophical concept of the *virtual* exists potentially (Gerolami 2009, 1), but in a very different way from what "could have been."

The *virtual* already exists, it is real before its "unfolding" or *actualisation*, and it is opposed to the *actual*. In this sense *virtual/actual* are not equivalent to possible/real: the possible is what "could exist" while the *virtual* has the same ontological status as anything that is real. In *Difference and Repetition* Deleuze offers the following description:

"the virtual must be defined as strictly a part of the real object . . . the virtual is completely determined . . . Every object is double without it being the case that the two halves resemble one another, one being a virtual image and the other an actual image. They are unequal odd halves . . . The virtual possesses the reality of a task to be performed or a problem to be solved: it is the problem which orientates, conditions and engenders solutions, but these do not resemble the conditions of the problem" (1994, 209-212).

Both the *virtual* and the *actual* are real and paired aspects of the same object, but they differ from each other. In contrast, the possible is nonexistent.

According to Deleuze the conversion from the *virtual* to the *actual* is called *actualisation* (Deleuze 1994, 211-2). *Actualisation* is the "becoming," "unfolding," or "differentiation" of the *virtual* into the *actual* (DeLanda 2002, 45-116). A different way of understanding these Deleuzian concepts is explained by DeLanda (1999) as a set of already existing intensities, or forces, that cancel each other through a "morphogentic" process of attraction (8).

The *virtual/actual patron* concepts used throughout this paper are the result of extrapolating Deleuze's realist ontology into LIS theory. But instead of referring to physical or biological processes, as Deleuze often does when referring to the *virtual*, the notions of *virtual/actual* are used to explain the notion of the 21st c. library patron as a multiplicity of forces that come together, as opposed to a fixed, individual identity that already exists. To be more precise the *virtual/actual patron* occurs as a process (or a becoming), as opposed to a unified and immutable "self" delimited by a name, a body, and a patron number. Based on the work of Deleuze the 21st c. library patron is conceptualized as a fundamentally dynamic multiplicity.

The drive of the *virtual/actual patron* can be gauged in "degrees of freedom," that is, the number of significant ways in which an object (e.g. a pendulum) can change (DeLanda 2002, 13). Referring to a library patron as an individual, fixed, identity is clearly more limiting than referring to her as a *virtual/actual patron*. The idea of the *virtual/actual patron* allows us to extend the notion of degrees of freedom from objects (e.g. a pendulum) to persons as multiplicities of dynamic intensities. However, the *virtual/actual patron* enjoys a wider range of degrees of freedom than objects. For instance, a pendulum has only two degrees of freedom: momentum and position (DeLanda 2002, 13), while the *virtual patron* can transform in innumerable ways.

The concept of the *virtual/actual patron* is more appropriate for expressing the wide range of possible modalities in which the 21st c. library patron can develop. In contrast with the idea of the modern library patron as a fixed identity destined to better herself and

society through reading, the *virtual/actual patron* is envisioned as an open-ended multiplicity that can only be understood as a constant becoming of multiple alternatives.

In other words, the idea of the library patron as someone who enjoys access to library materials chiefly to improve herself is replaced with a new notion of self-transformation that is not solely characterized by the implied morality of self-improvement for the good of the individual and society, but that is largely motivated by *actualisation* in innumerable degrees of freedom *as a way of life*, regardless of the moral outcome of such transformation.

Someone may object that the idea of the *virtual/actual patron* as a liberating concept from the imperative of self-improvement for the good of the individual and society is redundant because this model is already acknowledged by current library policies such as ALA's stance in favour of intellectual freedom. Indeed, we agree that defending intellectual freedom has promoted genuine progress by undermining the self-betterment discourse in librarianship. Efforts of this sort are epitomized in the *Intellectual freedom manual* which states that:

Intellectual freedom can exist only where two essential conditions are met: first, that all individuals have the right to hold any belief on any subject and to convey their ideas in any form they deem appropriate, and second, that society makes an equal commitment to the right of unrestricted access to information and ideas regardless of the communication medium used, the content of work, and the viewpoints of both the author and the receiver of information (ALA 2006, xviii).

Nonetheless, we respond to this objection by arguing that, although the defence of unhindered contact with different ideas is a respectable effort, there is still a lot more to do in order to fully achieve a different approach concerning the aims of librarianship. As mentioned in the first section of this paper, core values in librarianship still include self-betterment ideas expressed in slogans such as "the power of words and their ability to elevate the quality of people's lives" (Rodger 1998, 68), or "the *best* [emphasis added] reading, for the largest number, at the least cost" (ALA 2010). Moreover, the motivation to

offer an alternative model of how library patrons can transform themselves is not chiefly driven against issues of censorship, but more importantly, against the 19th c. liberal tenets that still compose the ideological framework in which self-transformation (read "self-betterment") has been embedded.

To summarize, in contrast with the rigid notion of the individual modern library patron who accesses (and is encouraged to access), library materials with the principal aim of bettering herself and society, the unfolding, dynamic multiplicity that conforms the *virtual/actual patron* is described in the present model as a "morphogenetic" process that embraces becoming, not just for its intrinsic utility or moral goodness, but *as a way of life*. In this sense the idea of the *virtual patron* is closer to Nietzsche's praise for self-creation beyond traditional moral values (cf. Deleuze 1962; Nietzsche 2003, 2005) than John Stuart Mill's (2002) Utilitarianism. The idea of the *virtual patron* has been conceived with the intention to offer an alternative to the pervasive notion of self-betterment that stems from Enlightenment and Utilitarian values that successfully nourished, but now put a bridle on the guiding principles of librarianship.

3) Catalysts

How does the *virtual patron* become *actualised*? To answer this question it is necessary to turn to the concept termed *catalyst*. A *catalyst* is best defined as a text made up by the coupling of both information and its material support. A *catalyst* goes beyond classifications of form and genre. Some examples of *catalysts* are: a clay tablet, a book, a film, an audio file, a website, a video game, or the textual display of an organism's genetic code. A *catalyst's* form (material support) and content (information) are not separable features. For example, a printed book and an e-book of the same title and edition cannot be considered the same thing, because in each instance the materiality in which the information is embedded has a fundamental and inseparable role (cf. McLuhan 1995) in what constitutes a *catalyst* and how it *actualises* the *virtual patron*.

More importantly, the description of *catalysts* puts aside principled implications reflected in questions such as whether accessing certain information displayed by a *catalyst* is either good or bad for its readers (Ross 2009, 633) or for society. A *catalyst* is not gauged in terms of moral duty or social utility but in terms of its capacity to *actualise* (in contrast with "making better") a *virtual patron*. *Catalysts* are not relevant for what they mean, characterise, or represent, but for what they can do to a *virtual patron*.¹ For instance, under the concept of *catalyst*, a copy of Hitler's *Mein kampf* (1943) is not judged in terms of "a book endorsing positive/negative values" but merely described as "the coupling of "information/material support with the capacity to trigger the *actualisation* of a *virtual patron* in degrees of freedom that are neither qualifiable nor quantifiable." In other words, the *catalyst* does not determine the transformation of a patron; self-transformation depends, to a great extent, on the reaction between two forces, namely, the *virtual patron* and the *catalyst*. Both the process and the outcome of such reaction remain, for the most part, uncertain.

In addition, the description of *catalysts* strays from questions of Truth. By the term "Truth" (with capital "T") we mean the dogmatic conception of a correspondence between assertoric statements and reality. Such view is epitomized by Alvin Goldman (1999) whose correspondence theory of Truth states that: "[a]n item *X* (a proposition, a sentence, a belief, etc.) is true if and only if *X* is descriptively successful, that is, *X* purports to describe reality and its content fits reality" (59). But someone may ask: why is this definition of Truth disregarded as part of an explanation of *catalysts*?

The danger of portraying *catalysts* as closer or farther from an accurate representation of reality is that, if the only goal of knowledge is "mirroring nature" (Rorty 1979), then we may be losing something remarkable, something unique, that can only be

¹ I am indebted to Bernd Frohmann for this insight. For more on this cf. Frohmann (2009) where he states that "there are other approaches to documentation, which have as their aims not so much the precision and accuracy of a scientific representation of what documents and documentation might be, but forging concepts in a Deleuzian spirit, seeking to enhance their power and force, with more concern for what they do than for what they mean or represent" (301).

accessed, as Deleuze and Guattari (1991) suggest, by "palpating reality"² (21-37). As Todd May (2005) observes, for Deleuze:

Traditional ontology would like to match its concepts to what there is, to map what there is by means of concepts that are adequate to it. Adequacy requires truth, conceptual stability, and in the end identity. But if it is difference rather than identity we seek, and the interesting and remarkable rather than the true, then it is palpation rather than comprehension we require (20).

Deleuze's suggestion makes sense if we remember that the function of *catalysts* is to trigger *actualisation*. Keeping the above in mind, the epistemology of difference behind the present model is guided by the capacity of any given *catalyst* to *actualise* the *virtual patron* and her world in new and interesting ways, as opposed to the restrictive and one-dimensional function of reinforcing her commitment to an accurate representation of reality, where the latter puts limits in the ways in which a *virtual patron* could conceive to conduct her life.

To illustrate the limiting quality of a correspondance theory of Truth à la Goldman it is useful to look at how traditional reference service in public libraries privileges values such as "accuracy, thoroughness, timeliness, authority, instruction, access, individualization, and knowledge" (Tyckoson 2001, 183). While these values appear to be important competencies for the reference librarian, they do not acknowledge the problem of *actualisation*. For instance, the transformations that a *virtual patron* may encounter while engaging with Gore Vidal's (1976) historical novel *1876* would be left out of the reference librarian's managerial equation because, it could be argued, *1876* is neither accurate nor up to date, it does not correspond with reality. Nonetheless, *1876* offers narrative elements that can importantly *actualise* a *virtual patron*. For example a reader of *1876* who learns about the alleged fraud committed by Republican leaders in the State of Florida during the presidential election

² The following explanation by Todd May (2005) helps to elucidate what Deleuze means by "palpating reality": "[c]oncepts do not identify difference, they *palpate* it. When doctors seek to understand a lesion they cannot see, they palpate the body. They create a zone of touch where the sense of the lesion can emerge without its being directly experienced. They use their fingers to create an understanding where direct identification is impossible We might say that palpation "gives voice" to the lesion. It allows the lesion to speak: not in its own words, for it has none, but in a voice that will at least not be confused with something it is not. Palpation is not a traditional philosophical activity. It does not seek to comprehend, if by comprehension we mean bringing within our intellectual control" (20).

between Rutherford B. Hayes and Samuel J. Tilden may, or may not, become more critical towards political corruption in past (and more recent) electoral proceedings. Furthermore, the reader of *1876* may, or may not, demythologize a significant epoch in American history. Keeping this in mind we believe that, in contrast with a correspondence theory of Truth, Deleuze and Guattari's notion of "palpating" the unknown (1991), is more appropriate to investigate the multiplicity and dynamism underlying *actualisation*.

The above observation does not imply, however, that our model endorses a blind post-modernist acclaim for relativism. Issues concerning the reliability of the information displayed by a *catalyst* are still considered important, however, veracity matters in so far as it boosts the transformative influence of a *catalyst*.

It is also important to clarify that *catalysts* alone have no transformative power whatsoever. The *actualisation* of a *virtual patron* will take place only if the engagement with the appropriate *catalyst* occurs. For instance, it is unlikely, but not impossible, that a hardcore Republican engaging with Vidal's *1876* will go through a major *actualisation*. Speaking metaphorically, in the *actualisation* "tango" it takes two to "dance": the *virtual patron* and the *catalyst*, and none of these elements has an absolute influence over the other.

Is it fair to say that *actualisation* starts and ends when a virtual patron engages with a *catalyst*? We claim that *catalysts* trigger *actualisation*, but once a *virtual patron* becomes *actualised*, the process starts again because *actual patrons* are always pregnant with their own *virtuality*. But now we should take a look at the "venue" par excellence through which this endless process of self-transformation takes place, namely, the *virtual library*.

4) Virtual libraries

The question underlying our study, namely, "*under which conditions does a library patron transform herself?*" cannot be answered with the concepts of *virtual patron* and *catalyst* alone. It is indispensable to include the notion of *virtual library*, which acts as an axis

between *virtual patrons* and *catalysts*. This fundamental concept is borrowed from the LIS doctoral dissertation of Natasha Gerolami (2009) to whom our study is deeply indebted, not just for the contents of this section, but also for the overall inspiration to write the present paper.

Gerolami's term "virtual library" may be misleading because it suggests the connotation of a digital library through which library materials, say online journals, are accessed from the distance by a technological device such as a personal computer. It is worth clarifying that Gerolami's project does not entail the description of a new technological inception of the library, but, in the same spirit as the *virtual patron*, Gerolami's project is an extrapolation of Deleuzian philosophy into LIS.

Gerolami (2009) argues that the traditional library should be transformed from a "normalizing force" to a "creative force" that can help reshape society through "freedom, creativity and transformation" (33). Such revolution from an institution of control to one of imagination and self-transformation is possible by rejecting the social contract model of liberal politics, which has set limits on the desires and freedom of fixed individuals for the sake of society, and substituting it with a model that acknowledges the transformative qualities of fragmented identities (207-15).

Based largely on Deleuze's work, Gerolami conceives the traditional library model not chiefly as repressive but as one that produces a particular subjectivity. In Gerolami's own words:

According to Deleuze's theory of institutions, the library is not best understood as an institution that represses natural base instincts; it is not merely a tool of repression. Instead, the library is best understood as a productive space where subjects are produced . . . According to Deleuze, the subject is neither a coherent organising principle nor the foundation of knowledge. It is the product of principles of association governing relations between the bundles of ideas that constitute the mind (2009, 220).

As this quote suggests, Gerolami proposes a project that encourages both the plasticity of self-determination and the creativity of multiplicities, as opposed to the rigid regulation of behaviour of individuals.

In relation to the present study the idea of the *virtual library* is important because it contrasts with the 19th c. notion of the library as an apparatus for the betterment of the individual and society. The concept of the *virtual library* embraces the facilitation of self-transformation as an end in itself and exists as part of a dynamic network of interacting multiplicities (more about this latter notion is explained in the next section). In a similar way than the idea of the *virtual patron*, the notion of the *virtual library* challenges the modern conceptualization of a fixed and independent institution to portray an organization that is dynamic, adaptive, and manifold.

But the importance of the *virtual library* is not solely related to the past; it also offers a guideline to elucidate the mission (i.e. self-transformation *as a way of life*) of new library materializations such as "travelling" libraries, digital libraries, or genomic libraries.³ But how do *virtual patrons*, *catalysts*, and *virtual libraries* interrelate with one another? In the next section we offer a model that explains how each one of these concepts mutually supports and shapes the others.

5) The 21st century library network

How do the three previous concepts come together? In this section it is argued, based on the work of both Michel Callon (1986) and Bruno Latour (2005) that, instead of detached and autonomous multiplicities, the *virtual patron*, the *catalyst*, and the *virtual library* are intimately related and support each other as actors in a network. The novelty and

³ "A genomic library contains an example of each DNA sequence found in a particular genome (or the hereditary information of an organism), broken into manageable fragments" (ISCID 2010). Based on the work of Dawkins (2009) we propose that it is not impossible that sometime in the future genomic libraries will be accessed in order to precipitate the *actualisation* of a virtual patron through the alteration of her own genetic makeup, thus expanding her degrees of freedom in considerable ways. Dawkins writes, tangentially: "[t]he genetic database will become a storehouse of information about the environments of the past, environments in which ancestors survived and passed on the genes that helped them to do so . . . this 'genetic book of the dead' will turn out to be a useful manual for survival in the present and future" (2009, 405).

advantage of this approach is that the role of actor is granted both to human and non-human things (i.e. *catalysts* and *virtual libraries*).

Adopting this model is also useful because it provides an alternative to the static and unidirectional library model of the 19th c., in which patrons are the only agents. Borrowing Latour's (2005) sociological "Actor-Network-Theory" (ANT) for the present model helps bring librarianship up to date with the structural changes that libraries are going through. ANT provides a flexible and dynamic model where both texts and organisations are considered actors, and not just "hapless bearers of symbolic projection" (10), with capacity to influence other actors in significant ways. The following paragraphs offer a succinct explanation of ANT as well as how it is incorporated into the present model.

A central thought of ANT is that what is commonly understood by the term "social" does not exist in a material vacuum; the "social" is always materially embedded. Human agents are constantly in interaction with non-human agents that force us to proceed in certain ways.⁴ In this respect Latour (2005) observes: "[w]hen we act, who else is acting? How many agents are also present? How come I never do what I want? Why are we all held by forces that are not of our own making?" (43).

The extrapolation of ANT into the present model supports the claim that *virtual patrons* cannot become *actualised* if they don't enjoy access to the appropriate *catalysts*; in turn, *catalysts* cannot be granted any agency without their users. In the same fashion the idea of a *virtual library* is meaningless if either one of its basic constituents (*catalysts* or *virtual patrons*) is missing.

For Latour (2005) "*any thing* that does modify a state of affairs by making a difference is an actor" (71). Moreover, in order to illustrate how many ordinary things can be considered actors, he invites us to imagine the following activities:

⁴ A recently published book that also acknowledges the agency of non-human elements is Jane Bennett's (2010) *Vibrant matter: A political ecology of things*.

hitting a nail with and without a hammer, boiling water with and without a kettle, fetching provisions with or without a basket, walking in the street with or without clothes, zapping a TV with or without a remote, slowing down a car with or without a speed-bump, keeping track of your inventory with or without a list, running a company with or without bookkeeping (71).

Keeping these illustrations in mind it is easy to see how a thing, say a speed-bump, can be considered an actor with the capacity to make others behave in very specific ways. Of course, this action is not exactly equivalent to human agency, but the advantage of ANT rests in recognizing the existence of non-human things with the potential to "authorize, allow, afford, encourage, permit, suggest, influence, block, render possible, forbid, and so on" (Latour 2005, 72). It is precisely these sorts of effects caused by things that make Latour consider non-humans as actors of a network. Following this line of thought *catalysts* and *virtual libraries* can also be considered non-human actors that have a fundamental influence over *virtual patrons*, and vice-versa, entangling each other through a continuous network of influence.

But the library network proposed here (composed by the entanglement of *virtual patrons*, *catalysts*, and *virtual libraries*) does not exist in a vacuum either. The internal elements of this library network must themselves be conceived as agents interacting unreservedly with *external* actors in a broader network of other agents. By incorporating ANT it is also possible to appreciate how the proposed library network itself is not constituted by an essential, rigid, and independent structure with clearly defined functions and capabilities, but as an actor open to interactions with other agents in an even larger network of institutions and structures.

6) Conclusion

In a documentary film directed by Pierre-André Boutang, Deleuze (1997) is interviewed by one of his former students, Claire Parnet, who brings forward a sequence of discussion themes that are named after each letter of the alphabet. In the last segment of this

documentary, entitled "Z comme zig-zag," Deleuze describes "zig-zag" as the basic, unintelligible, movement present in the origin of any creation. The "zig-zag" is what enables disconnected singularities to make contact with each other, it is present in the encounter of latent qualities that come together through an "obscure originator," in the same way that lightning is created through the encounter of two reacting potentialities that already exist, but are undisclosed, before the lightning strikes. Deleuze's description epitomizes the model of self-transformation that this paper offers, in which *virtual patrons* become *actualised* through the engagement with *catalysts*.

In this paper it has been argued that self-transformation through the explanatory model of *virtual patrons*, *catalysts*, and *virtual libraries*, offers a more flexible, dynamic, and up to date account than the dominant Enlightenment and Utilitarian model of modern librarianship, in which individuals achieve self-betterment through libraries for their own good and the overall good of society. In contrast with the modern ideal of librarianship the present model offers a framework in which self-transformation is not regarded as a moral duty of improvement, but as a liberating process inherent to a creative *way of life*. As the opening quote from Borges implies, the library has stopped being idealized as Paradise: its embracing darkness allows it to become something else, something new.

Finally it is worth asking if the complex philosophy of Deleuze (and, to a lesser extent, Latour's ANT) is necessary for the present model. We think that extrapolating Deleuze's and Latour's theories, as well as incorporating Gerolami's research, has permitted the creation of a theoretically enriched model that could not be attained otherwise. The explanations offered in this paper are not common in LIS literature: the present model enriches LIS theory by putting forward a 21st century approach to the underlying dynamics of self-transformation through libraries. While doing so this model also contributes to the advancement of the interdisciplinary dialogue between LIS and philosophy.

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