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Untangling the relationship between libraries, young adults and web 2.0: The necessity of a critical perspective

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UNTANGLING THE RELATIONSHIP BETWEEN LIBRARIES, YOUNG ADULTS AND WEB 2.0: THE NECESSITY OF A CRITICAL PERSPECTIVE.

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Purpose: This paper addresses a gap in the analysis of the dynamic and challenging relationship between libraries, Web 2.0 and young adults, suggesting the relevance of a critical approach.

Methodology/Approach: This paper represents an exploratory literature review with the objective of identifying a possible gap in the way the LIS community is addressing the concept of Web 2.0.

Findings: Findings indicate that the research produced in other fields, such as Communication or Computer Science; the way young adults interrelate with new technologies; and the need for collaboration between practitioners and researchers justify and support the use of a critical perspective to analyze the suggested topic.

Originality/Value: The call for a critical approach to technology is certainly not a novel suggestion in the LIS scholarship; however, its resurgence is extremely relevant for the LIS field because of the significant role that technology is playing in the daily life of the library and its users.

Keywords: Web 2.0, Library 2.0, Critical theory, Young adults, Research collaboration

General review

1. INTRODUCTION

The purpose of this article is to inspire the use of a critical approach when analyzing the intersection between libraries, young adults and Web 2.0. In 2003, Wayne Wiegand called for a change in the research agenda of the Library and Information Science (LIS) field, from the user in the life of the library to the library in the life in the user. Currently, technology is another factor that influences the life of both the library and the user. Other fields, such as Communication, Sociology, and Computer Science are already looking critically at how technology is affecting society; however, the Library community is not following the same path, and a critical approach in relation to Web 2.0, the last embraced technology, is therefore hard to identify. This gap presents itself as an opportunity for collaboration between practitioners, the most productive sector in relation to Web 2.0 in the library community, and researchers. As well, this critical perspective is especially crucial for professionals working with young adults, since this segment of the population has a seamless relationship with technology and the library is becoming one more environment where this relationship is constructed and supported.

In order to address the need for a critical approach to Web 2.0, this paper will address the following concerns: the significant contribution that research from other fields, such as Sociology and Communication, can make to the LIS community; the importance of bringing together the knowledge gathered by practitioners with the research carried out by scholars; and finally, the relevance of this approach in relation to young adults because of their particular relationship with technology.

2. THE CONCEPT OF WEB 2.0: THREE POTENTIAL PATHS

The aim of this first section is to detect three distinct voices in relation to the concept of Web 2.0 in the general discourse. These three paths will help to identify a gap in the way the concept of Web 2.0 is being applied and analyzed in the Library and Information Science (LIS) community.

The inevitable start when defining Web 2.0 is Tim O'Reilly. His contribution to the creation and development of the term Web 2.0 has been determinant, although certainly not without controversy. O'Reilly's compact definition establishes the boundaries between Web 2.0 and Web 1.0:

"Web 2.0 is the network as platform, spanning all connected devices; Web 2.0 applications are those that make the most of the intrinsic advantages of that platform: delivering software as a continually-updated service that gets better the more people use it, consuming and remixing data from multiple sources, including individual users, while providing their own data and services in a form that allows remixing by others, creating network effects through an "architecture of participation," and going beyond the page metaphor of Web 1.0 to deliver rich user experiences." (O'Reilly, 2005)

This definition comprises key terms that are repeated when talking about Web 2.0: the importance of users, participation, and the remixing of information. His voice can be easily detected in LIS literature and his definition is frequently used as the "official" definition for the concept of Web 2.0.

Two dissident voices emerged to enrich the process of defining Web 2.0; Tim Bernes-Lee and Tim Bray challenged the concept of Web 2.0 as established by O'Reilly. Berners-Lee challenged the basic premise of Web 2.0, that is, the shift of focus from technology and information to the user, connectivity and participation. Bernes-Lee believed that "Web 1.0 was all about connecting people. It was an interactive space, and I think Web 2.0 is of course a piece of jargon, nobody even knows what it means. If Web 2.0 for you is blogs and wikis, then that is people to people" (Anderson, 2006). Bray, another Internet guru, also questioned the concept of Web 2.0 in a similar basis as Berners-Lee: "I just wanted to say how much I've come to dislike this "Web 2.0" *faux*-meme. It's not only vacuous marketing hype, it can't possibly be right" (Bray, 2005). These two positions did not question the technology behind Web 2.0; however, their understanding of Web 2.0 is not revolutionary but evolutionary, another step in the development of the Internet.

Finally, Jaron Lanier represents an opinion that challenges some of the basic elements that define Web 2.0, for example collective work. Described as controversial, his essay *Digital Maoism: The Hazards of the New Online Collectivism* provoked mixed reactions from different intellectual communities, including librarians (Johnson, 2007). Another relevant publication for this paper is Lanier's *Beware of the online collective* (2006). In this work, Larnier defines Web 2.0 in relation to the capitalist society within which we live. According to Larnier, the basic idea behind Web 2.0 can be equated to an entrepreneur that creates some framework or service that attracts "clicks" and information of an enormous amount of people; the service creator following this "monetizes" the interest by offering ad space to target the huge pool of users populating the online service. Larnier explains that "[w]hat is amazing about this idea is that the people are the value — and they also pay for the value they provide instead of being paid for it" (Lanier, 2006). One can agree or disagree with his theses, but the importance of the voices that challenge the status-quo and stimulate debate cannot be denied. Larnier's perspective enriches the discussion bringing a critical perspective that should be of interest to library professionals because it does not analyze the technology *per se* but rather analyzing what people are doing, gaining, producing with it. Furthermore, this approach connects the Web 2.0 debate with current critical concepts such as "prosumer" (Toffler, 1981) and "immaterial labour" (Hardt, 1999).

The notion of technology as part of everyday life, especially with reference to the Internet, is being pursued by researchers from Sociology and Communication. However, the LIS community could also benefit from this perspective as it assess both benefits and challenges that technology brings to the life of the citizen, a knowledge that would complement Wiegand's call for research about the library in the life of the user. (Wiegand, 2003)

Now that these three important voices have been identified, the objective of the following section is to map out these three paths in the LIS literature about Web 2.0.

3. THREE IDEAS OF WEB 2.0 IN THE LIBRARY LITERATURE

The aim of this section is not to develop an extensive analysis of the literature published about Web 2.0; rather this section seeks discussing Web 2.0 in LIS literature, detect the main voices and compare them with the three realms detected in the previous section. The article *Library 2.0 and "Library 2.0"* by Crawford is recommended for an extensive commentary about the concept of Library 2.0, and consequently the application of Web 2.0 in the LIS field. The works of the authors mentioned in this section are listed in a separate bibliography to facilitate their location for the reader.

3.1 The Web 2.0 according to O'Reilly

O'Reilly's definition of Web 2.0 is considered to be standard, which is reflected by the number of published articles in LIS that rely in his conceptualization of Web 2.0. While some of the following authors are currently contributing to the development of the concept of Library 2.0 –that will be discussed in the next section- many of these authors were primarily responsible for applying O'Reilly's Web 2.0 to the LIS field.

The application of O'Reilly's Web 2.0 to LIS studies is characterized in the work of Rachael Singer Gordon and Michael Stephens, Paul Miller and Stephen Abram. Their position supports and encourages the applicability of Web 2.0 technologies in libraries. Librarians are their target audience, since the profession, they deemed, needed to know more about how to quickly and conveniently integrate Web 2.0 in their libraries. The works produced by these professionals tended to describe every possible piece of Web 2.0 software or application that could be beneficial for the librarian, the library and the user. It is important to notice the professional background of some of these authors. For instance, Miller or Abrams are important members of companies that provide different technologic solutions to libraries, Talis and SirsiDynix.

It is also intriguing to see some of the defenders of this vision challenging the future of the library as an institution. For instance, Chad & Miller (2005) stated the following when discussing the future importance of the library: "A great many libraries today may be regarded as serving an ageing and diminishing segment of society. They are faded, shabby: a home for musty books. Although certainly not justified, in a world of Google and Amazon, libraries may be perceived to be irrelevant" (p.11). The message they are sending is that the future of libraries in the Web 2.0 society seems to be away from books and the physical space and inevitably tied to what corporations like Amazon or Google define.

3.2 Attempting independence with Library 2.0

While the above authors directly applied Web 2.0 to the library, the authors in the following section are responsible for developing the concept of Library 2.0. The difference between the application of Web 2.0 to the library and Library 2.0 is, as will be shown, challenging to discern.

The concept of Library 2.0 was first used by Michael Casey in his blog *Library Crunch*. It can be considered an appropriation and development of the Web 2.0 concept. Library 2.0, furthermore, represents an effort by the library field to generate a more meaningful definition through "customizing" the general Web 2.0 concept to the strengths, weakness, opportunities, and threats that libraries are facing nowadays.

As was mentioned previously, the difference between O'Reilly's conception of Web 2.0 and Library 2.0 is challenging to distinguish. For instance, Crawford (2006) found difficult to identify an exact definition for Library 2.0; rather, he presented two different notions behind this concept. The first one refers to "a range of new and not-so-new software methodologies (social software, interactivity, APIs, modular software…) that can and will be useful for many libraries in providing new services and making existing services available in new and interesting ways" (p.31). The second refers to "Library 2.0" as "a hype, a bandwagon, a confrontation, a negative assertion about existing libraries, their viability, their relevance, and their lack of changes […]" (p.31) This second idea comprises the opinion of many professionals that feel Library 2.0 as meaningless and confrontational. On the contrary, these two ideas should be considered

complementary instead of conflicting; the librarians' criticism of the Library 2.0 concept as revolutionary should help to discuss the complexity around this concept and its direct application to the daily work at libraries. An interesting definition that might help in this debate has been developed by Michael C. Habib, a graduate of the LIS program at the University of North Carolina in Chapel Hill. Habib defends Library 2.0 as "a *subset* of library services designed to meet user needs caused by the direct and peripheral effects of Web 2.0" (Habib, 2006, p.9, italics added). Habib's understanding is less confrontational, since it represents an evolution instead of a revolution. This definition might seem simplistic but his idea brings together both the technological side of Web 2.0 and the notions of change behind Library 2.0 without rejecting Library 1.0.

Originally, Library 2.0 was considered to be a concept that surpassed a merely technological approach, instead examining the relationship between the library and Web 2.0 in a holistic way. Library 2.0 defended a vision of the library that was user centered, that "encourages constant and purposeful change, inviting user participation in the creation of both the physical and the virtual services they want, supported by consistently evaluating services" (Casey & Savastinuk, 2006). The idea of placing the user in the center is not revolutionary; however, the way Library 2.0 materializes this idea it is. The capital problem was detected by the concept developers; technology still was the leading topic of discussion (Casey & Savastinuk, 2007). Library 2.0 did not seem that different then from plain Web 2.0. The contribution by Meredith Farkas provides an interesting point to differentiate Web 2.0 and Library 2.0. Farkas states that the only difference between these two concepts is that "Library 2.0 is obviously not about making money; it's about improving services to our patrons" (Farkas, 2005).

Analyzing some of the publications (Casey & Savastinuk, 2007; Courtney, 2007) that embrace the Library 2.0 concept, one can find many similarities between them and the work of the Web 2.0 followers, with some differences also noticeable. These authors also target the practitioner who is attempting to implement Web 2.0, offering a description and specifying the applications of Web 2.0; however, the question of why these capabilities are needed is discussed and justified, and the role of the user becomes an important issue to debate. A work that may complement the aforementioned works is Meredith Farkas' *Social Software in Libraries.* Farkas' approach does not marginalize the particularities of either the user or the library. She devotes one chapter to a reflection on how this technology can be applied in different environments, focusing on the needs of the user and the needs of less-technologically oriented colleagues. As well, Farkas explains the particularities of applying social software to a wide range of libraries, including public, academic, school, law, and medical.

As it has been presented, most of the production about Web 2.0 and Library 2.0 are professional publications and their purpose is not to present tools to harvest patrons' opinions or to think about how technologies shape libraries and, thus, the library users. Although conceptions of Library 2.0 are more aware of the material reality and mission of libraries, several important questions are still unanswered, namely: how does Library 2.0 affect the users who do not know anything about blogs? Do all young adults really love technology? How does this technology affect to the physical services that the library provides? How do we measure the success of a Web 2.0 implementation project?

According to the readings in this section, it seems that the more technology, the better; however, the actual technological needs and preferences of the library users are not clearly stated. Currently, to keep focusing on technology is to focus on the librarian, who, in most cases, is authoring the articles in question. Clearly then, a vicious circle is being created whereby one professional influences other professionals with anecdotes of success. Although this knowledge is valid and extremely useful, at the same time it should be balanced with formal research to specify the personal experience of users and to enrich the overall knowledge in the LIS community about the implementation of Web 2.0 and its effect on library users.

3.3 A critical approach to Libraries and Web 2.0.

A critical approach to technology in the library field is not an original idea. It has been recommended and defended in the past by Buschman (1993), as well as by Harris & Hannah (1993). As editor and author in *Critical Approaches to Information Technology* (1993), Bushman declares that "our intellectual and professional responses to these phenomena [the technology effect in the library] have been inadequate, and uncritically accepting of the large amount of hype that information technologies receive" (p.4). In his introduction, Buschman based his argument on the work of Herbert I. Schiller, a theorist of communication. Schiller identified the need for research in several areas; first, on production and not just consumption; second, about the sources of power in relation to communication and information; and third, he stressed the importance of doing research before a technology was accepted, since missing this objective has "excluded technology from detail scrutiny […]". (Schiller, 1983, p.255). In *Into the Future* (1993), Harris and Hannah challenged the importance of technology and its role in the library world given the assumptions of technological neutrality and autonomy.

The call for a critical view of technology by Buschman and Harris & Hannah is extremely relevant, since one could argue that "it is not only technology that 'impacts' on society; technology itself is already the outcome of complex, subtle, and situated social processes" (Introna, 2007, p.13). As the remained of this paper will show, the library is contributing to these processes that are building and promoting technology.

The following section will specify the need for a critical approach in the analysis of Web 2.0 and its implementation in young adults' libraries. This perspective will be supported through the analysis of the following: other disciplines' contribution to the examination of Web 2.0 in the LIS community, the main role of researchers and practitioners collaboration when studying Web 2.0 and the necessity of a critical approach especially when looking at young adults as library patrons and their relationship with technology.

4. THE NEED OF A CRITICAL APPROACH TO WEB 2.0 AND LIBRARIES

4.1 THE INFLUENCE OF OTHER DISCIPLINES

In Buschman's conclusion for *Critical Approaches to Information Technologies in Librarianship* (1993), he employed Education scholarship to defend the use of critical theory. Education is a discipline that has developed in a similar manner to Library Science and it also shares many characteristics with the LIS community (Buschman, 1993, p. 212). Education has also been struggling with the introduction of technology into the classroom and with the particular and ever-changing characteristics of a new generation of students.

Although the contribution of Education scholarship is valuable, other disciplines also support and inspire Library scholarship. "Internet in everyday life" is a label that characterizes the research being developed by scholars and professionals from fields such as Sociology, Communication, Media Studies and Computer Science. Their goal is to uncover and study the different purposes, applications and users of the Internet. These disciplines explore the shift in Internet users from the realm of the expert or "geek" to the average citizen. In doing so, these disciplines examined the consequences of the introduction of the Internet on the everyday life of the user. Furthermore, these fields of study distanced themselves from research that focused on specific groups and environments that had an easy access to technology (i.e., computer professionals or experts, university students and professors, and high skilled workers). Instead, these disciplines looked at the household, the family, children, and retired people. Castells describes this approach as the one that "provides us with reliable, scholarly research on the hows and whats of the Internet as it relates to people's lives" (2002, p. xxix). Furthermore, Rheingold affirms that "until recently,

individuals and policy-makers have been making decisions about personal use and societal regulation of the Internet amidst a scarcity of science and abundance of rumor and sensationalism." (2002, p. xxvii)

"Internet in everyday life" is an adequate complement for Wiegand's proposition of researching the library in the life of the user (Wiegand, 2003b). The information produced by the researchers under the "Internet in everyday life" umbrella informs the LIS community about a possible intersection between the library and the Internet in the life of the user.

A particular approach that might be critical to consider in the LIS field is presented by Bakardjieva in the introduction to her book *Internet Society: Internet in Everyday Life*. Combining different schools' of thought, such us critical theory of technology or phenomenological sociology, Bakardjieva builds a theoretical framework that strengthens the agency of the user. Technology is not neutral or harmless because in most cases it is a product of the interest and priorities of dominant social agents, making technology "one of the instruments that insure the systematic domination of certain groups over other" (Bakardjieva, 2005, p.15). Bakardjieva refers to the ideas of Feenberg and Woolgar to support the concept of empowerment for the user in relation to technology, starting at the moment of its design. A controversial idea is that of 'configuring the user' (Woolgar, 1991 & 1996). Using the library as an example, one could say that the way young adult libraries are embracing and applying the Web 2.0 says many things about how they view their users. At the same time, young adults are also confronted with these libraries' preconceptions of them. Participatory design is an option that could open the technology to the imagination and input of the users; the aim for the library should be to get the institution and its patrons to "engage in technological controversies, innovative dialogues and creative appropriations directed towards reforming technology with more humane and democratic aims in mind" (Bakardjieva, 2005, p.19).

Another relevant example of research that should be of interest for both LIS professionals and scholars comes from Communication Studies. A special theme issue of the Journal of Computer-Mediated Communication (2008, vol.13, issue 1) brings together a collection of articles that analyze social network sites (SNSs) from different perspectives. The first characteristic to highlight is the wide spectrum of SNS that are studied: BlackPlanet, Cyworld, Dodgeball, Facebook, MySpace, and YouTube. The researchers examine relevant themes for the LIS community: the interactions between offline and online relationships; the differences and similarities between online and offline communities; the role of early adopters; usage patterns of SNSs in college environments; and the management of concepts such as trust and identity or public and private in these virtual environments.

Coming back to the use of a critical approach, the sociologists Beer and Burrows (2007) applied critical theory to a sociological perspective of Web 2.0. First, they described Web 2.0 as a "complex, ambivalent, dynamic, laden with tensions and subversions, and, we would argue, of increasing sociological significance. (2007, parr.1.3). Second, the authors detected three issues that required sociological analysis: "the changing relations between the *production and consumption* of content; the mainstreaming of *private information posted to the public domain*; and […] the emergence of a *new rhetoric of 'democratisation'*" (2007, parr.3.1). The issue of privacy and the democratic values that Web 2.0 theoretically support are being also discussed in the LIS community, but the analysis and point of view provided by these researches broadens the scope of analysis and brings new information to the field.

The discourse around Web 2.0 has been built on notions of collaborative behaviours, empowerment of the user, freedom of production and free transfer information. Beer and Burrows, however, called for a close examination to another side of the Web 2.0: the false power that is attributed to the user; and the stress of the commercial use and application of these networks. In the same way that information became a commodity, Beer & Burrows claim the user is now a commodity as "it is *the user profile* that has

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become *the* commodity of Web 2.0, as users engage in simultaneous acts of production and consumption. This is not just the profiles of cultural luminaries, but also of the 'ordinary' user" (2007, par.3.3).

The sociology of Web 2.0 and the research produced under the umbrella of "Internet in everyday life" should be used by the LIS community as relevant and valuable sources of information to explain and understand this current relationship of three: the library, the Web 2.0 and the user.

4.2 THE COLLABORATION BETWEEN RESEARCHES AND PRACTITIONERS

As it has been noted, the literature produced about Web 2.0 in the LIS field comes primarily from professionals; it is knowledge that comes from experience and daily work. Buckland (1986, p.12) establishes the differences between scholarly and applied research, stating that the latter is involved on the study of situations that are time sensitive or urgent to solve, interactions and consequences, and the achievement of a certain utility. The literature published on Web 2.0 can be described as grounded knowledge, time sensitive, and focused on the utility of Web 2.0 to improve services and the librarian's work. The LIS field recognizes the importance of the relationship between library users and Web 2.0; however, more research employing a critical approach that focuses on implementation, use and acceptance of this technology is still needed.

Issues, for instance, such as the digital divide or the work with non-technological savvy patrons should be important for both practitioners and researchers. The digital divide is a complex concept to analyzed and discuss, since its theoretical development affects in many cases its application, for example, in government reports. Van Hacker & Dijk detected a steady political and practical interest in just one of the several facets that the concept of digital divide comprises, namely having a computer and network access. However, there are four barriers for access to the Internet (2003, p.315-6):

1. Lack of elementary digital experience caused by lack of interest, computer anxiety, and unattractiveness of the new technology ("mental access").
2. No possession of computers and network connections ("material access").
3. Lack of digital skills caused by insufficient userfriendliness and inadequate education or social support ("skills access").
4. Lack of significant usage opportunities ("usage access").

Activities related to information literacy are helping to undertake some aspects of the three barriers left. However, both professionals and scholars need to take into consideration these issues when developing or researching about any new service that has a technological base. In the case the Web 2.0, for instance, one must question who the library is serving and who it is not serving. Also, the Web 2.0 services offered by the library create a more welcoming and up-to-date space for what patrons? Are any patrons feeling intimidated or uncomfortable with what technology? What actions is the library establishing to balance this situation? These are some of the themes that need to be questioned and problematized both at a theoretical and practical level, and it is extremely important to involve practitioners and researchers at the same time in this process.

The call for collaboration between professionals and researchers has already been made by various authors (Haddow & Klobas, 2004; Lynam, Slater & Walker, 1982; McNicol & Dalton, 2004; Powell, *et al.*, 2002). McNicol & Dalton (2004, p.175) mentioned the need for a collaborative approach to achieve a balance between practitioners and academics. This balance is what the LIS literature about Web 2.0 is lacking; the field needs a holistic view of the interactions between libraries, Web 2.0 and users, especially when focusing on young adult patrons.

Powell, Baker & Mika (2002) stressed the importance of practitioners' research "to improve problem solving and decision making in the workplace" and "to make professional practitioners critical consumers of the research literature". Establishing research collaboration between practitioners and

scholars also helps in the relevant task of research dissemination; for instance, Haddow & Koblas (2004) and McNicol & Dalton (2004) pointed out the role that collaboration has to increase the dissemination of research since practitioners tend to view purely academic research with scepticism (McNicol & Dalton, 2004, p.175). Seen (1998) called for a similar alliance in the Information Science field since practitioners can be strategic partners and serve as "critics for theory, research approaches and findings", as well as facilitate the replications of results (p.27).

Another assumption in this "created" dichotomy is that academics and practitioners do not have the same interests. On the contrary, McNicol & Dalton (2004) found out that scholars and professionals interests are not so different. Replying to a survey, both researchers and professionals expressed similar priorities in relation to need of further research on user needs and social inclusion. Both topics are directly connected with the overall development of Web 2.0 in the library setting.

Having established the need to bring together practitioners and researchers to broaden and advance the Library field's knowledge, another obstacle needs to be overcome: the division between the techno-elite and neo-luddites (Castells, 1999, p.1). This confrontation is not unique to the library field, as it is present in general society. For instance, Castells has described this division as a "fundamental debate" that it is often "cast in simplistic terms" (1999, p.1). Meredith Farkas detected this same problem in the early debate about Web 2.0 in the LIS community, describing it as "two parallel conversations, with no intersections between the two conversations" (Farkas, 2005). In the same way that formal research and applied research are frequently seen as alternative, these two positions appear as a dichotomy, a reality that does not benefit the LIS field. The existence of contrary positions is the germ of debate and advance in any discipline, but these positions have to be able to find interactions to make, for instance, the concept of Library 2.0 stabilize and grow. This moment is particularly appropriate for scholarly research to take on a mediator role and, in collaboration with practitioners, specify the strengths and weakness of the application of each position.

4.3. YOUNG ADULTS, LIBRARIES AND WEB 2.0

The increase of research relative to Web 2.0 and young adult library patrons should be a priority for the profession, especially in the public library realm. Young adults are continuously described as information consumers and active Web 2.0 users and supporters. The influential reports published by the Pew Institute & American Life project (for instance, Lenhart & Madden, 2005; Lenhart *et al.*, 2005) and the the Kaiser Family Foundation (Roberts, Foehr, & Rideout, 2005) have shaped a profile of youth as techno-savvy. Evidently these publications are extremely useful and serve as a support for many of the services and changes that are being developed in libraries, both academic and public. However, both professionals and researchers should read these reports carefully. Bernier (2007) praised their utility because they represent a source of information about technology in the daily life of young adults, a perspective still weak in the field of young adult information seeking behaviour. Despite their utility, Bernier warned the reader about the point of view from which these studies are being developed, namely an empowerment of youth as leader in technological adaptation and innovation. A second issue to take into consideration when consulting these reports is the portion of the population sampled in the survey. The report "Teens and Technology", for instance, omits Asian youth as well as non-English speaking families (Bernier, 2005). The omission of these two important segments of the young adult population reduces the value of this study when applied, for example, to public libraries.

The research about young adult information seeking behaviour detected the lack of information about the information needs and behaviours challenges of this population in their daily lives (Bernier, 2007). The need for a wider perspective is also significant for the research and practice carried out around the

applicability of Web 2.0 technologies in young adult libraries. For instance, in a qualitative study of seventy two young adult college students, McMillan & Morrison (2006) concluded as a major research finding the existence of a "duality of feelings that interactive media technologies evoke for young adults. These yin and yang attitudes toward the media technologies in their lives are manifest within a context of dependency" (p.88). The image that most people conjure regarding the relationship between technology and teenagers is almost of mutual dependence; however, McMillan & Morrison detected a different view. Some of their respondents expressed "concerns about the effects that online socializing had on their offline social lives" (p.85). These results show the shadow behind the shiny information reported in the general media and commercial reports. Furthermore, these results help to problematize the relationship between technology and young adults, and help the library community to broaden their perspective when taking decisions about employing online services for this population.

Another relevant example to support a critical approach to the relationship between young adults and technology is presented by Hargittai (2007). She surveyed first year students of an urban public research university in the United States to find out, among other conclusions, that "online actions and interactions cannot be seen as *tabula rasa* activities, independent of existing offline identities" and that "constraints on one's everyday life are reflected in online behavior". The discourse of the 'virtual' and the 'real' has been another false dichotomy that has been consequently refuted by research, proving that online and offline worlds are more connected that what it was once thought. These articles complement, for instance, the Pew Institute reports and provide one more piece in the puzzle regarding technology in the life of a young adult.

Techno-savvy, Web-savvy or Internet-savvy are expressions that populate government reports and the media to define young adults in relation to technology. However, Combes (2006) challenges this assumption contrasting the qualities implied by these terms to the reality that teachers and librarians perceive in their jobs. Combes concluded that while youth today are techno-oriented, they are still far from being techno-savvy. This distinction should be present in every librarian's mind to help distinguish young adult users that feel more comfortable or attracted by new technologies, such as Web 2.0, from those that actually are proficient in their use. A second relevant conclusion from Combes' research highlights the importance of educators becoming familiar with "how young people are using these technologies to ensure they have the skills to be truly techno-savvy, rather than just techno-oriented" (2006, p.406). As it is been said before, the role of the research being developed under the umbrella of "Internet in everyday life" might be extremely helpful to characterize young adults' behavior with technology.

The article by Clare Snowball (2008) is an example of the growing importance that technology is gaining when talking about young adults and libraries. The section in Snowball's article dedicated to technology is extremely rich, presenting a balanced survey of Web 2.0 technologies that are being applied in different young adult libraries. Snowball also mentioned that cyberbulling might be one of the problems that libraries might confront when working with online technologies. This article contributes in a remarkable way to the literature about young adults and libraries; however, after reading it one might think that most young adult patrons are extremely familiar with these technologies and ready to use them.

One might ask, then, to conclude: what is youth librarianship doing for the young adult user that does not want to jump on the Web 2.0 bandwagon?

5. CONCLUSION

It has already been established that the Internet is playing a prominent role in people's daily life, especially when young adults are the population being studied. In order to respond to this relevant role of

technology, the library is embracing new technologies, such as Web 2.0, and as a result is becoming a highly technological environment. The manner in which the LIS community is making decisions and reflecting over these changes is essential. Returning to Wiegand's words (2003b), the LIS scholarship should research the library in the life of the user; however, it should also research the potential benefits and drawbacks of technology. The importance of this research on technology should be relative as it is important that technology does not become the only research focus since it can do "a fundamental injustice to the democratic service goals of the profession"; it also tends "to separate LIS researchers from library practitioners"; and "it greatly limits what LIS research can contribute to future library planning" (Wiegand, 2003a, p.vii).

The usefulness of a critical approach to the examination of the interaction between libraries, young adults and Web 2.0 is enriching for the profession because of three elements. First, new research questions need to be formulated and the knowledge gathered by practitioners should be essential in this process; furthermore, the collaboration between professionals and researchers will be fundamental to fully understand the interactions between libraries, young adults and Web 2.0. Second, other fields of study have already embraced this approach to researching the use of technology by average users. Finally, it is increasingly important to inform the LIS community about alternative perspectives to be able to construct critical and relevant questions in relation to young adults, a highly technological segment of the population. In the end, the result of this critical approach should be a holistic view of the interaction between libraries and Web 2.0 that ultimately supports and benefits the needs of the young adult user.

REFERENCES

Anderson, N. (September 2006), "Tim Berners-Lee on Web 2.0: "nobody even knows what it means"". *Ars technical*. Retrieved December 1st, 2007 from: http://arstechnica.com/news.ars/post/20060901-7650.html.

Beer, D. & Burrows, R. (2007), "Sociology and, of and in Web 2.0: Some initial considerations", *Sociological Research Online,* Vol.12 No. (5). Retrieved November 25th 2007 from http://www.socresonline.org.uk/12/5/17.html.

Bakardjieva, M. (2005), *Internet society: The internet in everyday life*. London; Thousand Oaks, Calif.: Sage.

Bernier, A. (2005), *Libraries and teens meet @ technology: Comments on the Pew study*. Retrieved on 30 July 2006 from LM_NET Listserv

Bernier, A. (2007), "'Not broken by someone else's schedule: On joy and young adult information seeking"', in M. K Chelton & C. Cool, (Eds.), *Youth information-seeking behavior II: context, theories, models, and issues*. Lanham, Maryland: Scarecrow., pp.xiii-xxviii

Bray, T. (August 4th, 2005), "Not 2.0". *Ongoing*. Retrieved on December 1st, 2007 from http://www.tbray.org/ongoing/When/200x/2005/08/04/Web-2.0

Buckland, M. (1986), "Library research: Problem solving or a contribution to the theory of Librarianship", in G.G. Allen & F.C.A. Exon, (Eds). *Research and the practice of librarianship: an international symposium*, Perth: Library, Western Australian Institute of Technology, pp.11-20

Buschman, J. (1993), *Critical approaches to information technology in librarianship: foundations and applications*. Westport, Conn.: Greenwood Press.

Chad, K., & Miller, P. (2005), *Do libraries matter?: The rise of the Library 2.0*. Retrieved December 4th, 2007 from http://www.talis.com/applications/downloads/white_papers/DoLibrariesMatter.pdf

Casey, M. E., & Savastinuk, L. C. (2007). *Library 2.0: The librarian's guide to participatory library service*. Medford, N.J.: Information Today, Inc.

Castells, M. (1999), *Information Technology, Globalization and Social Development*. UNRISD Discussion Paper No. 114. Retrieved Accessed March 25th, 2008 from: http://www.unrisd.org/UNRISD/website/document.nsf/(httpPublications)/F270E0C066F3DE7780256B67005B728C?OpenDocument

Castells, M. (2002), "The Internet and the Network Society", in B. Wellman & C. Haythornthwaite (Eds.), *Intenet in Everyday Life*, Oxford; Melbourne; Berlin: Blackwell, pp.xxix- xxxi.

Combes, B. (2006), "Techno savvy or techno oriented: Who are the net generation?". In C. Khoo, D. Singh & A.S. Chaudhry (Eds.), *Proceedings of the Asia-Pacific Conference on Library & Information Education & Practice 2006* (A-LIEP 2006), Singapore, 3-6 April 2006, Singapore: School of Communication & Information, Nanyang Technological University, pp. 401-408.

Courtney, N. (2007), *Library 2.0 and beyond: Innovative technologies and tomorrow's user*. Westport, Conn.: Libraries Unlimited.

Crawford, W. (2006), "Library 2.0 and "Library 2.0"". *Cites & Insights*, Vol.6 No.2, pp.1-31. Retrieved December 2nd, 2007 from http://citesandinsights.info/civ6i2.pdf

Farkas, M. (December 1st, 2005), "Web/Library 2.0 Backlash". *Information Wants To Be Free* [Accessed 21 March 2008]. Retrieved March 21st, 2008 from http://meredith.wolfwater.com/wordpress/index.php/2005/12/01/weblibrary-20-backlash/

Farkas, M. G. (2007), *Social software in libraries: Building collaboration, communication, and community online*. Medford, N.J.: Information Today, Inc.

Habib, M. (2006), *Toward Academic Library 2.0: Development and Application of a Library 2.0 Methodology*. Master's Thesis for the M.S. in L.S degree, University of North Caroline, Chapell Hill.

Hacker, K.& Dijk, J.V. (2003), "The digital divide as a complex and dynamic phenomenon". *The information society*, 19, pp.315–326.

Haddow, G. & Klobas, J.E. (2004), "Communication of research to practice in library and information science: Closing the gap", *Library & Information Science Research*, Vol.26 No.1, pp. 29–43

Hardt, M.I (1999), "Affective labour". *Boundary 2*, Vol.26 No.2, pp. 89-100. Retrieved April 17, 2008, from Research Library database.

Hargittai, E. (2007),"Whose space? Differences among users and non-users of social network sites", *Journal of Computer-Mediated Communication*, Vol.13 No.1, article 14. Retrieved March 1st from http://jcmc.indiana.edu/vol13/issue1/hargittai.html

Harris, M. & Hannah, S.A. (1993), *Into the future: the foundations of library and information services in the post-industrial era*. Norwood, N.J.: Ablex Pub. Corp.

Introna, L. D.(2002), "The (im)possibility of ethics in the information age", Information and Organization, Vol.12 No.2, pp.71-84

Johnson, K. (2007), "Collectivism vs. Individualism in a Wiki World: Librarians Respond to Jaron Lanier's Essay 'Digital Maoism: The Hazards of the New Online Collectivism'", *Serials Review*, Vol. 33, pp. 45–53.

Lanier, J. (2006), "Beware of the online collective", *Edge The Third Culture*. Retrieved December 1st, 2007 from http://www.edge.org/3rd_culture/lanier06/lanier06.2_index.html

Lanier, J. (2006), "Digital Maoism: The Hazards of the New Online Collectivis", *Edge The Third Culture*. Retrieved December 1st, 2007 from www.edge.org/3rd_culture/lanier06/lanier06_index.html

Lenhart, A. & Madden, M. (2005), *Teen content creators and consumers*. Washington DC: Pew Internet & American Life Project. Retrieved November, 2007 from http://www.pewinternet.org/pdfs/PIP_Teens_Content_Creation.pdf

Lenhart, A., Madden,M. & Hitlin, P. (2005), *Teens and technology.* Washington DC: Pew Internet & American Life Project. Retrieved November, 2007 from

http://www.pewinternet.org/pdfs/PIP_Teens_Tech_July2005web.pdf

Lynam, P., Slater, M., & Walker, R. (1982), *Research and the practitioner: dissemination of research results within the library-information profession*. London: Aslib.

McMillan, S.J.& Morrison, M. (2006), "Coming of age with the internet: A qualitative exploration of how the internet has become an integral part of young people's lives", *New media & society*, Vol.8 No.1, pp.73–95.

McNicol, S. & Dalton, P. (2004), "Striking a balance: priorities for research in LIS", *Library Review* , Vol.53 No. 3, pp. 167–176

O'Reilly, T. (October 1st, 2005), "Web 2.0: Compact Definition?". *O'Reilly Radar*. Retrieved December 1st, 2007 from http://radar.oreilly.com/archives/2005/10/web_20_compact_definition.html

Powell, R., Baker, L.M., & Mika, J.J. (2002), "Library and information science practitioners and research", *Library & Information Science Research*, Vol.24 No.1, pp.49–72

Rheingold, H. (2002), "Virtual community in the real world", in B. Wellman & C. Haythornthwaite (Eds.), *Internet in everyday life*, Oxford; Melbourne; Berlin: Blackwell, pp.xxvii-xviii.

Roberts, D. F., Foehr, U. G., Rideout, V. (2005), *Generation M: Media in the Lives of 8–18 Year-olds.: A Kaiser Family Foundation Study*. March 2005. Accessed from the World Wide Web: www.kff.org/entmedia/upload/Generation-M-Media-in-the-Lives-of-8-18-Year-olds-Report.pdf

Schiller, H. I.(1983), "Critical Research in the Information Age", *Journal of Communication*, Vol.33 No.3, pp.249–257

Senn, J. (1998), "The challenge of relating IS research to practice", *Information Resources Management Journal* , Vol.11 No. 1, pp. 23-28

Snowball, C. (2008), "Enticing teenagers into the library", *Library Review*, Vol. 57 No. 1, 2008, pp. 25-35.

Toffler, Alvin. (1981), *The third wave*. Toronto: Bantam Books

Wiegand, W. A. (2003a), "Broadening our perspectives", *Library Quarterly*; Vol. 73 No. 1, pp.v-x

Wiegand W. A.(2003b), "To reposition a research agenda: What American Studies can teach the LIS community about the library in the life of the user", *Library Quarterly*, Vol.73 No. 4, pp.. 369-382

Woolgar, S. (1991), "Configuring the user: the case of usability trails", in J. Law (Ed.), *The Sociology of monsters, essays on power, technology and domination*, London, New York: Routledge, pp.57-102.

Woolgar, S. (1996), "Technology as cultural artifacs", in W. Dutton (Ed.), *Information and communication technologies: visions and realities*, Oxford: Oxford University Press, pp.87-102.

WEB 2.0 REFERENCES

Abram, S. (2008), *Stephen's lighthouse*. Retrieved March 31, 2008 from Http://stephenslighthouse.sirsidynix.com/

Abram, S. (2007), "15 minutes a day: A personal learning management strategy", *One-Person Library,* vol.24 No..2, pp.5-7. Retrieved December 10, 2007, from LISA: Library and Information Science Abstracts database.

Abram, S. (2007), "At second life, info pros will find much to see, do, learn, play with, try out", *Information Outlook,* Vol.11 No.4, pp.34-36. Retrieved December 10, 2007, from LISA: Library and Information Science Abstracts database.

Abram, S. (2006), "Advocating for teens' technological needs", *Young Adult Library Services: The Journal of the Young Adult Library Services Association,* Vol.4 No.4, pp.35-37. Retrieved December 10, 2007, from LISA: Library and Information Science Abstracts database.

Abram, S. (2006), "Millennials: Deal with them", *Texas Library Journal,* Vol.82 No.3, pp.96- 98, 100-103. Retrieved December 10, 2007, from LISA: Library and Information Science Abstracts database.

Abram, S. (2006), "Web 3.0 and project croquet", *Information Outlook,* Vol.10 No.1, pp.42-43. Retrieved December 10, 2007, from LISA: Library and Information Science Abstracts database.

Abram, S. (2006), "What can MySpace teach us in special libraries", *Information Outlook,* Vol.10 No.5, pp.34-35. Retrieved December 10, 2007, from LISA: Library and Information Science Abstracts database.

Boule et al. (2008), *ALA Techsource*. Retrieved March 31, 2008 from http://www.techsource.ala.org/blog/

Casey, M. E., & Savastinuk, L. C. (2007), *Library 2.0: The librarian's guide to participatory library service*. Medford, N.J.: Information Today, Inc.

Casey, M. E., & Savastinuk, L. C. (2006), "Library 2.0". *Library Journal,* Vol.131 No.14, pp.40-42. Retrieved December 10, 2007, from LISA: Library and Information Science Abstracts database.

Casey, M., & Stephens, M. (2007), "Introducing the Michaels". *Library Journal,* Vol.132 No.6, pp.30. Retrieved December 10, 2007, from LISA: Library and Information Science Abstracts database.

Casey, M., & Stephens, M. (2007)., "Turning "no" into "yes"", *Library Journal,* Vol.132 No. 8, pp. 27. Retrieved December 10, 2007, from LISA: Library and Information Science Abstracts database.

Casey, Michael (2008), *Library Crunch: Service for the Next Generation Library - A Library 2.0 Perspective by Michael Casey*. Retrieved March 31, 2008 from http://librarycrunch.com/

Chad, K., & Miller, P. (2005), *Do libraries matter?: The rise of the Library 2.0*. Retrieved December 4th, 2007 from http://www.talis.com/applications/downloads/white_papers/DoLibrariesMatter.pdf

Farkas, M. G. (2007), *Social software in libraries: Building collaboration, communication, and community online*. Medford, N.J.: Information Today, Inc.

Farkas, Meredith (2008), *Information Wants To Be Free: A librarian, writer and tech geek reflecting on the profession and the tools we use to serve our patrons*. Retrieved March 31, 2008 from http://meredith.wolfwater.com/wordpress/index.php

Gordon, R. S., & Stephens, M. (2006), "Free finds or frugal libraries", *Computers in Libraries,* Vol.26 No.3, pp.44-45. Retrieved December 10, 2007, from LISA: Library and Information Science Abstracts database.

Gordon, R. S., & Stephens, M. (2006), "How and why to try a blog for staff communication", *Computers in Libraries,* Vol.26 No.2, pp.50-51. Retrieved December 10, 2007, from LISA: Library and Information Science Abstracts database.

Gordon, R. S., & Stephens, M. (2006), "Keeping up with keeping up", *Computers in Libraries*, Vol.26 No.9, pp.52-53. Retrieved December 10, 2007, from LISA: Library and Information Science Abstracts database.

Gordon, R. S., & Stephens, M. (2006). Online cool on budget. *Computers in Libraries, vol.26, no.6, pp.48-49, 26*(6), 48-49. Retrieved December 10, 2007, from LISA: Library and Information Science Abstracts database.

Gordon, R. S., & Stephens, M. (2006), "Priceless images: Getting started with flickr", *Computers in Libraries,* Vol.26 No.10, pp.44-45. Retrieved December 10, 2007, from LISA: Library and Information Science Abstracts database.

Gordon, R. S., & Stephens, M. (2006), "Share and share alike", *Computers in Libraries,* Vol.26 No.7, pp.44-45. Retrieved December 10, 2007, from LISA: Library and Information Science Abstracts database.

Gordon, R. S., & Stephens, M. (2006), "Ten tips for technology training", *Computers in Libraries*, Vol.26 No.5, pp.34-35. Retrieved December 10, 2007, from LISA: Library and Information Science Abstracts database.

Gordon, R. S., & Stephens, M. (2006). "To USB or not to USB", *Computers in Libraries*, Vol.26 No.8, pp.44-45. Retrieved December 10, 2007, from LISA: Library and Information Science Abstracts database.

Kenney, B., & Stephens, M. (2005), "Talkin' blogs", *Library Journal,* Vol. 130 No.16, pp. 38-41. Retrieved December 10, 2007, from LISA: Library and Information Science Abstracts database.

Miller, P. (2006), "Coming together around library 2.0. A focus for discussion and a call to arms". *D-Lib Magazine*, Vol.12 No.4. Retrieved December 10, 2007, from LISA: Library and Information Science Abstracts database.

Miller, P. (2006), "Personalisation tool scoops library services mashup prize", *Research Information*, No.25, pp.10. Retrieved December 10, 2007, from LISA: Library and Information Science Abstracts database.

Miller, P. (2005), "Web 2.0: Building the new library", *Ariadne,* No.45, Retrieved December 10, 2007, from LISA: Library and Information Science Abstracts database.

Singer Gordon, R., & Stephens, M. (2007), "Buy the book", *Computers in Libraries*, Vol.27 No.3, pp.44-45. Retrieved December 10, 2007, from LISA: Library and Information Science Abstracts database.

Singer Gordon, R., & Stephens, M. (2007), "Creating a librarian's info-portal with netvibes and RSS", *Computers in Libraries*, Vol.27 No.4, pp.44-45. Retrieved December 10, 2007, from LISA: Library and Information Science Abstracts database.

Singer Gordon, R., & Stephens, M. (2007), "Promoting productivity", *Computers in Libraries*, Vol.27 No.5, pp.30-31. Retrieved December 10, 2007, from LISA: Library and Information Science Abstracts database.

Singer Gordon, R., & Stephens, M. (2007), "Putting wikis into play", *Computers in Libraries*, Vol.27 No.2, pp.42-43. Retrieved December 10, 2007, from LISA: Library and Information Science Abstracts database.

Stephens, M. (2004), "Technoplans vs. technolust". *Library Journal*, Vol.129 No.18, pp.36-37. Retrieved December 10, 2007, from LISA: Library and Information Science Abstracts database.

Stephens, M. (2005), "The iPod experiments", *Library Journal*, Vol.130 No. 22, pp. 24-25. Retrieved December 10, 2007, from LISA: Library and Information Science Abstracts database.

Stephens, M. (2006), "Web 2.0 & Libraries: Best Practices for Social Software", Library Technology Reports, Vol. 42 No. 4.

Stephens, M. (2007), "Web 2.0 & Libraries, Part 2: Trends and Technologies", Library Technology Reports, Vol. 43 No.5.

Stephens, M. (2008), *Tame the web: Libraries, Technology and People*. Retrieved March 31, 2008 from http://tametheweb.com/

Stephens, M. & Schmidt, A. (2005), "IM me", *Library Journal*, Vol.130 No. 6, pp.34-35. Retrieved December 10, 2007, from LISA: Library and Information Science Abstracts database.

Storey, T., Anderson, R., Stephens, M., Nilges, C., Riemer, J. J., & Schulz, W. (2006), "Web 2.0. where will the next generation web take libraries?", *NextSpace,* No.2, pp.6-11. Retrieved December 10, 2007, from LISA: Library and Information Science Abstracts database.

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