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Exploring Users' Information Behavior
in Social Networks

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DECLARATION

"I certify that all material in this dissertation which is not my own work has been identified and that no material is included for which a degree has previously been conferred upon me"

...............................(signature of candidate)

Juan Daniel Machin Mastromatteo (submitted electronically)

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ABSTRACT

Social networks are most commonly seen as a technology used only for entertainment purposes. However, they can also be used for serious purposes in business and education environments because they are powerful tools that can accomplish various roles and purposes. It is important to do research on them from an information system and information science point of view by analyzing user information behavior so we can see trends and issues in behavior in connection with these systems. This research aim was to explore how Web 2.0 and social networks are having an effect on users' information behavior. The method used for the collection of data was a semi structured interview, containing questions constructed according to the issues of Web 2.0 and social networks identified on the literature, along with typical features or characteristics of social networks. Purposive sampling was used, the interview participants selected were four teachers and four second year students of the DILL Master Course. This sample was selected according to the criteria that they had to have a professional background on information science and knowledge and skills about using social networks. The method for analyzing data was discourse analysis and a framework of categories was created to present the data in a certain order. This study identified various trends and tendencies in users' information behavior and some future directions for research were proposed. Findings of this type of study provide insights to users' information behavior in information systems, they could contribute to a better understanding of the users and to the design of such systems; this is relevant when it is necessary to build information systems from the point of view of users needs and behaviors, that is, by taking a bottom-up approach.

Keywords: information behavior, social networks, Web 2.0, students, academic staff

Dedicated to the Loving Memory of Luis Mastromatteo (1934 – 2008)

"All your base are belong to us"

"'All your base are belong to us' is a broken English phrase that was central to an Internet phenomenon, or meme, in 2000–2002. The phrase came about as the result of the spread of a Flash animation which depicted the slogan. The text is taken from the opening cutscene of the 1991 European Sega Mega Drive version of the video game Zero Wing by Toaplan, which was poorly translated from Japanese. It was popularized by the Something Awful message forums."[1]

This phrase as the beginning of this work expresses the free nature of the Internet and its social networks, where the users are the primary creators of information, as opposed to the models of the traditional media. The "base" would be the information society and "us" are us, the information "produsers"

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[1] Taken from Wikipedia: http://en.wikipedia.org/wiki/All_your_base_are_belong_to_us

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List of Abbreviations

ACM: Association for Computing Machinery

ASTD: American Society for Training and Development

BBC: British Broadcasting Company

CSS: Cascading Style Sheets

CMC: Computer-Mediated Communication

DILL: International Master in Digital Library Learning

FAQ: Frequently Asked Questions

ICT: Information and Communication Technology

IDG: Internet Discussion Group

i4cp: Institute for Corporate Productivity

IPO: Input-Process-Output

IM: Instant Messaging

LIS: Library and Information Science

LLC: Limited Liability Company

LMS Learning Management System

PhD: Doctor of Philosophy

P2P: Peer to peer

Q&A: Questions & Answers

RSS: Really Simple Syndication

UAI: Uncertainty Avoidance Index

UK: United Kingdom

WWW: World Wide Web

Chapter 1: Introduction

This introductory chapter outlines the fundamentals of this research project. First, the context around this research is given by providing background information and stating the motivations for doing this kind of study which leads to the statement of the problem. The aim, objectives and research questions, the justification for the research and the methodology chosen are briefly exposed, followed by the two central definitions around this thesis and its limitations. Finally, an outline of this thesis' structure is given.

1.1. Background

Web 2.0 social networks have now some many years with us, since they were established between 1995 with Classmates.com and in 1998 with Open Diary. Information scientists are more often doing research around them. From an information science perspective, they are information systems and as such one of the relevant approaches we can use to study them is by analyzing their users' information behavior. As it will be stated in the literature review of this thesis, information behavior is a well established research field in library and information science (LIS). Web 2.0 social networks inherit some of the issues that have characterized human interaction with other information structures and media throughout the history, like libraries, scientific literature and the Internet. Some of these issues are: trust, decision making, users' satisfaction, information overload, quality control, loss of identity, permanence, repackaging and privacy. The current thesis explores how these issues are present on social networks and how users' confront them.

The main motivation for developing this study is that I am an "old user" of the Web, since around 1997-1998. As such, I am very fond of the Internet, how it has developed, its freedom, its general neutrality and the ethical ideals some of its communities maintain. However, even with this background, sometimes I don't understand the nature of some of the conflicts that can occur between people when one has to resort to distance communication

with friends and relatives. Another motivation from the academic side is that I feel the need to analyze this phenomenon of social networks, one of the last manifestations of the web, from an information science perspective.

1.2. Statement of the Problem

There is a tendency to view social networks as a technology used only for entertainment purposes. However, they can also be used for serious purposes in business and education because they are powerful tools that can accomplish various roles and purposes. Social networks are largely used mainly for their ease of use, so it is important to do research on them from an information system and information science point of view by analyzing user information behavior so we can see trends and issues in behavior in connection with these systems.

1.3. Aim, Objective and Research Questions

This research aim is to explore how Web 2.0 is having an effect on users' information behavior: specifically when using social networks and how users deal with some of the issues of the Web 2.0 and social networks identified in the literature.

The objective is to find trends and tendencies in users' information behavior and also explore how they confront Web 2.0 issues.

Research questions to this study are:

- What are the trends and tendencies of users' information behavior in social networks?
- How users confront Web 2.0 issues?

1.4 Justification for the Research

It is important to do research on Web 2.0 social networks to see how they are affecting information behavior and practices of their users, as well to understand issues and trends concerning them. This type of research can derive on a better understanding of them that allows researchers to better design different systems with features similar to social networks, such as learning management systems, digital libraries, promotion or consumer's feedback systems for businesses. The findings of this type of study can help in the design of learning management systems, promotion or consumer's feedback systems for businesses.

1.5. Methodology

The methodological approach of this study is qualitative, mainly because it is a study of users' perceptions on these social applications.

The method for the collection of data is a semi structured interview applied to a purposive sampling. Most of the questions of the interview were constructed according to the issues of Web 2.0 and social networks explored on the literature review, and also looking to learn about the user's information behavior when presented with typical features and characteristics of social networks.

Sampling was limited to participants with a professional background on information science and with knowledge and skills about using social networks. This choice was motivated by practical and other reasons that will be discussed in Section 3.4: the participants were chosen among people with some relationship with the International Master in Digital Library Learning (DILL). The participants interviewed were four teachers and four second year students of the DILL Master Course; this included four male individuals and four females, two males and two females for each group.

The method for analyzing data was discourse analysis. In the data analysis section, significant parts from the interviews were cited in a narrative form, grouping tendencies; similar or different opinions and keywords that the participants used to define topics and issues. The raw data collected throughout the interviews was coded manually, using just word

processor software. The categorization consisted of 16 topics (see 4.1). Some of the sections of the framework created coincide with the issues of Web 2.0 and social networks explored on the literature review. Other sections explored other typical aspects of social networks which were worth investigating, such as the roles and purposes of social networks, motivations for befriending people and sharing information, and to find out which were the social networks used by the participants and why. Following the data analysis, a summary of trends, similarities and differences is provided in section 4.2.

1.6. Definitions

This thesis doesn't attempt to add to the discussion on which would be the most appropriate name of the research field of this study. It is briefly presented on the literature review that some researchers call it information behavior, information seeking behavior or information practices. However, to be practical and also for the sake of uniformity throughout this thesis, the term information behavior is adopted.

A simple definition of information behavior is adopted, inspired by Wilson (2000). So, information behavior is defined as the sum of the ways that a human interacts with an information system which involves information use, access and seeking.

The other main definition to be addressed in this study is social networks. This term is used relatively loosely to encompass any Web 2.0 sites or applications which allow the publication or posting of user generated content and also interactions between users.

In this thesis, the phrase social networks are mostly used to name the types of web applications like Facebook, Twitter, LinkedIn, Wikipedia, Tumblr, among others. In some instances and because of the context, the phrase "Web 2.0 social networks" is used as well, in order to avoid confusion. There are very few instances when this text is referring to "real world" networks of people. In these cases, the phrase social networks has been used as well, but the context makes it clear enough to distinguish them from the Web 2.0 social networks.

1.7. Limitations and Scope

Purposive sampling was used in this study, because of the conditions already mentioned in section 1.5 and further explored in section 3.4. Purposive sample and the size of the sample represents a limitation of this study, which can be considered small, as 8 participants were interviewed and not so many differences were found on their answers. However, there is a considerable amount of participants' insights into the issues explored in this thesis.

Another limitation is brought because of the broad definition of social networks adopted in this research. Some websites or Web 2.0 applications are named as social networks, even when their inclusion under this term could be argued. However, all of these fulfill the two conditions which are present on the definition given in the section 1.6; social networks must allow user interaction and user generated content.

Finally, time was a limitation as well, and also because this thesis intends to be an exploratory study, the issues of Web 2.0 and social networks analyzed are not fully studied and the list of issues given is not a definitive one.

1.8. Outline of the Thesis

This thesis consists of five chapters. The first chapter gave the background and motivation for this research, followed by the statement of the problem, research aim, objective, research questions, justification of the research and methodology. The definition of core terms, limitation and scope of the study, thesis outline and conclusion were presented.

The second chapter of this thesis provides a literature review both as a background for this study and a means to discuss the participants' answers in the light of what has being said in the literature. This chapter is not exhaustive, but different aspects on the pertinent research available are explored. The first part presents a brief overview on information behavior: the concept and main theories developed around it. The second part contains definitions and characteristics of social networks. In the third part a connection between the two topics is

explored, presenting some proposed frameworks to study social networks, some of them consider a behavioral part. In this part, the issues of Web 2.0 and social networks are presented; this is the center of this thesis, as the research questions are about how these issues would affect users' information behavior. Some studies on social networking sites are included into this section.

The third chapter describes in a detailed manner the way the data collection, analysis and discussion was conducted. The methodological approach chosen to develop this research was qualitative, the method for the data collection was semi-structured interviews to a purposive sampling and the method for the analysis of data was discourse analysis. In this chapter all these choices are justified. The ethical considerations are exposed as well as the limitations of the study and the trustworthiness of enquiry.

The fourth chapter is divided in three parts, the first one, data analysis, presents detailed quotations from the interviews in a form of narrative and some patterns are indicated. Because the data analysis section is considerably long, the second part presents a summary where the tendencies, similarities and differences emerged from the interviews. The final part, discussion, attempts to explain these tendencies, similarities and differences under the light of what has being said in the literature review.

The fifth chapter is the conclusion of this thesis, it addresses directly the research questions, by stating the main trends and tendencies on users' behavior that emerged from this study and how the participants of this study confronted the issues of Web 2.0 social networks. Finally some concluding remarks are presented on possible future research directions to continue, replicate or use a study of this type to contribute to the design of information systems such as digital libraries and learning management systems.

The last parts of this thesis include the cited references, presented in alphabetical order and also various appendices: an illustration that shows many different social networks, their date of creation and approximate number of users they have, the privacy statement provided to the participants, the interview questions and finally some brief notes about the social networks the participants mentioned.

1.9. Conclusion

This introduction started by providing a background to this thesis, followed by the research problem, aim, objective and research questions. The methodological approach and the choices made about the methods used were briefly presented. The two central definitions which concern this research have been addressed: information behavior and social networks. An overview of how this thesis is organized has also been presented. The following chapter reviews the relevant literature.

Chapter 2: Literature Review

The following chapter is structured in four parts. The first part is a brief overview on information behavior: the concept and main theories developed around it. It also explains the origin and development of the research on information behavior.

The second part contains definitions and characteristics about social networks. "Social networks" is a broad term; any gathering of human beings for a reason is a social network, therefore, they can be found everywhere. This definition is addressed in this Thesis, but the instances of this concept used through this review are social networks as applications and services based on Web 2.0. The origin of these Web 2.0 social networks is presented, with the examples of Usenet, Classmates.com and Open Diary being the first ones. Some optimistic and pessimistic scenarios on the usefulness of social networks for working and educational environments are presented, as well as some studies about perceptions of people, employees and businesses on social networks.

The third part involves research on information behavior in social networks. Some relevant theories and frameworks proposed are presented: social network theory, social network analysis, a framework for analyzing virtual communities and one method to analyze social reference services. The last one mentioned is very specific. However, it has been the only one found during this research for the purpose of analyzing social network services. Then there is a section dedicated to the issues of Web 2.0 and social networks which have been identified by and reviewing the literature. The last subsection of the literature review summarizes some studies on social networking sites, they are as diverse as these networks. These case studies are: eBay, Gnutella, CiteULike, a web survey about knowledge sharing and social ties in an organization, computer-mediated communication groups, Internet discussion groups for researchers, Facebook, MySpace and MOSAICA.

The search strategies used to retrieve most of the documents used in this research, were performed in the scientific journal databases: Sage, ACM, EBSCO and Emerald. The queries were made to retrieve full text articles, ranging from 2000 to 2010. Keywords used were "social networks", "Web 2.0", "information behavior", "information behaviour" (including both the British and the American spellings of the term), "information practice" and

"information seeking". Some similar searches performed in Google helped retrieve some blogs which publish relevant articles on social networks, for example: Tech Crunch and Thoughtpick blog. A subscription to these blogs through Really Simple Syndication (RSS) using Google Reader helped follow relevant articles published during the development of this research.

2.1. Information Behavior

Wilson defines information behavior as "the totality of human behavior in relation to sources and channels of information, including both active and passive information seeking, and information use." (Wilson, 2000, p. 1). Pettigrew, Fidel and Bruce (2001) define information behavior as "How people need, seek, give, and use information in different contexts, including the workplace and everyday life." (p. 44). They argue about how appropriate the use of the term information behavior is, because it can be associated with the behaviorist paradigm of psychology and also because information does not behave; only people do.

Borgman (1987) defines the study of user information behavior as:

[…] studying ways to optimize human efficiency at retrieval, studying ways to make systems more user friendly, studying satisfaction with the system and its output, or study of the human characteristics and human problem solving activities that bear some relationship to the retrieval performance of the user. (p. 2.)

Information behavior is a widely accepted concept and information behavior research is an established field of study. However, other terms are used to refer to this research field, such as information seeking behavior, and information practices. Supporters of other concepts, like information practices tend to oppose supporters of information behavior, such is the case of Savolainen (2008), who defines information practice as "a set of socially and culturally established ways to identify, seek, use, and share the information available in various sources

[…]. These practices are often habitual and can be identified both in job related and non-work contexts." (pp. 2-3.)

As stated on the introduction, this thesis doesn't attempt to add to the discussion on the most appropriate name of the research field. However, to be practical and also for the sake of uniformity throughout this thesis, the term information behavior is adopted.

2.1.1. Research on Information Behavior

Wilson (2008) gives an overview of the development of the research on information behavior. According to him the origin of the research on this topic can be traced back to the 1980s, where information use and users had become a curriculum topic in the schools of librarianship in the United Kingdom (UK). About the same time, also in the United States, there was a certain pressure to engage in research either to develop the curriculum or raise the status of educational institutions. Thus a growing interest on the information-seeking behavior research field, especially among PhD students, started.

Case (2002) studies and reviews research made on information behavior, stating that it would be impossible to review the full body of literature on information behavior and he estimates that there's about 10.000 publications on this area and related topics (p. xv). In Case (2007) the author presents an extended version of this work. Wilson (2008) expresses the growth of the literature as:

> The growth, in general, can be shown by reference to the increase in papers indexed by the Web of Science with the terms information seeking, information behavior, or information seeking behavior anywhere in the record there were nine such papers in 1990 and 200 in 2006 (p. 5).

He affirms that this growth has been nearly exponential. As for the theories developed in time about information behavior, Wilson (2008, p. 8.) cites four models or approaches: Wilson's models of 1981 and 1996, Kuhlthau's (2004) information search process model and Dervin's (2003) sense-making theory.

Wilson (2008) projects that:

Whatever the future holds for any of these issues, it seems likely that the need to understand how people search for and use information is likely to continue and, as technologies change and information services continue to develop, the understanding gained may become more and more important for the effective design of systems and services (p. 8).

However, and more relevant for the purposes of this review, Shultz-Jones (2009), states that a "movement in social network research towards attention to contextual variables mirrors a similar shift of information behavior research" (p. 611)

The information behavior definition given in section 1.6 is followed in this thesis. It is a broad conception, as we use it to encompass users' interactions with each other, the decisions they make, their reactions and motivations when they use information. The brief overview on the state of the research field gives a context to this thesis. From Wilson (2008) perspective on its origin, this section finishes validating a research like the present, with Schultz-Jones (2009) statement of a movement in social network research.

2.2. Social Networks

Social networks are as old as humanity itself, humans are social beings, and since the beginning of time they have gathered in sets of groups, according to the place where they live, shared interests, religion, and functions in society. This affirmation must be taken into account because the functionality of virtual social networks is based on "real world" social networks and some methods and theories developed for their analysis are similar. Carter (2005) mentions that human relationships in cyberspace "rather than being exotic and removed from real life, they are actually being assimilated into everyday life. Furthermore, they are often moved into other social settings, just as they are in offline life." (p. 2.) One of the main changes produced by information and communication technologies is that they help in creating new social networks, eliminating barriers of time and space.

According to Matzat (2009):

It is often stated that the successful use of information and communication technologies (ICTs) depends not only on the properties of the technology. ICT researchers claim that the technology has to fit in with the social environment in which it is intended to be used (p. 2).

In the last decade, the term social networks is usually associated with web-based or Web 2.0 applications and services. Focus.com (2009) made an illustration of the development of these social networks, showing that Classmates.com was the first one, created in 1995 (see Appendix 1: The Boom of Social Sites). But Kaplan and Haenlein (2010) set the genesis of these social networks earlier in time:

By 1979, Tom Truscott and Jim Ellis from Duke University had created the Usenet (established in 1980), a worldwide discussion system that allowed Internet users to post public messages. Yet, the era of Social Media as we understand it today probably started about 20 years earlier, when Bruce and Susan Abelson founded Open Diary [in 1998] an early social networking site that brought together online diary writers into one community (p. 2).

Users of social networks do not only consume information created by traditional producers (e.g. cultural or commercial industries), but they are themselves the main producers of information they share with their connections or anyone connected to the Internet. The content or information shared is diverse; there could be photos in a user album, the now famous 140 characters on Twitter, bookmarks, movies, and music. Kaplan and Haenlein (2010) define User Generated Content as "the sum of all ways in which people make use of Social Media. The term, which achieved broad popularity in 2005, is usually applied to describe the various forms of media content that are publicly available and created by end-users" (p. 3).

Web 2.0 is such a big buzz word these days. Bawden and Robinson (2009) state that:

There is no clearly accepted definition or explanation of exactly what Web 2.0 is. It is generally taken to encompass a variety of sites and tools for shared information creation and updating, and social networking and communication. Generally subsumed within this are blogs, wikis, RSS feeds, podcasts, sites for sharing photographs and videos, sites for social interaction and social bookmarking, and virtual worlds (pp. 7-8).

Kaplan and Haenlein (2010) define Web 2.0 as a concept which was

First used in 2004 to describe a new way in which software developers and end-users started to utilize the World Wide Web (WWW); that is, as a platform whereby content and applications are no longer created and published by individuals, but instead are continuously modified by all users in a participatory and collaborative fashion (pp. 2-3).

Gartman (2009) states that:

[…] social networking allows us the opportunity to span space, and to some extent time, to communicate with each another in a real and personal manner. It allows us to feel more connected, less alone and more a part of a community. And these days participation in community is truly valuable.

Siegler (2009) has a less lighthearted opinion:

Social networking has been perhaps the most popular trend on the Internet over the past several years. At first the term was ironic. Social networking was anything but social in the traditional sense. But over time, we've grown accustomed to the idea that you can do social activities such as play games, collaborate on work, and talk, online. And in fact, many times it's even more convenient than doing it in person. It's social, but it's a different kind of social (para. 4).

Social media has brought new types of interactions between Internet users and it has changed the way information is produced, giving more power to individual users and crowds of users. At first, it looked like social media could be only a fad or only used for enhancing communication, providing entertainment and new ways of wasting time. However, it could be more to it.

2.2.1. Towards a "Serious Dimension" for the Use of Social Networks

Usually the first things that people think about when asked about social networks are Facebook, entertainment and almost useless and time consuming activities. However, a serious dimension has emerged and social networks, virtual relationships, digital societies and Web 2.0 are being studied and used for different purposes apart from entertainment.

Marchionini (2009) defines some characteristics of digital societies: they are determined by topic or interest of individuals or communities, rather than by the geography, because ICTs bridge people regardless of their location. Of course, digital societies are dependent on technologies and electronic infrastructure. They are driven by weak ties; this can be seen in social networks such as Facebook where one "collects" contacts or friends that you don't actually have to know personally, the acquaintance process is very different than in the "real world society". Individuals in this digital society are also extremely diverse, if the location makes little difference, people interacting in a network come from different places and that makes them different, because of different culture, religion, and behavior. Digital societies grow fast, we can say they are viral, but at the same time they can lose members at the same speed as they grow, they are not so sustainable, because the fidelity of the members is different from person to person. These societies of course are based on our "real world society" and interact with traditional institutions. Wellman et al. (1996) "assert that computer networks are social networks with strong, intermediate and weak ties between members" (as cited in Hersberger, Murray & Rioux, 2007, p. 2).

Due to the heavy use of social networks and Web 2.0 for entertainment purposes, academics, scholars and organizations in general underestimate the powerful tools they could have in their hands if they try to use them for more serious purposes. Bawden and Robinson (2009) support this by saying that "though the initial usage of such tools and resources was

largely for social, recreation and popular culture purposes, a professional and 'serious' dimension has emerged" (p. 8). Buckley (2009) affirms that "personal and work boundaries can blur, so a tool that's useful for work can be useful for personal life and vice versa." (p. 3).

The blog Thoughtpick (2010) add to this serious dimension by writing the series of posts *Learn Social Media by Example*, where they would analyze different marketing campaigns that companies do by using social networks.

Wentworth (2009) states that:

There may be a little irony in the fact that training and development professionals have taken so long to progress along the Web 2.0 learning curve. Even as other experts look beyond these technologies to the next stage, most learning professionals are still trying to catch up. (p. 1).

Farr (2009) also reflects about this in the context of allowing access to students in school to social networks and ICTs in general. He states that: "to continue to fight against students having access is pointless. Realistically, our alternative should be to teach responsible, safe use of the technologies and their applications as they apply to gaining new knowledge, exploring new ideas, playing with concepts, and building the Future" (Access or not section, para. 2). Farr (2009) bases his argument about giving students access on three premises:

- Students have access even if they cannot access from school, so there's an opportunity to use this for everyone's benefit: emotional, social or educational benefits.
- Promote students' abilities to use technologies to develop their potentials.
- Knowing the dangers, teach safe protocols and "net etiquette" to students. (This is What I Believe section, para. 4-6)

There is a growing interest in analyzing social networks as separate or special societies with characteristics yet to explore. Researchers acknowledge that they can be used for serious purposes; they are ready to study them and use them.

2.2.2. Studying social networks use and perceptions

There have been several studies done to find out people's perceptions on social networks, also about their usefulness or on how they fit on businesses or educational environments. This following section mentions a group of studies that are relevant for this research.

Lardinois (2008) mentions that according to the 2008 Cone Business in Social Media Study, 93% of Americans believe that companies should use social networks and 85% believe they should use them to interact with consumers. 56% of consumers believe that a company is offering better services by interacting with them on social networks. In the website of this study of the Cone Limited Liability Company (LLC) (2008) it is shown that when asked about specific types of interactions, Americans who use social media believe that:

- Companies should use social networks to solve my problems (43%);
- Companies should solicit feedback on their products and services (41%);
- Companies should develop new ways for consumers to interact with their brand (37%);
- Companies should market to consumers (25%) (para. 5).

EHS Today (2009) mentions a 2009 study published by Deloitte Development (2009), *Social Networking and Reputational Risk in the Workplace*, pointing out that employers' main concerns are about the potential for confidential or sensitive information to be disclosed. Another concern is the possible negative effect of posts by their employees on blogs and social networks. Deloitte Development (2009) survey results can be summarized as follows:

- 74% of employees surveyed say it's easy to damage a company's reputation on social media.

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- 58% of executives agree that reputational risk and social networking should be a board room issue, but only 15% say it actually is.
- 53% of surveyed employees feel that their social networking pages are personal and that their employers should not view those pages.
- 40% of executives surveyed believe that they have a right to know what their employees post online. 30% admit to informally monitoring social networking sites. (pp. 4, 6-8)

Wentworth (2009) cites the study *Transforming Learning: Web 2.0 Technologies*, assigned by American Society for Training and Development (ASTD) and conducted by Institute for Corporate Productivity (i4cp) which "found that the vast potential of Web 2.0 technologies has not yet been realized by the learning functions in most organizations." And he reflects about companies' concerns with social networking sites, stating that:

The majority of concerns with Web 2.0 technologies can be mitigated through policy implementation. Many of the survey respondents that offered best practices recommended clear procedures that include specific permissions and restrictions. The nature of these technologies means that they cannot be too tightly controlled, otherwise they will never flourish. Too much policing will drain the usefulness right out of the tool (p. 1).

In this section we have seen that there are some companies conducting studies about the general public's perceptions on social networks. The results in a broad sense indicate acceptance of them, a general agreement that the public wants companies to reach them by using social networks and some concerns by executives and management because they are very powerful tools and they could be used to damage a company's reputation.

2.3. Research on Information Behavior in Social Networks

In the previous sections research on information behavior was briefly presented and also some definitions, opinions and surveys about perceptions on Web 2.0 and social networks phenomena and its "serious dimension". The next part includes a short review of the research done connecting these two topics. Firstly by presenting some theories and frameworks found on the literature and then there is a section dedicated to the issues of Web 2.0 and social networks which have been identified by reviewing the literature. The last subsection of the literature review summarizes some case studies related to social networks and they are as diverse as these networks.

2.3.1 Research Frameworks

The theories presented in the following section come mostly from knowledge management and business literature. These models are: social network theory and social network analysis, a framework for analyzing virtual communities. The remaining method presented on this section is different, however, and is very specific, it is a conceptual framework to analyze and evaluate social reference services. But it has been the only one for analyzing social network services found during this research. The reason why these theories are included in this review is to serve as background for this research on what has been done.

2.3.1.1 Social Network Theory and Analysis

The distinction between social network theory and social network analysis is fundamental. Social network theory seeks to make generalizations to explain the workings of networks and relationships among phenomena occurred in these networks. Social network analysis is the methodology used to research network behavior (Schultz-Jones, 2009, p. 2).

Schultz-Jones (2009) reviews and does a bibliometrical analysis on post 1996 literature about the application of social network theory and social network analysis in a library and information science (LIS) context. Her bibliometrical analysis concludes that there is a

growing interest in social network theory and social network analysis in LIS and other disciplines.

Salancik (1995) (as cited in Schultz-Jones, 2009, p. 2) defines that social network theory must do two things:

- Propose how adding or subtracting a particular interaction in an organizational network will change coordination among actors in the network.
- How a network structure enables and disenables the interactions between two parties. In short, a network theory of organization should propose how structures of interactions enable coordinated interaction to achieve collective and individual interests.

Schultz-Jones (2009, p. 4) enumerates the techniques of social network analysis as follows:

- Social network map.
- Surveys and interviews.
- Agent-based technology to capture email and document flow across servers.
- Metrics of journals, authors, citations, co-citations, web sites, online community positions.

Social network theory and analysis are frameworks which could be used to study information behavior in social networks, because they seek to explain interactions and relationships inside a network.

2.3.1.2 Examining Virtual Communities

Hersberger, Murray & Rioux, (2007) present an emergent conceptual framework for examining virtual communities, represented as a four tier pyramid:

Tier 1: The foundational building blocks:

- Membership; attributes of membership are: safety, sense of belonging and identification; personal investment and common symbol system.
- Influence
- Integration and fulfillment of needs
- Shared emotional connection.

Tier 2: Social networks as information networks: exploring the social networks as information networks which can be analyzed using social network analysis methods.

Tier 3: Information exchange: addresses how current theories and models of information need, information seeking and, in particular, information exchange can be used to help explain ways in which online relationships and virtual communities develop and evolve.

Tier 4: Information sharing: examines information-sharing behaviors. Information acquiring-and-sharing refers to a set of combined behaviors and processes in which an individual:

- cognitively stores representations of other people's information needs;
- recalls those needs when acquiring information of a particular type or quality;
- makes associations between the information that s/he has acquired and someone he/she knows who s/he perceives to need or want this information; and
- shares this information in some way (pp. 2-7).

This model may not be the only framework that could be used to examine virtual communities. However, it is relevant because it addresses information needs, seeking and exchange, in few words: it integrates information behavior to its framework.

2.3.1.3 Understanding Social Reference

Shachaf (2010) affirms that "there is a need to develop a conceptual framework to understand social reference and to facilitate the analysis and evaluation of social Q&A [Questions & Answers] sites." (p. 1.) These social reference sites she mentions are for example: Yahoo! Answers and Wikipedia Reference Desk. She stresses some differences between this social reference and Library's Reference Service: the service is often wiki based, the questions can be answered by all the community of users, as a group effort, users can categorize and rank questions and answers, and even reply to the other answers to complement or correct the previous one. The framework she proposes is an Input-Process-Output (IPO) one, which integrates reference models with IPO models of team effectiveness. This framework can be briefly presented as:

Table 1. Input-Process-Output framework for understanding social reference, adapted from Shachaf's (2010, pp. 71-73)

Inputs	Task	Question type, difficulty, clarity, and topic
	Users	Participants' knowledge, skills, abilities
	Context	Service and technology, includes guidelines, norms, training, rewards and technological platforms.
Processes	Task processes	Involves the transactions related to the question.
	Group social processes	Management, trust, motivation, conflict, cohesiveness.
Outputs	Task	Answer quality
	Users	Satisfaction
	Context	Service: viability, percent of questions answered. Technology: repository of questions.

This was the only framework found throughout the literature which can be used to analyze a Web 2.0 social network. However this instance is too specific about the platform it can be used to study. Regardless of this fact, it is worth to report it as background.

2.3.2. Issues of Web 2.0 and Social Networks

This section includes issues of the Web 2.0 and social networks identified in the pertinent literature. It was developed taking as a starting point and inspiration from the article *The Dark Side of Information: Overload, Anxiety and Other Paradoxes and Pathologies* by Bawden and Robinson (2009), where they identify some of the "pathologies" in the information on the Web 2.0 and social networks. Further additions to their views resulted in the present structure, subdivided in different issues: trust, decision making, users' satisfaction, information overload, quality control, loss of identity, permanence, repackaging, crowdsourcing, privacy and the clash with the real world. This inventory of issues by no means pretends to include every issue or to be an extensive and final list. Most of them come from an information science perspective, some of them are also applied to the studies on information behavior for traditional or printed documents and some others are applied for the web, so they are not exclusive for social networks. As information systems and sources, social network applications also have these issues, the degree on which they affect and concern social networks studies may vary.

2.3.2.1. Trust

Because social networks are present on the Internet, they have some of the same issues that academics and scholars criticize and acknowledge as present on the Internet itself. One of the major issues is trust. Kling and McKim (2000) (as cited in Matzat, 2009) cite two barriers related to trust:

Firstly, a researcher who decides to use an internet tool to receive informal information must trust the sender of information with respect to its reliability. Secondly, a researcher who decides to use an ICT to send information must be sure

that this does not harm his own career advancement. Since he gives away information of potential value to competitors for status in the research system, this is not self-evident. The existence of either of these two trust problems can be a barrier for the use of new ICTs in a research field (Matzat, 2009, p. 4).

2.3.2.2. Decision Making

Berryman (2008) speaks about judgments in information seeking behavior, stating that "under the broad umbrella of rational decision theory, two major strands of thought are evident: classical, or optimal, decision theory, and behavioral decision theory" (p. 3). She adds:

Much decision making theory derives from research that focuses on the moment of choice. If a decision is understood as making a choice between alternatives, then at times, an information seeker may well be making decisions of this nature, for example, about information resources, on a sequential item by item basis (p.10).

There are decisions involved when using and searching for information, first the way to actually search for it even if unconscious is a search strategy: how and where I am going to try to find information. The "where" involves a relevant resource. The decisions a person makes when searching and using information are influenced by this person's experience. Jungermann (2000) (as cited in Berryman, 2008) sees decision making as a 'multistage cognitive process', composed by three phases: identification or recognition of the problem, consideration of alternatives for action, and selection of the alternative. The decision making process is being made when user consider his or her alternatives and choose between them, uncertainty reduction, the familiarity of the situations, and the construction of mental models affect the decision making process. As with any information sources or systems, it is interesting to find out how users behave in this respect when using social networks, for example how do they choose which feeds to follow and what they decide to read.

2.3.2.3. Users' Satisfaction

Agosto (2001) (as cited in Berryman, 2008) studied the decision making process of young Internet users: She argued that participants of her study were constrained by time and their own knowledge and she concluded that satisfaction of their needs was not the only element which made the participants stop their information seeking. "She reported additional stop rules, including physical discomfort and boredom, which caused participants to stop searching before they had found a website that was good enough to meet their information needs" (p. 4). Zach (2005) wanted to find out what elements made arts administrators end information seeking processes: there were conflicts between time factors and a sense of comfort with the amount of information found. These participants used their own personal experience or expertise to find information and they would stop even when more information was known to be available. Shenton and Dixon (2003) applied Kuhlthau's information search model in a study with youngsters: they describe this model as being composed by six phases: task initiation, topic selection, prefocus exploration, focus formulation, information collection and search closure. They state that in the stage of search closure:

> Youngsters draw their searches to an end, often as a result of lack of time or falling productivity. Pupils are likely to experience relief at completing the library search but, whilst some may feel satisfaction at its outcome, others are disappointed (p. 3).

It can be interesting to see how this issue is present on social networks, to analyze what kind of information needs are satisfied by social networks, how the users are satisfied with the information they have and how do they act in order to satisfy their information needs by using social networks.

2.3.2.4. Information Overload

Parsons (2010) illustrates information as:

No one ever tells you how dangerous this stuff can be: they just go on pumping it out, hour after hour, day after day. You're consuming it right now, without a clue about the possible consequences. The worst thing is, evolution has predisposed your brain to crave it as much as your body craves fat and sugar. And these days - as with fat and sugar - you can get it everywhere. (Information Overload section, para. 2)

He questions if the information overload brought primarily because of the Internet brings unanticipated dangers: "The human craving for information makes censorship a particularly problematic response to any perceived information hazard, and openness is often the preferred option."

Bawden and Robinson (2009) state that:

[…] there is no single generally accepted definition of information overload. The term is usually taken to represent a state of affairs where an individual's efficiency in using information in their work is hampered by the amount of relevant, and potentially useful, information available to them (p. 4).

In a Web 2.0 social networked world, we are challenged by an increased information overload because these social networks allow us to multiply information exponentially due to their ease of use and their possibilities. The features allowing user created content and reblogging are many, for example: "mashing-up" of content, real time comments and modifications.

At this moment, the production of content has switched from cultural, business or academic organizations and enterprises to the broad public with access to an Internet connection. The term produsers has started to appear in the literature; Produsage.org (2007) defines produsage as when "users occupy a hybrid position of being both users and what in

traditional terms would have to be described loosely as producers." This idea of the produsers is not new, Toffler (1980) coined the term prosumer to express a situation when on his *Third Wave* the roles of consumers and producers would merge, as a result of the need of highly customizable products which will call users to take part in the production processes adding value to goods and services or creating them. Such is the case of Amazon, which allows customer ratings and reviews of products.

It is relevant to investigate how users are coping with information overload in social networks, to see if they are taking any actions about it or are just giving up because of the large amounts of information they are receiving from their friends' feeds.

2.3.2.5. Quality Control

Quality control on information sources has always been a concern for academics.
Rieh (2002) states that:

"In the Web, making judgments of information quality and authority is a difficult task for most users because overall, there is no quality control mechanism" (p. 145). He noted that information users attempt to make judgments on information quality and authority.

However, in social networks, quality control can be enforced either by administrators or by users. In the case of Wikipedia, everybody on the Internet can edit and make changes to Wikipedia. Mainly because of this reason is that it receives negative criticism from scholars. Weblogs also are part of this quality control issue because they are made to allow their writers to express themselves quickly. In other social networks like Facebook, most of the quality control centers on keeping harmful content outside of the network, administrators can enforce it and also the users, by reporting users or groups. So, we could say that quality control in social networks is related to the wisdom of the crowd.

2.3.2.6. Loss of Identity

Loss of identity, as pointed out by Cronin (2005) (as cited in Bawden & Robinson, 2009) is:

[...] inherent in tools which allow anonymity and pseudonimity in their contributors. There are numerous anecdotal accounts of contributors to wikis making false claim to qualification and authority, and of authors of blogs adopting false personas. This makes it particularly difficult to assess the validity of the information presented (p. 8).

It is obvious that in the cases where the identity of the creator or contributor of information cannot be discovered, the information can't be trusted for serious purposes, but that's not the case for all social networks, for example Linked-in is an instance of a social network where the purpose is to maintain a list of contacts who we know and trust professionally, and one of the new features is that professional groups can be created and any user can start discussions inside of these groups. Also, loss of identity is not an issue that big in social networks, because there is a tendency to use real names and base interactions on real world social structures, like Carter (2005) and Marchionini (2009) see it (see 2.2 and 2.2.1, respectively).

2.3.2.7. Permanence

A problem of the first web is amplified with Web 2.0. Again, with the case of Wikipedia, if an article can be modified by anyone, anytime, the article will be always changing, and also blogs are always changing, making it nearly impossible to archive this type of information, because there is the question about which is the original or the final expression of a document? And also no one can know when a website will be changed, or taken down.

There are some institutions and projects proposed in order to archive information on the web, in order to give it permanence. One example is the Internet Archive Wayback Machine, which "is a [free] service that allows people to visit archived versions of Web sites.

Visitors to the Wayback Machine can type in a URL, select a date range, and then begin surfing on an archived version of the Web" (Internet Archive, 2001, FAQ section, para. 1). Similarly, but limited to the UK, the British Library created the UK Web Archive, a project which began in 2004, containing "websites that publish research, that reflect the diversity of lives, interests and activities throughout the UK, and demonstrate web innovation. This includes "grey literature" sites: those that carry briefings, reports, policy statements, and other ephemeral but significant forms of information" (UK Web Archive, 2004, About section, para. 1).

However, it appears that by now the sole project to archive content from social networks was proposed by the United States' Library of Congress. On April 1st it was announced that the Library of Congress has acquired every tweet since 2006 (Oder, 2010). This project aims to archive all public tweets from Twitter.

2.3.2.8. Repackaging

Most of the information available on social networks is a repackage of existing information, for example the digests we receive by RSS feeds, reblog of existing information (in full or as a fragment) coming from various sources, like: Blogs, Facebook, and Tumblr. Carpenter (2009) defines a content pyramid in the Web, where the base indicates volume of information and ease, referring to the ease of reblogging or no original content created; and going further up in the pyramid is the value and effort of creating original content. The tiers of this pyramid from bottom to top are: the thieves, the aggregators, the commentariat and the originators. As a summary, the thieves are people who don't add value to the reblog; aggregators don't add real own insights but tend to group content in a new form; the commentariat add value to the content by grouping and commenting it; and the originators are obviously the source of the content.

Social networks are very versatile for sharing information and most of this information is taken from other places, which mean reblogging. It is the essence of social networks.

2.3.2.9. Crowdsourcing

Whitford (2007) mentions that the term crowdsourcing was coined by Jeff Howe, a writer in Wired magazine. It is "the act of a company or institution taking a function once performed by employees and outsourcing it to an undefined (and generally large) network of people in the form of an open call." Examples of crowdsourcing on Web 2.0 social networks are social bookmarking sites. Libert & Spector (2008) also cite Wikipedia as one successful example (p.3), although Jimmy Wales, the creator of Wikipedia doesn't like the term or its implications, as he stated:

One of my rants is against the term crowdsourcing, which I think is a vile, vile way of looking at that world [...] What you're really in the business of is providing a nice place for people to come and do what they want to do. (Lee, 2007, para. 20).

Although Wikipedia is an example of a project of collaboration, it is not a commercial project, the collaborators don't receive any payment and the donations are used to cover the site maintenance and other associated costs, it is possible that the position of it's founder against using the term crowdsourcing to describe Wikipedia is that the term has a very strong commercial dimension. Berkus (2009) says that it:

[…] is being used to replace other words. Particularly, open source, community and citizens [...] If you're describing using the internet to procure cheap labor, by all means say crowdsourcing. But if you're describing a community enterprise use instead: community participation, peer contribution, collaboration, citizensourcing. (Conclusions section, para. 1)

Nevertheless, going back to the Wikipedia case, it is an example of a collaborative effort in which a huge community is responsible for writing the encyclopedic entries and maintaining quality control. In this context, it is a good thing if they can control vandalism and the entries can achieve sufficient scientific accuracy; but Roman (2009) mentions that crowdsourcing has a weakness: "there is no clear difference between the wisdom of the crowd

and the mob that rule" and that "doesn't really help sort through or synthesize information, in fact, it might do the opposite" (p. 1).

Although not so important in order to study users' information behavior in social networks, crowdsourcing is a relevant trend on the Web 2.0 nowadays, so it could be interesting to know users' opinions on it and how it relates to the different perspectives discussed in this section. The relationship between information behavior and crowdsourcing would be if the user participates in a crowdsourcing project and how and why he or she does it.

2.3.2.10. Privacy

McCreary (2008) defines privacy as a:

[…] form of self-possession - custody of the facts of one's life, from strings of digits to tastes and preferences. Matters of personal health and finance, everyone agrees, are in most instances nobody's business but our own - unless we decide otherwise (p. 1).

In this age of social media, one of the main concerns is privacy, as Web 2.0 tools allow and sometimes even encourages oneself to publish very personal information which is, by the default settings of the social applications, very public.

Taraszow, Aristodemou, Shitta, Laouris, & Arsoy (2010) state that "youth, especially between the ages of 18 and 22, seem unaware of the potential dangers they are facing when entering real personal and contact information in their profiles while accepting 'friendship' requests from strangers" (p. 2).

More and more the users demand more privacy for their profile, in recent years we have seen improvements and revamps on Facebook's privacy options. A summary of these changes can be found in an image created by McKeon (2010) (Appendix 2: The Evolution of Privacy on Facebook), where he illustrates these changes on Facebook's default privacy settings between 2005 and 2010, and how they changed according to the type of information shared and what do the stakeholders see.

There has been some debate on the Internet especially about the case of Facebook, because of concerns among the general public on how Facebook could use personal data and what amount of this data could be reaching other companies. Yoder (2010) wrote a post called *10 Reasons to Delete your Facebook Account*: the author confessed to have deleted his own Facebook profile and invited the reader to do the same. The reasons he cites have to do mostly with the issue of privacy, Facebook making personal information available to other companies, the fact that private data is shared with applications. Some days after his post appeared, King (2010) answered with a post *called 10 Reasons to NOT Quit Facebook*, where he, among other issues, argues that even when Yoder's points are valid, he sees that it is good for organizations to maintain a Facebook page, mainly because a good amount of customers and communities are using it; it can be used as a free marketing and communication tool to reach these customers and communities. Apart from this, he invites people to figure out the privacy settings changes and use Facebook to tell them what do they think about the changes, rather than complain and delete the account. Finally, he also cites some reasons involving an individual level of use, to stay in touch with family, friends and colleagues. Many examples of this type of debate can be found all over the Web.

2.3.2.11. The Clash with the Real World

This section presents different kinds of issues that can be put together under this heading, because they are caused by some clash that happens when the use of social media can cause negative consequences in the real world. The different issues presented are about organizations afraid of and banning social networks, social climbers and cyber bullying and crime.

Deloitte Development (2009) report notes that the development of social networks affects the way people communicate, share and disseminate information. They redefine the differences between professional and private lives. These tools create opportunities but they raise various ethical dilemmas for individuals and pose challenges for businesses when sensitive or confidential information can be exposed because of negative posts by employees on their blogs or social networks. Kaplan and Haenlein (2010) state that once a firm has

decided to utilize social networks it is worth checking that its employees can access them. Commonly, institutions block or ban Facebook, YouTube, and Second Life on corporate PCs for fear that staff might spend too much time on them instead of working. For example, Callari (2009) reported five organizations in the United States which forbid the use of social networks by their employees; the organizations listed were: United States Marine Corps, Entertainment Sports Programming Network, National Football League, J. Crew and some financial institutions.

Related to this issue, there have been instances where people lose their jobs because of the comments they make, most of the times it is with a reason, when people post inappropriate information in their public social networks. However, it can also happen that freedom of speech is damaged by the employers firing someone without a really justifiable cause, just for expressing himself or herself freely in social networks. Sometimes these cases are reported on blogs in an often humorous way. Hdaib (2010) wrote a post *Top 10 Ways in Which Social Media Can Get You Fired*; some of the ways cited were: speak ill of your boss or manager, post that you are looking for a job when you are not, share company information with your friends, bad mouth other employees, post pictures of yourself while committing illegal acts, post pictures of yourself while committing acts that do not match your company's ethics or code of conduct and use social media excessively. On the same blog, Bamieh (2010) wrote the post *5 Things that Really Shouldn't be on Facebook*; here, he listed the following things: phone numbers, crabs status, porn, criminal record information and "that you hate your job". Most of these elements were cited under the logic that those are not good for one's own image and it would prevent a person to find jobs.

Armano (2009) states about the social climbers that:

"The same people who climb their way up the social food chain in the real world tend to do well in the social media world. They'll be your friend for a while, until they find someone else with more Twitter followers to tweet with."

This is probably not a very worrisome issue, depending on the individual's use of social networks. It would depend on the intentions of the social climber; if it is just as Armano

(2009) stated, then it is not so bad, because it is just about getting attention and the climber is just following someone he sees as trendy. In another case it can happen that some people just look to befriend you for dubious intentions in order to acquire certain status given by befriending certain people or to damage you or one of your contacts.

One of the most worrisome issues of the use of ICTs, and by extension social networks, is cyber bullying. Belsey (n.d.) indicates that it "involves the use of information and communication technologies to support deliberate, repeated, and hostile behaviour by an individual or group, that is intended to harm others" (Home section, para. 1). As with privacy, children and teens are the groups most likely to be affected by this problem. There have been even some cases of suicide, as reported in the Wikipedia article about cyber bullying; the suicides of Ryan Halligan and Megan Meier (Wikipedia, n.d., Harmful Effects section, para. 4), two American teenagers who committed suicide after been cyber bullied when using IM and MySpace respectively. Just for reference, as it goes beyond the scope of this thesis, this article is very comprehensive; among other aspects it reports surveys, statistics and legislation about this issue.

Also related to extreme criminal cases, it appears that the media has coined the term "Facebook murder"; this can be seen in the following and recent articles in the online version of BBC News:

BBC (2010a) reports the murder of Ashleigh Hall (17 years old). She was murdered in England by Peter Chapman (33 years old), who posed as a teenager with other name on Facebook and met her, leading to the crime. BBC (2010b) reports a similar case to the previous one, but in Australia, where a 20-year-old man was charged with the murder of Nona Belomesoff. In this case, the charged person supposedly offered the possibility of a job to the victim, luring her to her death. The article adds: "Detective Russell Oxford, who is leading the investigation, said the case was a reminder to young people about the dangers of trusting strangers on social networking sites" (para. 14). Finally, BBC (2010c) reports a case in London; the article states: "A 16-year-old boy has been detained for killing a former best friend after the pair traded insults on Facebook" (para. 1). Although only illustrated here with these three cases from the same news source, there have been several murders related to social networks, reported by different news services.

In different measures, the issues presented in this last subsection are worrisome. In the first case it doesn't feel right when an organization which can be using social media forbids completely the access to them to its workers, when some policies and limitations could be friendly discussed. Social climbers are probably not an issue worthy of too much concern but it would depend on an individual's purpose when using social networks, as not everybody befriends someone whom he or she doesn't now. The third instance of cyber bullying and crime is perhaps the darkest side of social networks discussed on this thesis. It is very important to be aware of it, as the Internet and Web 2.0 could be very dangerous to young and malleable minds. Other possible issues are about how the use of social networks can affect real world human relationships, especially love relationships; and finally about alienation or how do social networks will make one person avoid physical and personal relationships in favor of virtual communication. These issues are acknowledged, but not developed in this section because no literature could be found to explore them.

In this section about the issues of the Web 2.0 and social networks, many issues were presented. Although their importance for studying users' information behavior varies, this thesis attempted to explore all of the issues presented in this section because these are different facets which can be used to study information behavior. They were in the center of the thesis because the exploration of these issues helped to answer to the research questions. The interview questions were constructed taking into account these issues and adding some other questions related to the typical features of a social network, such as the roles, purposes and way of befriending people or building connections. The depth of the exploration accomplished in this thesis was determined by the interview questions and the answers of the participants.

2.3.3. Research on Social Networking Sites

This last section summarizes some studies on social networking sites. These studies were obtained as a result of the search strategies detailed at the beginning of this chapter. They are as diverse as social networks and are presented as follows: eBay, Gnutella, CiteULike, a web survey about knowledge sharing and social ties in an organization, computer-mediated

communication groups and internet discussion groups for researchers, Facebook, MySpace and MOSAICA.

2.3.3.1. eBay

One of the most popular auction websites on the Internet, eBay has different localizations of itself in about 42 countries, with more or less the same navigation and rules or policies. Vishwanath (2003) compared the behavior of its users across different cultures. This study is centered on the concept of uncertainty. Using Hofstede's uncertainty avoidance index (UAI) the comparison was made between eBay Web sites in Germany, Japan, and the United States. The study found that for the users it is very important to have informational cues (such as pictures) to reduce uncertainty when they are about to bid for an item. An important relationship between the UAI and participation in auctions is expressed as, "High uncertainty-avoidance could result in the relatively low participation in auctions with little information. As against this, auctions with more information (pictures) provide more information and lower uncertainty resulting in better valuation and higher participation" (Vishwanath, 2003, p. 16).

Visual cues are an important aspect of online information systems, as they provide extra information for the users.

2.3.3.2. Gnutella

Peer to peer (P2P) is a type of network of computers in which every computer share resources with other computers on the network without the need of central coordination, resources shared are processing power, disk storage, files, or bandwidth. Yang and Kwok (2005), researched about the changes in the queries made by users on Gnutella (one instance of P2P network) in 2002 and 2003, by saving the data of these queries in a log file and analyzing it using a database management system. They found an increased number of non-English queries, also a decrease on the number of repeat queries but still more than that for WWW search engines, partly because most users know what file they are looking for when they make a query. The length of queries has been increased by about 40%. There has been a shift in the most searched topics: from entertainment and sexuality to computers and entertainment. They conclude their study by projecting that if users get more familiar with this

technology as with the Web, the information behavior of users may also include occupational and educational information seeking.

2.3.3.3. CiteULike

Klaisubun, Kajondecha & Ishikawa (2007) made some research about Social Bookmarking Service in an academic environment, these types of services could be regarded as a powerful social network tool, because they allow people to discover articles or websites relevant to their area of interest, significant peers with a shared interest, and they are able to discover areas connected to their research topics by browsing through topics. The researchers started gathering research topics and prepared bookmarks importing them from the reference management tool CiteULike. The experimental tool used in this study is called ReMarkables, all user logs were recorded and analyzed using Pathalizer. The authors summarize the findings of the experiment as: users select tags to focus the search topics; then users select other users to find the related bookmarks around the focused topics; and they frequently find desired bookmarks in the libraries these other users.

2.3.3.4. Social Ties

Marouf (2007) made a study with a web survey applied to business organization, where she wanted to find out if there is a significant association between strength of business ties and the sharing of public and private knowledge. This study identified of two types of ties in a working environment, we can also say that in any social network they exist, the ties are: business ties and social ties. The study found out that in a working environment, "the strength of business relationships, in comparison with the strength of social relationships, contributes measurably more to the sharing of both public and private knowledge" (p. 12).

2.3.3.5. Computer-mediated Communication Groups

Cho and Lee (2008) made an experiment with 86 students from one university in the United States and two in Singapore, to study collaborative information seeking in intercultural computer-mediated communication (CMC) groups, where they recommended information to each other using a computer system. The results of this study demonstrate that:

…the significant influence of the social context on the emerging patterns of CMC interactions and how those constraints on interaction are socially rather than technologically imposed. The results also showed that the socially bounded nature of information seeking could be moderated by other contingent factors, such as macrolevel national cultures and individual-level expectancies of the Internet use (Cho & Lee, 2008, p. 17).

This was the only study found that explicitly says used social network analysis methods.

2.3.3.6. Internet Discussion Groups

Matzat (2009) presents existing and new hypotheses about how researchers in different disciplines present a distinct use of internet discussion groups (IDGs). The hypotheses presented have their main concern with the issue of trust, which could inhibit, or encourage researchers to use such groups.

This study tests the hypotheses using data obtained with the help of a postal questionnaire sent to a multi-stage random sample of English and Dutch university researchers in the following eight disciplines: history; sociology; management science; economics; mathematics; chemistry; mechanical engineering; and physics. These cover established disciplines in the humanities, the social, and the natural sciences and

were expected to have sufficient variation in the theoretically interesting conditions that might affect IDG use (Matzat, 2009, p.7).

The test of hypotheses with the questionnaire can be summarized as follows:

- Higher commercial relevance of research findings and less visibility of research doesn't inhibit the use of IDGs.
- Researchers in fields where research projects have a low visibility or dispersion of scholarly communication have a higher likelihood of starting to use IDGs, but it doesn't mean they will continue to use them.
- The degree of interdependency is negatively associated with the initial use of IDGs.
- A large number of disciplinary differences in the prevalence of IDG use are still unexplained.
- The data demonstrate that a general claim that trust problems inhibit the use of all kinds of information and communication technologies would not be supported.

This study proves that trust is an important issue to take into account in communication systems.

2.3.3.7. Facebook

Taraszow, Aristodemou, Shitta, Laouris, & Arsoy (2010) made a study to see how young people of Cyprus deal with privacy issues on social networking sites. For this study, they used Facebook, examining personal information disclosed on profiles, noting some differences in behavior according to their gender. They examined 131 profiles and the "results suggested that most people regardless of gender enter full name, facial pictures, hometown and e-mail addresses in their profiles. However, males are more likely than females to disclose mobile phone number, home address and instant messaging (IM) screen names." (p. 2).

They found also that young people seem unaware of the possible repercussions of disclosing personal information on social networks and they suggest that future research can

investigate the levels of awareness of young people on this matter, because it's a serious privacy issue. The authors of this study point out that on the methodology used:

> …observing profiles, which, as the search of the past literature suggests, is an approach that has rarely been used in this field. The study quantified patterns of information revelation from the actual field data, which is, examining profiles, rather than conducting surveys (p. 15).

It is worrisome that young people are unaware of the dangers posed by the sharing of personal information in social networks. They are the ones who are using them the most and most willing to embrace them.

2.3.3.8. MySpace

Souza & Dick studied MySpace use by Sydney high school children, examining the reasons why children disclose personal information on their sites and tried to measure their understanding of privacy risks. They developed an "information disclosure model" that has the following reasons why to disclose personal information: peer pressure, signaling, trust, myopic views of privacy risks, design, and relaxed attitudes to privacy. They administered a questionnaire to the children to see what information they had disclosed, to know their views on the researchers proposed information disclosure model and to understand their value of privacy. They also conformed two focus groups, one of parents to classify by concern the information provided by their children; and the other of children asked to give comments on the comments of the first group. Some of the findings are: children who value privacy are less likely to disclose sensitive information, younger children seem to be more vulnerable in this context, and there is disconnect between what parents see as safe and appropriate and what the children do.

2.3.3.9. MOSAICA

Barak, Herscoviz, Kaberman, & Dori (2009) describe "MOSAICA", a Web 2.0 system for cultural heritage. The objective of the project that gave it birth was "to develop a toolbox of generic technologies for the preservation of cultural heritage resources (photos, documents, video, sound, etc)" (p. 2). Its vision was to promote and open mind and pluralism by presenting different cultures' stories in a learning environment.

The authors made an evaluation for the project as well. This evaluation was made to evaluate its impact to influence user's disposition to open mindedness and its usability. For this, they made two questionnaires: The Disposition toward Open-Mindedness Questionnaire and the Usability and Learning Outcomes Questionnaire. The first was administered before and after MOSAICA usage. The second was administered only after MOSAICA usage. They also did content analysis on the participant's comments in the questionnaires and did a semi-structured interview to a sample of users. The important findings of the questionnaires were that "bias opinions can be dangerous" and "it's important to be open-minded about different world views" and there's "a statistically significant enhancement of the users' disposition towards non-judgmental views as result of MOSAICA usage" (p. 7). The usability evaluation proved positive views on three usage aspects: affective, cognitive, and operative. For the interviews, they categorized responses into three categories: usage characteristics of MOSAICA, content comprehension, and open-minded attitudes.

2.4. Conclusion

This chapter contained varied information from the literature; first it presented a brief overview on information behavior and social networks. Then, it presented the literature involving research on information behavior in social networks with some relevant theories and frameworks proposed. The section dedicated to the issues of Web 2.0 and social networks was included; these issues are the center of this thesis because the exploration of them answered the research questions. Also, the interview questions (see section 3.4) and the framework to present the data analysis and discussion (see section 3.6) were constructed by taking these

issues as a starting point. The last subsection summarized some studies on social networking sites. The necessity of this study was proven along this literature review, starting from the quotations of Wilson (2008) and Shultz-Jones (2009) (see 2.1.1) to the clear necessity of creating frameworks to study social networks, find out how different of other information systems they are, and determine which issues affect users' information behavior and in what way.

Chapter 3: Methodology

This chapter is concerned with the methodological approach taken for this research. The aim, objectives and research questions of this study are explained, followed by the data collection methods, sampling strategy and interview instrument. Then the ethical considerations, data analysis methods, limitations of the study, and the trustworthiness of enquiry are discussed.

3.1. Aims, Objectives and Research Questions

This research aim was to explore how the Web 2.0 is having an effect on people's information behavior: specifically when using social networks and how users deal with some of the issues of the Web 2.0 social networks identified in the literature.

The objective was to find trends and tendencies in users' information behavior and also explore how they confront Web 2.0 issues.

Research questions to this study were:
- What are the trends and tendencies of users' information behavior in social networks?
- How users confront Web 2.0 issues?

3.2. Methods for the Collection of the Data

The methodological approach for this research was qualitative, because the collection of in depth information about experiences and reactions was intended, as they are part of the social networks user's behavior. Users' experiences in these social interactions were meaningful for the purposes of this thesis.

The method for the collection of data was a semi-structured interview, because it was assumed that the participants from the interview could bring up some topics which were not so explicitly asked for in the questions, or could make a really good contribution due to their own experiences. And this was true especially for the intended participants who were information professionals, colleagues and professors who used social networks to a high degree. This choice was also motivated for the possibility to make extra questions to the participants to further develop unexpected topics. The choice for a semi-structured interview was also justified broadly for the reason that this was an exploratory study. This approach was especially useful because it was more important to get qualitative data from the users using their own words as opposed to get data from methods such as log analysis or observation. These methods can give us information about what users do, but they do not report why users do things or what do they think about these things. They cannot tell us how users confront the issues of Web 2.0 and social networks either, and these issues were the focus of attention of this thesis.

3.3. The Sample

A purposive sampling has been used in this study because, as Pickard (2007) states, it is used for ensuring that participants can contribute different perspectives on the phenomena to study. The participants of the interview were chosen from the International Master in Digital Library Learning (DILL) program. They were four professors and four second year students of the Master program. Participants included four male individuals and four females, two males and two females within each group. Different sex, location, and age were considered to introduce this diversity that was intended to result in having multiple perspectives, as mentioned before. It was suspected that multiple perspectives would arise, similarities and differences between answers by students and professors were noted in the data analysis. However, there were no significant differences between the answers of interviewees of different sex. For that reason, sex was not connected with the findings.

The motivations for the choice of participants were: firstly, by practical reasons as they were individuals whom the researcher knew in person and they were available and willing to

participate in the study. Secondly, because of the previous point, their competence as social networks users could be assessed for their selection, so they should be individuals who have experience using social networks in order to get valuable data. The third motivation was because of their background, to know the information scientist's opinions on these topics and to be able to ask about concepts like user satisfaction and information needs as they are information science concepts.

3.4. Interview Topics and Questions

The interview was intended to give information to answer the research questions about trends and tendencies of users' information behavior in social networks and how are users confronting Web 2.0 issues. The scripted questions for the interview were constructed following the section of the Issues of Web 2.0 and Social Networks (see section 2.3.2) because the main focus was to explore how users coped and behaved in front of the issues of Web 2.0 and social networks. For grouping these questions, two main categories were created: general questions and issues of Web 2.0 and social networks. The general questions category contained questions not directly related to the issues mentioned in section 2.3.2 but were used to ask important behavioral aspects of the participants on social networks, such as what roles they see social networks are fulfilling, which are their purposes of using them, why do they add friends or connections, which social networks do they use and why do they share information there and what kind of information do they share. The second main category of questions was based on the structure of section 2.3.2, but it is more similar to the framework used to present the data analysis and discussion chapter (see section 3.6). The structure of the second main category of questions was: Trust, Loss of Identity & Crowdsourcing; Decision Making & Quality Control; Users Satisfaction & Information Overload; Permanence & Repackaging; Privacy and The Clash with the Real World. The interview questions formulated were based on information exposed on section 2.3.2 and to try to find out interviewees opinions and behaviors about these issues at stake.

The first set of questions had 28 questions. In order to test the questions, a pilot interview was performed. This interview was indeed useful to try the questions before

interviewing the selected sample. After this pilot interview there were no major changes to the questions themselves, some of them were merged with others and most of them were rephrased to be as clear and straightforward as possible. The final set of questions as they appear in the Appendices had 25 questions (see Appendix 4: Interview Questions). Further questions were asked by the discretion of the researcher in the case the participant strayed from the issue at hand or didn't answer exactly what was asked. In the case of the crowdsourcing issue, some explanation about it was necessary for allowing some of the participants to answer to the questions related to it. Some background information about the scope of the definition of social networks was given to the participants as well. In this thesis the term is used relatively loosely to encompass any Web 2.0 site or application which allow for user generated content and interaction (see section 1.6).

3.5. Ethical Considerations

A privacy statement was handed over to the participants, although no personal information was needed for this research purposes, apart from the differences on the education level and sex. These characteristics of the participants were kept because it was supposed that they would provide different insights to the study. Sex just provides differentiation among the participants because no significant differences were reported by participants of different sex.

The privacy statement also asserts that, among other things, no information which could be used to identify these individuals was used in this work and that no personal information will be given to third parties (see Appendix 3: Privacy Statement). All interviews were recorded in audio format, following the consent of the participants and then transcribed for analyzing the raw data derived from them.

3.6. Methods for the Analysis of the Data

The method used for analyzing data was discourse analysis. Discourse analysis, as Pickard (2007) puts it, "is [used] to present an explanation of those shared meanings and assumptions." (p. 241). This refers to the shared meanings and assumptions of the participants.

In the "Data Analysis" section (see 4.1), large parts from the interviews were cited in a narrative form, grouping tendencies; similar or different opinions and some keywords the participants used to define topics and issues. For this process, the interviews were transcribed from the digital audio files to text. The quotations used were not edited; they were presented in the language as used by the interviewees.

The interview questions and the first two interviews served to create an almost definitive framework of categories which were perfected when adding all the interviews to this framework. The raw data collected throughout the interviews was coded manually, using just word processor software. The categorization consisted of 16 topics (see 4.1). At early stages of the coding a spreadsheet was used primarily from the researcher's assumption that some quantitative data could be obtained from the interviews, but this idea was abandoned as there were more similarities than differences in the interviewees' answers, so it was not worth doing it.

Table 2 illustrates the issues listed on the literature review chapter (section 2.3.2) in front of the definitive framework used for the data analysis and discussion. It can be seen that, as already mentioned, some categories of the framework explored typical aspects and features of social networks. These were not listed as issues on section 2.3.2, and they are: "The Different Roles of Social Networks", for asking the interviewees about the roles they see social networks capable of fulfilling; "The Friendship Factor", for finding out how users add friends and if they add unknown persons to their networks; "A Question of Purpose", to gather information about the purposes they intend when they use social networks; "Sharing is Caring", to find out what kind of information they share and why; "Social Networks Used", to list the social networks the participants use.

It can also be seen on Table 2 that some issues were combined to form one category on the framework. This combination was made because of two reasons; firstly it was due to the fact that some issues have some relationship with each other and secondly because the topics did not came up significantly on the interviewees' answers to justify the addition of a separate section. Combined categories of the framework are: "The Issue of Trust", containing "Trust" and Loss of Identity; "Quality Control", containing "Quality Control" and "Decision Making"; "Information Needs and Overload", containing "Users' Satisfaction" and "Information Overload".

The opposite case happened with the issue "The Clash with the Real World"; in this case, it was expanded by giving different categories to different topics associated with it. On the framework, sections related to the mentioned heading are: "On the Negative Views", "Organizations and Social Networks", "Communication vs. Alienation" and "Negative Consequences" (see 4.1.14 – 4.1.16).

Table 2. List of issues identified on the literature review vs. framework for data analysis and discussion.

Issues on the Literature Review	Framework for Data Analysis and Discussion
Aspects related to features on social networks, not present on the literature review	The Different Roles of Social Networks
	The Friendship Factor
	A Question of Purpose
	Sharing is Caring
	Social Networks Used
Trust Loss of Identity	Issue of Trust
The Clash with the Real World	On the Negative Views
Crowdsourcing	The Wisdom of the Crowds
Quality Control Decision Making	Quality Control
Users' Satisfaction Information Overload	Information Needs and Overload
Permanence	The Problem of Permanence and Volatility of Information
Repackaging	Reblogging and Repackaging
Privacy	On Privacy
The Clash with the Real World	Organizations and Social Networks
	Communication vs. Alienation
	Negative Consequences

Following the data analysis section, a section named "Trends, Similarities and Differences: A Summary" (see 4.2) was introduced on purpose between the data analysis and

discussion to serve two goals: firstly, to answer the research questions of this thesis: What are the trends and tendencies of users' information behavior in social networks? And how users confront Web 2.0 issues? The second purpose was to provide a brief summary of the interviews to make the reading of the discussion section easier.

The "Discussion" section uses discourse analysis as well to comment on the meanings of the previous sections. There are some subsections which include citations to parts of the interviews which serve better purposes in the discussion rather than in the data analysis.

3.7. Limitations

The limitations of this thesis and methods of choice were related to the small sample of participants chosen, as it is evidenced on the "Data Analysis and Discussion" section there were more similarities than differences on the participants' answers. It was presumed that apart from their small number, it was also because most of them were heavy social networks users and all of them were information professionals with a good disposition to embrace information technologies. So, there were not too many negative issues or opinions on social networks discussed.

In a future study with a more heterogeneous sample, some of these questions, or new and more extensive sets, have to be formulated keeping different backgrounds in mind.

Another limitation is brought because of the broad definition of social networks adopted in this research. Some websites or Web 2.0 applications are named as social networks, even when their inclusion under this term could be argued. However, all of these fulfill the two conditions which are present on the definition given in the section 1.6; social networks must allow user interaction and user generated content.

Finally, time was a limitation as well, and also because this thesis intends to be an exploratory study, the issues of Web 2.0 and social networks analyzed are not fully studied and the list of issues given is not a definitive one. Future studies can study these issues more thoroughly and add new issues to the list. One relevant topic to add would be psychological issues, which could be an interdisciplinary perspective, as they would contemplate motivations, incentives and rewards from a psychological perspective.

3.8. Trustworthiness of the Enquiry

The information obtained from the interviews and on the literature review of this thesis was considered enough for the intended analysis. The trustworthiness of the data obtained is assured, as it is used as it was obtained from the audio recordings, also because the objective of this thesis was to analyze very subjective phenomena.

The detailed quotations presented in the data analysis Chapter and other evidence for the patterns found in the data can guarantee the trustworthiness of this research. Finally, adding to the trustworthiness of this study is the fact that a detailed description of the research procedure was given in this chapter.

3.9. Conclusion

This chapter presented the methodological aspects of this thesis. The methodological approach of this thesis was qualitative and the method for the collection of data was a semi structured interview. A purposive sampling was used, the participants were chosen from the International Master in Digital Library Learning (DILL) program. The process of creating the questions for the interview was explained thoroughly, as well as the pilot interview, the methods for the analysis of the data, the limitations and the trustworthiness of the enquiry. The next chapter shows the practical use of the methods and ideas presented in this Chapter.

Chapter 4: Data Analysis and Discussion

This chapter is structured in three parts, the first one presents large parts from the interviews cited in a narrative form, grouping tendencies; similar or different opinions and some keywords the participants used to define topics and issues. The second part summarizes the most relevant tendencies and finally the third part is the discussion, which attempted to explain these tendencies, similarities and differences under the light of the literature cited in chapter 2.

4.1. Data Analysis

In this section the data gathered in the interviews are analyzed. The method chosen is discourse analysis. Large parts from the interviews were cited in a narrative form, grouping tendencies; stressing similar or different opinions and keywords which the participants used to define topics and issues. The framework used to present the data in this section is discussed on section 3.6.

As a guide to the reader and because the researcher is bound by the privacy statement already mentioned, numbers were assigned to Interviewees to make the statements easier to read and to follow who said which statements. The students are the numbers 1 to 4 and the professors are from 5 to 8. Females are even numbers. So, for example 2 and 4 are female students and 6 and 8 are female professors. These numbers are also used in the other sections of this chapter when necessary, for example, some fragments of the interviews which are more anecdotic serve a better purpose in the discussion. All the categories are subdivided in two parts: a) Students' Perspective, and b) Academic Staff's Perspective.

4.1.1 The Different Roles of Social Networks

The participants were asked about which roles social networks can fulfill. Their views on the versatility of social networks determine how they use them, which is an element on

their behavioral pattern. There was a general agreement between the participants that social networks could fulfill many roles. The first idea was entertainment and personal development. But some cited roles were: entertainment, communication, academic purposes and career networking. The purpose is also platform dependent, as many different social networks can or cannot be used for certain roles. One interesting issue brought up by respondents was that people are now starting to realize or they will realize the various and more serious roles social networks can fulfill in time, as their potential for it has not being tapped in full measure.

4.1.1.1. Students' Perspective

Social networks can fulfill almost any other tasks but they are more related with entertainment and general communication, as one of the participants put it: "because they are designed for that" [Int. 1]. The participants agree that there is a high potential to unleash on social networks for serious purposes in a working, scholar or scientific environment and contexts.

They're definitely tools for entertainment but I think they have different roles to fulfill: career networking, learning. I think people don't necessarily know in which way to apply them to get the full benefit for other fields, for example career networking. [Int. 2]

4.1.1.2. Academic Staff's Perspective

There is not so much difference in the professors' perspective, but the Interviewee 8 cited that the roles depend on the application, a point not made by the students in this instance. They indeed see social networks fulfilling other roles apart from entertainment, such as: for working environments purposes, networking with friends and professional purposes.

I'm sure we can expect them to fulfill a number of roles, many of them are for entertainment. [Int. 7]

They're definitely more than just entertainment and I think we're just beginning to see what other roles they are going to be fulfilling. I think that's going to move with time. [Int. 6]

4.1.2. The Friendship Factor

One of the first activities in which socials networks users engage just after creating an account is to start building their groups, list of friends, connections or followers. This friendship factor was not identified among the issues of Web 2.0 and social networks section (see 2.3.2) of the literature review, which were used to construct this interview, but as stated on the methods for the analysis of the data (see 3.6) this friendship factor is part of other typical aspects of social networks worth finding out, such as: the roles (presented above in 4.1.2), purposes of social networks (4.1.3), motivations for sharing information (4.1.4) and to find out which are the social networks used by the participants and why (4.1.5).

Depending on the networks, the "label" to define a relationship between acquaintances would change, but they are basically the same. It is possible to create groups of followers or friends on Facebook; on LinkedIn, there are groups and connections. In other networks as Twitter or Tumblr, there are followers. It is possible to "follow" one person's account and the other user may choose to follow back. Two very valid questions are: what are the conditions you put to be "friend" of someone on a social network application? And is it necessary that you know physically that person? The 1st participant stressed that the concept of know someone is fuzzy because you can know about someone by reference, email or Internet but not in person, he stated:

I add people when I know them, to "know" someone in this context it's a concept a bit fuzzy, it can be because I know them physically or just know them on the Internet only, because you share some interest or you are part of some community, but I don't accept people who I don't have any relation with like friends of friends. [Int. 1]

The 8th participant spoke about the fuzziness of the "friend" label, which is used all over social networks, regardless of the level of acquaintanceship. She stated:

If I'm commenting my Facebook friends' activity then it's very hectic, I cannot say why and who, I don't have favorite person to who have, if it reaches my interest and if I have the time. For me is the dilemma how many friends, if I can call them friends, I prefer to call them contacts to be honest because for me friendship is a different thing, so the Facebook friend I cannot say. [Int. 8]

4.1.2.1. Students' Perspective

The participants answered almost by agreement that they have to know a person in order to add them. The concept to know is a bit fuzzy in this instance, as Interviewee 1 stressed it by stating that he can know someone in person or because of the Internet previously and add him/her as a friend. There is a shared concern about adding unknown persons as friends, mainly for privacy concerns about the use of their data, even so Interviewee 3 claimed he's glad to do it in some instances because he then realizes that this people is interesting and they share some interests. Only this participant claimed to have added people whom he doesn't know as friends. There are two exceptions mentioned where the participants can add unknown persons to their social network, we can name those as: the friends of friends and the background exceptions. The first one is to add friends of friends, as Interviewee 2 put it, because of the famous statement: "a friend of yours is a friend of mine". It is possible to ask the common friend or take a look at this prospective friend's profile in order to take the decision. The second exception is based on sharing common backgrounds or connection, as the Interviewee 4 puts it, if her prospective friend is doing or had done the same activity than her, because there should be a reason to add someone.

I typically like to know who the person is in order to protect my information, but I'll accept someone that I don't know, if it's somebody who I have contact with, perhaps someone who knows something educational or career related who have a relationship in the online sphere where we exchange information. I also accept people who are friends of friends based on the logic that a friend of yours is a friend of mine, but I don't do that for everyone that asks, it depends on who it is, but you can't always tell; maybe I'll look at the picture or ask the common friend. I know it can be a way to

meet new people, but I don't use for this generally because I like to be more private about my data because I don't know who is going to use what for what. [Int. 2]

I have become friends in Facebook with people whom I didn't know at first, and I'm glad to do that sometimes because I see that they are very active, they are friends of friends, they write interesting things, and have common interests, so I ask them to connect with me. [Int. 3]

…there must be some connection; I never accept a friend invitation from someone I don't know anything about. But it has happened that someone invites me and tells me that he or she is doing some activity that I also take or I have taken part in. So there is some connection between us, and I can add this person. I just need some reason why to add a person, maybe to feel secure about adding someone I don't know. [Int. 4]

4.1.2.2. Academic Staff's Perspective

In general, the professors' perspective is quite similar to the students' one. As they mostly would not accept an invitation from somebody they don't know. In some instances where it's not necessary to know the people in person, factors considered were: if it's a colleague from other institutions, they know him/her name or via email, the friends of friends and the background/connection exceptions mentioned in the students' perspective. Part of the background check exposed here can be done by: asking the person who made the invitation if they share a network or even if they should be connected, checking their profiles or websites. Only Interviewee 7 stated that he just accepts people who he has met in person.

If they ask me to be friends and I know their name, or if it is a colleague from some other institution. It's enough if I know him or her via email; I don't have to meet them in person. [Int. 5]

There are people who are friends of friends so I haven't met them in person but because that I know there's a connection with someone that I know, I accept their invitations. [Int. 6]

I accept persons whom I know or remember from different stages of my life, could be friends, colleagues, relatives, past relatives; who might now be in Facebook or Twitter as well. I could look for some background, in the Internet or in LinkedIn or ask this person by sending a message. If I'm not sure I know these persons earlier. It means Facebook or/and Twitter is not for me to learn new people but to connect easier to persons I already know. [Int. 8]

4.1.3. A Question of Purpose

This section could be associated with the first section about the roles, but when the first one was about impressions on the versatility of the tools, this part is concerned with the uses the participants give to their social networks. The main purposes are: communication, sharing information, see what friends do or share, keep in touch or track them, know more about our friends, keep connections no matter the physical distance between them and keep track of news.

4.1.3.1. Students' Perspective

Purposes cited by the students were entertainment, communication, social networks as means to know more about one's friends, and to build and maintain friendships with ease. One male student stressed an important aspect of this communication, as he mentioned it:

I use them as means of communication from one to many, considering myself as a broadband channel, to share something with many people at the same time. [Int. 1]

A student notes: "In most of the cases it's just for friendship". [Int. 3] Another student stated that social networks can be an easy and convenient way of maintaining friendships knowing more about our friends' culture, interests, challenges and ideas:

Social networks help me in knowing about other people's culture and to know how they live. By seeing what they share is possible to learn what are the challenges and ideas these people have, so you can get some knowledge out of what the people say, especially when those people are from another culture or country. […] [Social networks] help keep the connection with a person alive somehow, because I'm kind of a lazy person for keeping my friendships, so they are helpful in keeping a connection with your friends. Otherwise maybe I wouldn't call or email them, so I think without them I would lose all my connections. [Int. 4]

About the purpose of keeping track of news, Interviewee 4 raised the problem of certain countries which can enforce some kind of censorship and manipulation around news and media, in these cases, people in social networks become the "accurate news." She said that:

In my country where there are no good [official] information sources due to its political situation, the people are the source of the real news when they share them in social networks [...] Another reason to use them is just for fun: know about parties, to exchange pictures or videos, but I don't use them to play games at all. [Int. 4]

4.1.3.2. Academic Staff's Perspective

The professors expressed the view that the purpose is platform dependent. The possibility of keeping track of friends, especially with friends scattered all around the world, is an important purpose for the participants. One reason they cited to use social networks is to be informed of their students' activities. Interviewees 7 and 8 stated that their friends can be an influence for them to use social networks. In one instance, the 7th participant is motivated to use them because he has some friends he wants to know about and they are heavy Facebook users. In the 8th participant's case she stressed that if a friend invites her to be part of a social network, she would sign up, but she might be passive there. Interviewee 8 mentioned two facts about her behavior; the first is that she is used now to start her day checking her email and social networks, it is an everyday habit. The second fact is that she started using them in the summertime, as she says a kind of a compensation for being away from the city.

Keep in touch with my friends; keep track of them, doing some chatting. I think there is a quite distinct use for each of the kinds of social networks. [Int. 5]

Keeping in touch with friends and colleagues who are scattered all over the world so it's primarily a distance thing, I have a lot of friends who are in [my country] and they are in social networks, but I don't follow them as much as I do with people who are distant, because I rely on other ways of keeping in touch. Also in a professional sense I check when people change jobs, when they move, I've found it's a good way of tracking people. Especially now when people are moving so much, you have people shifting to other countries. [Int. 6]

Currently I'm only using them because some friends whom I want to know something about are heavy Facebook users for instance, so in order to be able to keep an eye on their activities. Also because of my students, it is interesting to follow them to see what happens to them. [Int. 7]

It has happened that if a friend asks me to be part of a network of course I agree but if I don't know about this network I would be very passive there. Sometimes it seems to me that I can't even have my morning coffee without my networks because I think is a kind of behavior with which I start my day I open my email of course because it's part of the professional communication and then to be honest I open also the Facebook. It's somehow additional but I do it because I like to, it's part of my behavior. I started [using social networks] on the summertime when I live in a small village and there I probably felt that I need more connection with my networks. In summer I'm more active in twitter and Facebook probably it's a compensation for not being in the city and not being able to make face to face interactions with the people whom I communicate on a daily basis. I also follow some library accounts for teaching my [national] students how libraries are using Facebook for marketing services. [Int. 8]

4.1.4. Sharing is Caring

The topic on what do you share or how do you decide you share something on social networks can be discussed from several perspectives, but within the scope of this study it is possible to present and comment on basic motivations and the sort of information the participants share.

4.1.4.1. Students' Perspective

As pointed out by the 1st participant, the type of information shared can be platform dependent. Among the participants, the keywords they used to describe the information they share are: fun, interesting, useful, political information, news, entertainment, music, likeable. Motivations for sharing were: communication and interaction, information they think concern or they presume has certain usefulness to their friends or connections. Interviewee 1 pointed out and criticized the shallow and messy nature of Facebook, as it doesn't allow for filtering or more customization in the way the friend's feed comes. One type of information that has come to be delicate to share is personal information, for mainly privacy concerns and also because it might not be interesting or being pointless.

> I simply like sharing information with people to have some kind of communication and interaction with them. Such activities define social life, even if it's 'virtual'. [Int. 4]

> I think sharing in social networks is platform dependent, for example: in Tumblr it's for fun, because it has a framework built for that. I would like social networks to be more useful to see interesting things shared by people, as opposed to the 'chitchat part of social networks' and the unuseful and shallow aspect of them, like someone updating his status to: I had pizza. Facebook is too messy and you can share whatever you like. I would like social networks to have some more mechanisms to allow user customization, [for both the content itself and the sources (friends) where that content

comes from] like filtering information or to create a subset of people you just want to read what they are saying. [Int. 1]

I try not to put anything too personal or identifiable, I don't even have my birthday posted. I weighted the pros and cons of getting all those nice wishes, but someone can steal your data. In my country there's a big focus on identity theft, so there are a lot of things being said like don't ever put your birthday out there, so I became really paranoid with that, even you can't put the month and the day because with that information and my name somebody could go and find the year and open credit cards, bank accounts, things like that. I put my education down, but that's also another area that I have been a bit hesitant because that could be used to steal my data too, so that's why I don't have a full résumé anywhere, even in LinkedIn. I post significant events in my life or funny observations, I am a fan of certain pages on Facebook, but I have removed some of those because I don't want everybody to know it, anyway it's kind of pointless for someone to know that I like lasagna or things like that, but it can be a fun way to change information with people, it can be a way to start a dialog. In LinkedIn is kind of a skeleton of all my accomplishments, just the basics and if somebody wants to know more, we can exchange it in a more private level, for me a public forum is not a place for that. [Int. 2]

4.1.4.2. Academic Staff's Perspective

The 5th participant also pointed out that the type of information shared can be platform dependent. Among the participants, the keywords they used to describe the information they share are: interesting, some personal information, education, professional interests, groups where they belong and professional information. Apart from Interviewee 8 who cited as a motivation for sharing that the information must be interesting, the rest of the professors didn't express any special motivation for it. The sharing of personal information seems to be a more delicate thing among the professors interviewed. The 5th participant said he shares his date of birth, information about who he is, his education and research interests but he doesn't share too many personal things and doesn't share any information about his family at all.

It is quite dependent on the tool, but I associate sharing with Facebook and LinkedIn. In Facebook I share my main information about who I am, date of birth and things like that, but I don't really say too many personal things about myself on Facebook and I don't share any information about my family. I would use LinkedIn for sharing information about my education, research interests, I would state what kind of groups I am involved in but I'm not very active in the discussions on these groups. [Int. 5]

I don't share much personal information. I'm conscious about certain categories of people who might have access to my information and as far as I'm not used to sharing very personal stuff with people who I'm not interacting with on a daily basis and personally, that's a bit confusing. I'll be more likely to share really personal information if I were sitting around with people on the coffee table and talking rather than putting it out for everybody to see. [Int. 6]

I'm relatively limited on what I share, I share only professional information. I use Facebook more as a reader than as a contributor. I'm in Linked In and I share information about my education and professional activities, but to a certain limit. [Int. 7]

In a qualitative sense depending on what I could find interesting for myself, when I put something into the Facebook the criteria is that it is interesting for me. Probably is not what this network is meant for because if I'm talking to this person on the coffee place, he or she speaks about of what he or she wants to say, I think is the same on these social networks so I put there some things that I think are important, it means to me that the quality of these messages is very personal. The quality for example in Facebook is very subjective for me, if somebody says something or continue the dialog with me it means that we reach the same understanding or we have the same understanding of things. [Int. 8]

4.1.5. Social Networks Used

The illustration cited on the literature review from Focus.com (see Appendix 1: The Boom of Social Sites), shows 63 different social networks sites. Considering this list is definitive, which is not, it is possible to state that the offer for social networking on the web is quite large. A user who is just entering the world of these technologies might be confused on which ones to chose and use. The participants were asked which social networks do they use and why, a list of the social networks mentioned is presented in this section, with the reasons and comments made by the participants on their use of them. The networks mentioned are: Facebook, Wikipedia, LinkedIn, Google Buzz, Tumblr, Twitter and Blogs in general (see Appendix 5: Some notes on the social networks mentioned by the participants).

4.1.5.1. Students' Perspective

Facebook: defined by two of the male student participants as the social network by excellence. Facebook is complex, messy; there is quantity over quality on the information presented there:

At the same time it's the most complex and that most messy one. Because you can have like 400 friends, but only 20 of them say something interesting and that's a real problem. [Int. 1]

Facebook is for entertainment, procrastination, it's a lot time that's wasted but I like to keep up with friends and family, it's very easy to see how they're doing. Keeping in better touch with people, you can feel more close to them that way. I have several friends who are from different spheres of my life: personal friends, family, people that I've worked with or conducted business with, so there's quite a mix there, but we haven't actually exchanged business information or talked about work so much as opposed to just sharing something about our lives. My former coworkers would talk about the workplace and things there, but it's not something that's really advancing my career or theirs, it's just friendlier. [Int. 2]

Wikipedia: "It is the most important social network ever, but it's not only that." [Int. 1] "It is good for research as a quick reference tool." [Int. 4]

LinkedIn: the 4th participant mentioned that it was useful to create an account in LinkedIn so she could find interviewees for her thesis:

I created an account in LinkedIn primarily for the purpose of finding people specialized in [certain area] to interview them for my thesis, but also for professional purposes. [Int. 4]

Other students noted:

It's useful to find someone in it and build working or academic connections, but its potential needs to be exploited. [Int. 1]

I use it as the career tool, but I personally don't know how to get the full benefit out of it, they have this feature where you can be introduced to someone, but I haven't used it, sometimes I get requests from people that I don't know there, but I haven't added them. [Int. 2]

Google Buzz: only one student mentioned this one, in his words:

It's useful because you don't have to create another account; it is just in your email, so it's possible to see what other people are sharing on there [Int. 3]

Tumblr: from all the participants, only one male student uses this social network. He reflects his experience in this way:

It is just for quotes and high level entertainment for me. It's possible to find amazing things there, discover culture, specifically Internet culture; learn English phrases and some formulas. It's entering a cool area for me and you just share and are part of it.

But I don't consider it so much as social network because you communicate things in a different way, similarly I don't consider the blogosphere as social networks, is just a net of blogs. But in any way [to consider one site as a social network] is a matter of how you view them. [Int. 1]

4.1.5.2. Academic Staff's Perspective

The social networks present on the professors' answers were:

Facebook: used for entertainment and relaxation, for keeping in touch and on track of friends, chatting and networking.

I use Facebook to keep in touch with my friends, keep track of them, doing some chatting, is more oriented towards entertainment or relaxation. [Int. 5]

One academic staff member expresses the view that her friends complain that she does not share many things there. Therefore, one reason or motivation for academic staff activities on social networks can be their friends there.

I'm there but everybody complains that I don't put so much. I have one friend who sent me a message saying: put something, put some photo. [Int. 6]

Wikipedia: it is on a middle ground between tools for entertainment and professional reasons, used for entertainment and as a reference source also by academic staff.

Some tools are more used for professional reasons and Wikipedia is somewhere between, I use them for reference lookups but also as a tool for entertainment. [Int. 5]

LinkedIn: was used for keeping in touch with colleagues, see what they are doing, to be aware of the activities of the professional groups there. The 8th participant stated that there

is not much discussion in the groups but at the same time she recognized that you can ask yourself: why are you not contributing yourself? Some other comments were:

It's a good way to see what people are doing. [Int. 6]

[…] mainly because there are some professional groups in there, and I like to keep track of their activities. [Int. 7]

Twitter: was used to keep track of friends and colleagues, for only a small circle of them and also for following what is happening on conferences, following people posting about them.

Two of my friends had a summer vacation holiday, they used a car to travel around in Europe and they sent me all times via Twitter the maps and short notes, it was the reason I joined Twitter. After that I don't use it so much. I don't use it to put the information to Facebook. I know people are doing it. But in conferences I may follow someone who is posting about it. [Int. 8]

Blogs: the 8th participant was the only one who mentioned blogs, she uses them as part of the assessment for one of her courses, where she would have students comparing information posted in blogs with the theoretical content of the course.

4.1.6. The Issue of Trust

The issue of trust is a controversial one on the information available on the web, some academic and business circles tend to completely dismiss them in contrast to sources like journal databases. The case of Wikipedia was raised by students and professors as well and in general they have a good perception of it: it is a good thing because it's being talked about among information professionals, while still some circles consider the use of Wikipedia a heresy.

4.1.6.1. Students' Perspective

Most students agreed that it depends on the people who post the information, not necessarily the social network itself. That means it is the people who can be trustworthy, not the sites. Interviewee 2 said that the information posted on social networks cannot be reliable because it is produced by people or companies with their own agenda. In any case if there's some links associated to the information, it would add to the value of its reliability as it can be checked by visiting the links and assessing their own trustworthiness. Students also mostly agreed that some sources of information, like blogs, news or academic sites they already know can be trustable. An issue raised by Interviewee 2 is the importance of people's information literacy skills to make individual decisions about the reliability of an information source. She said that this is especially important when confronted with information produced by people and radical governments.

It completely depends on the person posting it; some people are more reliable than others. If they are posting something that is from a reputable source I can trust that. People can present whatever they want online so you have to be wary of that. If it's a business or company I tend to believe what they say. [For the case of] Restrictive governments or people who are very radical you have to determine with your information literacy skills if the information that is reputable or not […] I would consider the person who posted it, what I know about them personally, if I know they are reputable themselves and if there are some links I can go and visit them and check out what is the domain, what is the news source and if it's sketchy I would do some research myself, I can find out if there are some articles about it and if they say the same thing or something else, just fact checking. [Int. 2]

The students raised the case of Wikipedia when asked questions about trust, they claim to use it often, to trust it, and they have not found among the sources Wikipedia cites something that is not relevant or a source with incorrect information.

Wikipedia is not completely reliable, but it's great when people put sources in there and most of the websites are reliable. [Int. 2]

In the case of Wikipedia I use it often, I trust it and I haven't found among the sources they cite something that is not relevant or a source with information that is not correct. [Int. 3]

Interviewee 4 identified Facebook as a social network which can be somehow reliable due to people using their real identities there and being responsible for what they say, however, she recognizes that in some cases there is the need to use fake identities, for example when living under repressive governments. She also identified LinkedIn as another reliable option because of the same reason of using real identities, but also because you can see people's résumés there and they are expected to act as professionals there.

Facebook can somehow be reliable because people most of the times use their real identity there, with the exception of some of my friends in my country. They need to use fake identities in social networks, but for some we know who they are. LinkedIn is also trustworthy because you can see the résumé of people and maybe that's why it's possible to trust when these professionals publish something, because they use real identities and they act as professionals there. [Int. 4]

When asked how they check the validity of information posted on a social network, the common methods are: checking the sources, checking the information via Google. The criteria for validating sources are: see the author, who says what, what people said before this, see the profile of the source and the people who refers to this information, the way it's written if its written in a rush or bad style, how many people shared the information could mean how many people believes in this, comments people make about it, own knowledge and judgment.

I look at the domain, who is posting it, if I can verify the authority, search in a different venue, not in another social network; in Google, cnn.com, the broader web,

some writers or news agencies to get the real fact. Also I follow my personal judgment. [Int. 2]

I tend to apply my other ways of verifying information online or offline, I check first the source where that link comes from so I see that the site is a personal blog or it comes from an academic source of from somewhere I know. I use different mechanisms, in most of the cases I try to see the author, who says what, what people said before this, I see the source, the kind of people, profile, the way it's written if its written in a rush or bad style. [Int. 3]

I look for who produced the information, people who refers to it, how many people shared it, that kind of means that how many people believe in that, their comments about it, maybe they don't trust and they comment on that. Also my knowledge and judgment is important. [Int. 4]

One point made by Interviewee 1 is that his social networks are not his main source of news or vital information, rather, he uses RSS feeds from various sites to configure his news and information sources, so it probably does not matter too much in this case if it's possible for him to check the validity of the information his friends' post.

In any case, my Web 2.0 life is constructed in a way that social networks are not my way of getting information on the Internet, my main source of information on the Internet is RSS, [via Google Reader] I don't think that is a social network and if I get certain information because of social networks, it's likely that I received it already by this other channel. [Int. 1]

4.1.6.2. Academic Staff's Perspective

Most professors also agreed as the students did, that trust depends on the people who post the information, not necessarily the social network itself, the trust in people is determined by the fact it is friends who they know well and they have some degree of knowledge that are most trustable. Interviewees 5, 7 and 8 gave some ideas relating to the fact that the degree of trust on a social network depends on the purpose one have when using them. Interviewee 5 claimed that social networks are in any case a complimentary source of information to traditional and authority controlled ones.

> I trust information that I get from friends whom I know quite well. Depending on who is the sender and my knowledge about them I trust that information. Many social networks could be reliable, I think I can use all the social networks but they would be in any case complementary sources of information to the more traditional and authoritative controlled materials. [Int. 5]

> First I would look for a personal connection, then if it's not a personal connection I would find out more about the person saying that information, if there are linked to an university or what is their background before I trust it. I'm probably more untrusting than trusting so I'm on the suspicious side. [Int. 6]

> This trusting issue is a sensitive one now for me. I think sometimes something tells you that you can trust but I cannot explain where does this feeling of trust is coming from, probably I trust the persons and if I can relate this information with the persons I trust, then it is not a problem. […] [Int. 8]

Interviewee 7 identified Facebook as a trustable network, for the same reason as one of the students: because people tend to use their real identity there. But he also recognized the possibility that there could be some people using fake identities as well, since there's no identity control included, someone can join in claiming to be another person. Interviewee 6 identified LinkedIn as a candidate for trustworthiness, because people are presenting factual

information about themselves, but there could be a bias, because you would be sure to look good in there.

I trust Facebook in the sense that its members that I follow are persons that I know their identity. Since there is no real identity control included, where I could join as anyone and claim to be the executive director of anything and nobody would know. In that sense they are not trustable. For my purpose Facebook is reliable to keep in track of persons. [Int. 7]

If I know the person or people generating that information, then I'm more inclined to trust it. Otherwise I'm less inclined to trust. As far, I like LinkedIn but I can't think of a good reason why, probably because people are presenting very factual information there, mostly about themselves so perhaps in that way is not so reliable because you would make sure that you will look good there. But it also comes back to knowing the people and I would first trust the information provided by people I know, I would be more skeptical about the people I don't know. [Int. 6]

The professors also raised the case of Wikipedia when asked questions about trust, claiming that it is trustworthy to a certain degree and also depending on the purpose of information need, it would depend on their knowledge of the topic as the 5th participant claimed, to also get new knowledge just for entertainment. The 7th participant confessed that he trusts it perhaps more than he should because he trust its own quality control works well, but he also stressed that it depends on the purpose to use it, as he uses it in a restrictive sense, mainly as a quick reference tool. This tool in some cases can be even used for teaching purposes, just to have a quick refresh about something.

Regarding information on Wikipedia, I trust it to a certain degree, depending really on the context and my knowledge about the topic. It's often for my use, to strengthen my knowledge; I can get quite new knowledge on there and also for entertainment. [Int. 5]

I tend to trust Wikipedia, perhaps more than I should because I generally see the kind of social control that is executed on the information in Wikipedia seems to function. I presumably should not trust it the way I do because the information is not systematically collected so there could be some gaps there. I also know there are some contented issues introduced in Wikipedia, where the status may be uncertain. But it is enough for the purpose I use it, for example to look at some formulas, meaning of mathematical terms or what a certain bird look like. I use it manly for factual information, quick reference. When I teach I may need to check perhaps the rules for logarithms so I go there and I find that. I think most of them can be reliable but that's because I use them on a quite restricted sense. [Int. 7]

The professors were also asked how they would check the validity of information posted on a social network, the common methods are: use traditional resources like encyclopedias, reference sources, books, journals, if it is worth to check the validity, of course. The 8th participant recognizes that she is not a heavy user of social networks and she confesses that it's difficult to trace the process she did for checking the validity in the instances she has done it, because it can be a very intuitive part of an information behavior.

If there's something that I have to make certain about, depending on what is of course. I might use some kind of validating resource like an encyclopedia; I could do a search on Google to see what others have written on the issue, other reference sources as well, like magazines, books, if it's important for me to check it out. The reliability of any information source is dependent on those involved and how is written. It is a social construction, so to speak, you have an author, you have some reviewers, there is some discussion that in the end would lead to a valuable piece of information, whether is on the web or in traditional books. [Int. 5]

I would research further, do more searching and finding out background information about topics. I would pull out and use more traditional resources. [Int. 6]

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I really don't. I do know that I have the possibility [in Wikipedia] of doing it going to the history of the document and see what part of it has been added or subtracted to it. I might check it also with another source, but mostly I don't, I use these kinds of media for things that aren't that critical. [Int. 7]

4.1.7. On the Negative Views

Related to the issues of role and purposes, the way people see social networks as not just tools for entertainment define how they conceive them and if they would be likely to embrace them for several purposes. It appears however, and exposed on the literature review, to be a gap between people ready to embrace social networks and companies which in a general sense are afraid of the challenges and changes social networks bring. In this part, the participants were asked the question if academics and companies should change their negative views on social networks, if they have such a view. There is a unanimous agreement among the answers of the participants, which in a broad sense, they would like these sectors to have a positive view on social networks and exploit their features to everyone's advantage.

4.1.7.1. Students' Perspective

According to the participants, academics and companies should change their negative views on social networks, if they have such a view. As the 4th participant put it, social networks must not be ignored by them, because they are part of society. She acknowledges there are negative aspects associated with them, such as their time consuming nature and their trust and privacy issues. Academics must be aware that if they share information about their research they face the dangers of other people appropriating their ideas. However in this age of open source and open content, academics are more used to disclose information abut their research, as the case of Arxiv.com has been for the physics discipline for quite some time on the Internet. Also academics and companies ready to embrace them must keep in mind that heavy monitoring is required, to control and eliminate improper language, racism, hate and negative ideas in general. However some positive uses for them are presented, for example, they can be powerful marketing tools, they are good communication tools for academics and

companies to reach their stakeholders, and also serve as means of exchanging information between academics, to get new ideas. Finally as the 1ˢᵗ participant put it, it is important for academics to embrace social networks, for instance if they work with Wikipedia and Wikisource it can improve their views on those projects and also raise their quality.

> Social networks are now part of society, so academics and companies cannot ignore them. There are a lot of negative things about social networks, like they are time wasters and raise problems of trust and privacy. However, organizations must find a way to deal with social networks and make use of them. [Int. 4]

> It's a tool like everything else, there are good and bad aspects about it, it's not either good or bad; it's up to the academics and businesses to have a more positive image of it. They could use it to promote their business interests because there are a lot of users there, so it is a great marketing tool for them. I don't know why the businesses wouldn't want to be there, apart from the fact that they have to monitor everything more closely. Academics can use it to exchange information, it can be beneficial to their research, and they can get new ideas. There are some drawbacks to it, the monitoring as I said, a library can have a page where people post, but you have to be sure people are not posting nasty stuff on there. For the academics there is the flop side of sharing information about research and then someone could steal their information and use it as their own. [Int. 2]

> They [academics and companies] should create the freaking social networks! I would really like scholars to work with it because their views are important and it is a shame they just have a negative view on it. They should join, collaborate, teach and learn about it and its tools. But I don't see the point on having scholars on Tumblr and some other social networks. They should join and create something more focused such as communities of practice based on interests; a good example is LinkedIn because that's focused." "[I hope for] a scientific Facebook, a more exclusive platform structured for people to collaborate and share what is really interesting. [Int. 1]

4.1.7.2. Academic Staff's Perspective

The professors mainly expressed their opinions on what they think about academics and companies having a negative view on social networks, calling it naïve and not a wise decision. In change, as the 5th participant put it, it should be a critical view. The 6th participant explained that they have to be open minded when looking at social networks because they can't be truly able to assess them correctly from an outsider perspective, they should be part of them to understand them and see their potential. The 8th participant claimed that a company is successful at taking the challenges of its environment. Social networks are part of the environment now and they are a challenge to any collective or individual.

> I think they should keep a critical view on any source they use as academics, I traditionally do. It shouldn't be naively negative, it should be critical. [Int. 5]

> I think people have to be a lot more open minded about social networks and it's only by being part of them that we can actually see how they can be used, because we have seen them developing now, so you can't assess them by being outside of them, you've got to be there and be a part of it, you have to use things and understand them and to see their potential. [Int. 6]

> I think they should change it because I personally think it is not a very wise decision to avoid or to think that the company or organization is good enough. […] I think a company is successful if it takes the challenges provided by the environment. […] I think we need to be there, where the people are […] [Int. 8]

4.1.8. The Wisdom of the Crowds

The concept of crowdsourcing and some views about it were presented on the literature review (see 2.3.2.9). It can be seen that crowdsourcing is a peripheral topic to the rest of the issues analyzed on this thesis but it is a relevant model of doing things on the web nowadays. It was evidenced in the participants' answers and reactions to the term that it is not a widely

known term and it can mean slightly different things to different persons. Five participants had to be explained what crowdsourcing is and to be given examples in order to answer.

4.1.8.1. Students' Perspective

The students had a good opinion about crowdsourcing, only one of them claimed to participate in crowdsourcing projects and he described some basics of crowdsourcing. Cited reasons why it is a good thing were for improving access and retrieval.

I believe in it, I read the book The Wisdom of Crowds [Surowiecki, 2004] and it explains why is it working and actually how it is working, there are the four elements of a wise crowd: independence, aggregation [diversity of opinion and decentralization]. You can reach the wisdom of the crowds or answer a question [in a way] that is more reliable and sometimes [better] than the expert's answer. The crowd could beat an expert. This is an interesting topic. It's really a revolution not [to] trust the expert, just the crowds. But we need to investigate when it works, why it works, how it works and not just [claim] the crowds are more intelligent than the experts it's not like that, it depends on the question and the context. [Int. 1]

Only this male student claimed to be involved in two crowdsourcing initiatives: Wikipedia and Wikisource.

One female student thinks that crowdsourcing is interesting and useful; even if she has never done it. It is useful because Internet is very large and people or institutions can do tagging of information for retrieval and access reasons.

It's useful, information could be updated a lot faster that way as opposed to an encyclopedia that has to be fact checked, but there could be information that's untrue. There could be a lot of benefits, tagging can be useful for people. For example librarians are known for their controlled vocabularies but that's some jargon that

people don't necessarily use. So to have some kind of other options in assigning tags to information will improve access to it, but I think both should be used. [Int. 2]

When asked about their conditions and motivations, the participants stated unanimously that one of the limitations to be involved in crowdsourcing initiatives is lack of time. As motivations, they named that it must be an exciting, useful or fun project, must be in tone with research interests. Interviewee 1 who involved with Wikipedia and Wikisource claimed one source of motivation is ethic ideals, because he works as a volunteer without payment to be part of a project that aims to open content on the web.

I'm actually contributing to several crowdsourcing projects. [In order to participate] I have to have fun and I have to believe in the project. I am a volunteer in both Wikipedia and Wikisource. I just do it because I like it and I think is important so there is an ethic ideal part. [Int. 1]

Another student noted:

To correct inaccuracies that people may have made and I want to improve that. Also to ensure quality control and don't make it too open. [Int. 2]

4.1.8.2. Academic Staff's Perspective

The professors also had a good perception about it, although it was stated that it is a very valid voice on the Web, it is not the only form of content development that we should rely on. Knowledge is something not so stable and is constantly built socially, this is reflected by crowdsourcing.

I think that sounds reasonable that when you have many users who are controlling each other in most cases you will end up with something quite stable. Knowledge is not a very stable thing; it is developed as time goes by. It would reflect a social and

continuous construction of knowledge. I think with a high enough number of users or a big enough crowd is a good thing. [Int. 5]

I think it's useful as one tool in many, it should be one of a range of approaches that can be used to access information, but we shouldn't rely on it entirely. Wikipedia is not authoritative so it shouldn't be used, I use Wikipedia a lot as an starting point to find information and I think it has a really important role perhaps academics don't recognize this because they are too busy comparing it to traditional encyclopedias or traditional ways of publishing information but it's a tool with different features, we have to come in terms with them and how they can be used in combination with more traditional tools. [Int. 6]

I know this is the basis for Wikipedia there is a legitimate wisdom of the crowd, it should not be necessarily confused with the wisdom of the expert. There is definitely a value to it, it's just that is not the same value in all cases. [Int. 7]

It's related I believe to the image Wikipedia creates for itself, as an information professional I open Wikipedia and I can see that there's a paragraph and the source needed for me it's not a text I can trust. The trust is related to the author and in this case for me it's anonymous. It might be related to my profession, probably we are very sensitive in having references and quotations and things like that, I know some universities in [my country] if the student in the master thesis is using the main source for a term Wikipedia, is not counted as a part of the job. Sometimes to be honest I use it if I'm looking at a new field and if I try to look for very basic understandings of the term in other language for instance. [Int. 8]

When asked about their conditions and motivations, the participants stated that it is important for them to have an interest on the topic or project and that time limitations are constraints to participate in a crowdsourcing project. The 5th participant claimed that he does some minor editing on Wikipedia from time to time.

I would have to have a special interest in the topic. For instance I do some editing in Wikipedia from time to time, if I see something that it needs to be edited, not big things, but it should be something I have a big interested in. [Int. 5]

I would have to be really interested in it, because if I know that I wasn't I wouldn't maintain participation, I'm too busy so it would have to be something that is really important to me and that would be my motivation. I should have to be able to make a very special contribution to it that maybe other people couldn't. I have to feel it's something really worthwhile; I have to see the value of it. If I see I'm not contributing too much I would put out because I would feel that I'm slowing things. [Int. 6]

I would not set any conditions, I suppose, my only concern is that I have limited time for this activities so I don't see myself as a heavy contributor. [Int. 7]

I think if I can really add something that is related to my interests, if I have some historical photos in my private collection in my collection or about places in [my country], then I can. Right now I don't think it would be something professional just some simple things people need that I have. I have not been thinking about it as a professional project, it doesn't mean that I would never participate in it. But I haven't thought about it. [Int. 8]

4.1.9. Quality Control

The participants were asked about their opinions on the quality control on social networks. The Wikipedia case was the most talked about, where the quality control of its content is more visible, but other instances are cited as well, as the cases of other social networks where quality control is enforced by administrators or users to keep harmful content outside.

4.1.9.1. Students' Perspective

In a broad sense, one female student stated that for her the quality control on social networks is well implemented if it can be enforced by the users as opposed to the administrators. If only the administrators were to do it, it would lose its purpose and ruins everything by limiting people. Most students claimed to like and trust the way quality control is made on Wikipedia, because discussions take place about making changes or corrections to articles.

The Wikipedia example is a very complex one I just trust it. For Facebook and the quality control on it, I would not like to label it quality control but in a certain way it is. It just about reporting something that is negative but you don't assess the trustworthiness or reliability or authority of some information. You just report the negative part, you just kick out the negative, and it's like the half of the quality control. [Int. 1]

In Wikipedia it's nice that they have the editors who are monitoring development, perhaps it's not as fast as it should be in keeping with all the work but they are doing it. I don't believe there's quality control on Facebook because people can post whatever they want. [Int. 2]

When asked if they would be willing to participate in quality control initiatives, the 1st participant said that as part of those projects he actually does that and his primary motivation in this case is as he put it: "we do it because we trust the projects and we want the projects to be trusted, so we have to have these sorts of quality control." He also stated that he has reported groups on Facebook when he sees that they are violent or racist. For him, quality control is not fun; it makes the information more useful. The other student cited lack of time as a constraint to participate, but he sometimes comments if some information is true or it is not. His motivations to participate more seriously would be the possibility to contribute towards providing information and improving its quality of the information to make it helpful. The 4th participant stated that she would not like to do it, because she's seen in the case of Wikisource

in […] language that its management group has this quality control over the articles people create and she does not like it because it follows their own judgment. She questions their authority to have such judgment to evaluate a reality or claiming an article as being not good. So she states she does not want to be involved in quality control because she knows she has her personal judgment and there is no way that she can ignore it. The 2nd participant, in contrast, would like to participate in quality control because, as she put it:

I like to see that the things are correct and ensure that access is increased and information is reputable for people. [Int. 2]

4.1.9.2. Academic Staff's Perspective

The 5th participant stated that the way quality control is implemented on Wikipedia is very intriguing and it has instruments put to a good use, like the power of users to edit an article or the way it's possible to go back to previous versions of them.

I think that control as it is implemented in Wikipedia is very intriguing, the way that you would have editors with the power to edit an article and the way people are able to retract to previous versions of articles, they are instruments put to good use in that network. When it comes to other things like Facebook I don't know what kind of control is there, probably they have some control over illegal content there. [Int. 5]

The 6th participant stated that even when the wisdom of the crowd used to control the quality of the content is part of the essence of social networks, it can be a dangerous area because it can affect this essence by changing to something controlled by a producer.

That has to be trough the wisdom of the crowds, that's social networks per se, that's what I would be relying on. I think as soon as social networks get into sort of determining quality control it becomes a dangerous area because you're affecting the nature of the network itself, but to what extent that continues to be a social network, or does it become something that is really controlled by a producer. [Int. 6]

The 8th participant stated that she's not familiar with quality control in social networks as she wonders what would happen if she posts something not "politically correct" in Facebook, but she knows she must be responsible for her comments. She illustrates quality control with the case of a newspapers' website from her country where users who wish to comment have now to use their ID card in order to do it. This was done as a type of quality control, to avoid vandalism and people taking the identity of others to post comments in their name.

When asked if they would be willing to participate, as in the crowdsourcing case, the professors expressed that mainly for time concerns they wouldn't be able to do it. The 5th participant claimed that he sometimes does some minor edits in Wikipedia, as quoted in one of the previous sections. The 6th interviewee however, stated that she won't be probably interested because it's a difficult area.

4.1.10. Information Needs and Overload

In a broad sense, when we have to know something or to retrieve some information to serve some purpose, we are trying to satisfy an information need. The participants were asked how or why do they decide to satisfy an information need by accessing social networks.

Information overload is not a new issue on the information science field, it is cited countless times to express the exponential growth in the production of information, being from the explosion of scientific journals or the appearance and growth of the Internet, to name two milestones on the analysis of the issue. Social networks are another source of overload due to email alerts, status changes, and the huge amounts of information our connections publish. About information overload, the participants were asked how they cope with the information overload brought by social networks.

4.1.10.1. Students' Perspective

Interviewee 1 decides to go to social networks if he wants to access information on what are his friends or connections are doing. However he cites a different purpose to go to

applications such as Tumblr, for example, look for information that is pleasant. He states it depends on the social network: on Wikipedia he searches for information, but he thinks that it is not a social network, but he sometimes checks:

[...] discussions on what people are saying about that development of a page sometimes I get into discussions that are important for Wikipedia but that's different it's no need for information it's just the collaboration part. [Int. 1]

The other male student stated that the information he gets from social networks is in general very useful when friends with similar interests select information via social networks. That saves him time he could spend to filter or select information. He says:

[...] people have already identified what is relevant. But I find the amount of information available to be quite distracting because sometimes it has to do with my interests and hobbies. [Int. 3]

So the way social networks fulfill his information needs is by providing a good source of filtered information (in this case, by his friends) when he can't put some time on doing it himself. Interviewee 4 said that she goes to social networks when she has the needs to know facts, contact people, share ideas, or just talk with somebody.

The 2nd participant states that social networks are for information needs related to people and light topics, as opposed to serious information needs: "they're only for information needs which have to do with people, if I want to know something about someone or a musical group. They are for light stuff." [Int. 2]

When asked about how do they cope with information overload, Interviewee 1 stated that he sometimes marks things as read (in RSS aggregators), but he admits he does not cope very well with Facebook. He is not likely to read all the home page because he says it's too messy, he cannot filter or cluster categories by topic. Interviewee 3 said that the overload of

information is distracting, but he sees it in under a positive light because of the variety of devices where the information can arrive, he says it can either be a problem and a good thing:

I get distracted from my so called real job, research or other important activities. It is a problem but I see it in a positive way because [the information] comes through different means: via my computer, mobile phone, office or from friends. Even when I took information literacy courses, it is difficult to select useful information, overload is a problem but sometimes also a good thing. [Int. 3]

Interviewee 4 stated that some people share too many things, so she tries to limit the amount that reaches her by eliminating her wall in Facebook, if she knows of a person who posts information that doesn't meet her needs, she can hide their updates. One specific problem of Facebook she cites is when you just "like" something (with the "thumbs up" button on Facebook), then you receive the comments other people do on that, sometimes even in other languages and for every comment you receive an email. So she decided not to "like" things. Even if you like to follow the comments, sometimes there are too many. Interviewee 2 accepted that it is hard to cope with information overload, alternatives to avoid being overloaded with information are, as she stated, turning it off and hide people or certain notifications:

It's hard to cope with, there is far too much, you have to pick and choose what you want to know more about. Turning it off is a good way to cope with it. I've hidden certain number of notifications on Facebook, like all these things about Farmville I don't really care about and I don't know how people choose to publish information about it. I've hidden some people that post some things which are kind of pointless; they post too many things, things I don't care, or offensive things. I hide them rather than removing them. [Int. 2]

4.1.10.2. Academic Staff's Perspective

The professors also agreed that social networks are for satisfying certain shallow information needs, like using Wikipedia for reference with broad topics, use Facebook for discussing with friends or check offers in flights in the airline Facebook page and for example the 7th participant stated that he sometimes takes advantage of the user added keywords on the library catalog, stating that it is an alternative entry point to library materials.

If I need some quick information about a topic say I'm preparing a lecture and some term really broad as copyright, that I need the definition of, I would start with Wikipedia and there may be something that I could use there but I wouldn't use it instead of going elsewhere so it would be for really broad topics that are really in my area of interest. [Int. 6]

I do sometimes use in the library catalog the user added keyword and I have found to profit from that in certain times because these keywords sometimes reflect aspects of a document that are not present in the classification or the official subject headings but are still on par of what I'm looking for in that document, so it is a supplemental entry point for the catalog. [Int. 7]

It depends on the need because if it is an everyday information need, that I need to know the offers from special offers for flights, for example… […] it's related to the purpose why I need this information because I'm not quite sure if I can say that I'm satisfied with a discussion I had with my friends or something. [Int. 8]

About coping with information overload, Interviewee 5 suggested keeping a special folder on the email dedicated to social networks alerts. All the professors suggested using them in a restrictive and selective way to avoid overload, and to hide some friends' updates.

I try not to spend much time there but I get so many of them by email that I don't want to see them anymore, I use some of the features like to turn off the comments from certain persons, I try to filter some things to a special folder in my email. [Int. 5]

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By disengaging, I have hidden people and I suppose I maintain a low profile, mainly because I can become inundated, just going in when I can. [Int.6]

4.1.11. The Problem of Permanence and Volatility of Information

The question of permanence of the information on the internet is an interesting topic, some websites disappear or change with time. The participants were asked how they act if a website is not there anymore and what they think about this issue of permanence.

4.1.11.1. Students' Perspective

The students called their perceptions on this issue as disappointing, frustrating and surprising when it affects them. The 2nd participant suggested that it is possible to try to get access to lost information via the Internet Archive and the Wayback Machine. The 4th participants suggested searching on Google for this information.

I would be disappointed depending on how much information I shared from the source that disappeared but it would be worse on the site or platform's side. [Int. 1]

It surprises and frustrates me; I tend to think that this stuff will be always there for accessing it. I know there are some ways to try and access things not available anymore like the Internet Archive, Wayback Machine. [Int. 2]

Interviewee 4 expressed dislike for this problem, citing this problem from the perspective of Youtube, when adding videos to the favorites and then after some time they disappear. She thinks they should remain in the same address, in the same place. If she needs them, she searches on Google until she gives up.

4.1.11.2. Academic Staff's Perspective

The professors also saw this issue as a negative one, reflecting either the characteristics of the Web in general or the producers of the information, whose trustworthiness can be undermined because of not giving permanence to their information. Interviewee 5 claimed that it reflects the nature of the web as a medium, for him is usually enough to find something similar, but he adds that an alternative is to try and search the information on Google's cache:

It does reflect the novelty of the web as a medium. I do react to it, but in the other hand that is reflecting the fragility of the web, but if I see that something is not there, that means I will find probably something that is similar to it, due to the huge amount of information there, I will get irritated over it, I will try to find it on Google's cache. But to find something similar is usually appropriate for my needs. [Int. 5]

Interviewees 6 and 8 centered on the fact that if some information is not there anymore on the web, it reflects on the trust on its producer, as they have not being able to have enough vision to have this content more permanently on the Internet: the organization might also have given up on hosting the content. Both of them would search for alternatives to this information, the 6th participant might resort to the Internet Archive.

This reflects strongly on the producer of the website and it can change my whole opinion of that organization or site. If they haven't had enough foresight to establish a presence that's going to be ongoing, I would take it very seriously. I might go to the Internet Archive or I just have to find another way of getting it. [Int. 6]

4.1.12. Reblogging and Repackaging

Social networks allow the posting of information from all over the Internet. To post a Youtube video as a Facebook status change is a form reblogging and certainly a repackaging of information. It is a reblog because it is being published once more, and it is repackaging

because it is being presented (in this case) in a different application to a different audience and it may include a comment which would add value and justify even more this repackaging.

4.1.12.1. Students' Perspective

Interviewee 1, who is the only blogger, was the participant who knew these terms can be applied to social networks activities. He said this is good for multiplying interesting and useful information. In a similar way, the 2nd participant said: "that's sharing information; it's making it more broadly available." [Int. 2] Interviewee 3 stated that he just share links on Facebook, and he think it's a good thing. But he stressed that it is important to cite the sources.

Interviewees 2 and 4 stated in a similar way that they are more likely to share information by sending a private message to the persons with whom they want to share rather than publishing it on the Facebook "wall", Interviewee 2 said that she even turned of the "wall" functionality on Facebook, that means that nobody can share something in her page in a public way, the only possibility to share something directly with her is to send her private messages.

I limit the information that I put out and the ability that people have to post things, I turned off the functionality of my wall on Facebook, because I thought if I'm going to have interaction with people is better if not everyone can see what people share with me in my wall so I prefer them to send me a private message rather than putting it publicly, I think it's less shallow that way also. [Int. 2]

Sometimes if something is worth sharing I send it as a message to the people I know would be interested in that, and sometimes I just send it as a message to myself or the link to my email to keep it. [Int. 4]

4.1.12.2. Academic Staff's Perspective

The 5th participant recognizes that reblogging or repackaging of content is part of the essence of social networking, it is important that a collection of relationships between people

and information on the web exist and it is made possible by the hyper textual quality of the Internet.

I think it reflects the media, is the essence of social networking. I don't have any moral problems with that. I think that the fact that people are linking to other people's blogs, that's essential, that's how it works, the hypertext qualities of the web. [Int. 5]

The 6th participant identified that such connections between people and information on the web leads to the discovery of associations not obvious at first, but the downside is that the multiplication of information brought by reblogging and repackaging might increase information overload.

It's a good way of making connections, linking people too; making linkages between information and people which might not be apparent but it can also contribute to information overload. [Int. 6]

Another element was brought up by the 7th participant; it is the added value to a piece of information that has been reblogged. Information has a certain purpose and sets of meanings which varies from person to person and he claimed reblogging is a good thing because it brings the ability to bring information from different contexts and repurpose it into new contexts and different forms of existence. It depends on the person reblogging the information if he or she adds some value to the information, being from commenting it or just changing the audience to which this information was intended but recognizing that it must have value also for other audiences.

I suppose it's generally a good thing, the ability of making things available in that way and introduce them into new contexts is interesting because it takes a different kind of existence. If you send me a link it has some kind of purpose for you which you think it will also be relevant for me, so it is not just a reproduction, it's adding meaning as well, in that sense it is valuable because a Youtube video may have a lot of meanings

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and the fact that you're actually presenting it, picks out some of those meanings, which can make it more relevant to me. [Int. 7]

4.1.13. On Privacy

The participants were asked the following questions about their privacy on social networks: how important is their privacy, what things they do to maintain it and what would they do if their privacy is compromised.

4.1.13.1. Students' Perspective

In a broad sense and obviously, the privacy was indeed important for the participants, some things they said they do to keep their privacy were: limit the information shared, turning off the wall functionality on Facebook or using private messages instead of sharing with everyone and limit the people who can see some kind of information shared.

It is very important for me. I limit the information that I put out, the ability that people have to post things, turned off the functionality of my wall on Facebook… […] I don't post certain things about myself, I don't look closely at the privacy terms, but I should do it. I like that they put the functionality for sharing different content with different people, the information I want to share with my friends, family and coworkers is different, so if I post something I use to limit this to certain people so I prevent it to be offensive. [Int. 2]

Interviewee 1 stated that privacy is important to him but it's not his main concern on his use of social networks. However, some things he does to keep his privacy are not sharing too many personal things and tweaking the security settings. Interviewee 3 replied that his privacy is important as well. However he stated that his privacy settings preferences change from time to time:

Sometimes I leave my picture there, personal information, but I go back and check how some things can affect me, for example some photos at parties. I try to filter this out, remove some photos, check options and tweak privacy settings to limit the information on my profile. I share everything only with my friends and friends of friends, but not anybody else on the Internet. I limit what I share and seek a balance between being open and protect my personal information. [Int. 3]

The 4th participant said her privacy is important, but not so much as for a conservative person who would not share or like anything. However she normally watches out for the people whom she's sharing with. To do this, she does not accept everyone as friend, or not sharing something if she thinks that might be offensive to some people. She brought again the topic about a government versus freedom of speech, by saying:

I had my real name when I signed up in Facebook after I left my country but when I went back to visit, I changed it, because I was afraid. Nobody knows what would happen there, you never know. I could have been arrested or even killed. So I changed my name to my first name but I realized I was still searchable by Google for my first and last name, the result showing that I'm there but you can't access the profile. I usually don't keep the things which can be a source of problems. I use to remove them after a month or so from my page so everybody can see it and then I just delete it. When I went back to my country I even cleared my email from political stuff. You must watch out the groups you join as they can be representative of your thinking. If this wasn't an issue of my own country, I wouldn't bother about things I share, for example in Europe I feel completely safe with everything. [Int. 4]

The participants were also asked what they would do if their privacy is compromised, both male students agreed on contacting the administrators of the social network.

I would contact the administrators and try to see how that information might be used and seek options, but no legal action, just to see information is not used to affect me. [Int. 3]

The 2nd participant added that an option would be to change passwords and that if her privacy is compromised she would have serious concerns when using social networks, going to the extremes of limiting herself on what she shares or even withdraw. The 4th participant would also change passwords and contact the person who is invading the privacy to see if it is possible to ask for a cease of activities, or even block him or her.

I would freak out. I would have serious second thoughts about using social networks. Change passwords. I would be very wary of what I'm posting, limit the content to the extreme or even withdraw from it. [Int. 2]

I would change passwords, if I know the person who bothers me I can talk and ask to stop, but if that person doesn't understand I would block him or her. [Int. 4]

4.1.13.2. Academic Staff's Perspective

Also the professors agreed that their privacy is important, and about what they do to maintain their privacy the answers were very similar to the ones given by the students, such as: limit the information shared and sending private messages as opposed to writing on the wall on Facebook.

[...] quite important, that's why I try to limit what I put out about my family, I reflect about the things I put out. I think that having a critical view on what I decide to enter in the media. [Int. 5]

It is strongly important. I give out as little information as possible. I usually don't write on the wall on Facebook, I normally just send private messages. [Int. 7]

When asked about what they would do if their privacy is compromised, the 5th participant would write to the administrators of the service, both female professors would

withdraw from them, and the 7th participant just accepted that there's not much he could do about this.

> I would probably withdraw completely and I'll be more wary of social networks, I think it would have a very detrimental effect on my usage of social networking. [Int. 6]

> I think that I will never be [there] again because I'm not starting to figure out who did or why did it […] [Int. 8]

4.1.14. Organizations and Social Networking

The participants were asked about their opinion on using social networks in educational and working environments.

4.1.14.1. Students' Perspective

Interviewee 1 stated that they can be useful but they are yet to be used on their full potential for these environments. He thinks productivity and performance can be undermined if there's a misuse of it without limitations.

> A balance should be found if social networking is used at work; the organization is responsible for managing the organization's time, working time, and time for personal communications. Organizations should have a very open and explicit policy about the use of social networks, otherwise it could affect performance. The organization where I work in is not explicit about this, so I limit my social networking at work. [Int. 3]

Interviewee 4 stated that social networks can be:

> [...] very useful [in organizations] if you apply them in the right way and if you take them seriously, you can take a lot of advantage out of them. Sometimes when you

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contact with other people virtually, you don't need a physical space and you can exchange ideas about work or other things with them. If you need something you can ask the people without necessarily using a formal tone or asking for a meeting. They can be very effective for increasing my knowledge of work activities, as a source of information to use at work; a way to contact with coworkers and other people working in the same topic. [Int. 4]

There is good potential: sharing information with fellow classmates; learn from each other, do group work for distance learning. In the workplace for marketing purposes, it is a great opportunity for them. [Int. 2]

When asked what do they think about organizations banning social networking both male students agreed that they are against that, both of them explaining that is like banning phone, email or Internet use. The reasons the participants cited for not banning social networking are: it is an important source of information that you can even use to achieve some goals in the organization; also some people use social networking sites as their means of communication, even for work related purposes.

I don't agree because it's like banning email or Internet use, but institutions must agree on rules with the stakeholders for social networks use. It should not be banned because sometimes it is an important source of information that you can even use to achieve some goals in the working or educational environment. [Int. 1]

That's wrong is like banning phone or email, some people use social networking sites as their means of communication, also for work related purposes. They could use them for personal purposes during lunch or tea breaks. It shouldn't be banned totally, just controlled. [Int. 3]

Both female students stressed the fact that in some sense they can be seen as a threat for an organization, but each of them had a different take on them, the 4th participant was

against this idea of banning social networks but thinks that it is a problem of culture from management and some workers if there is a bad perception of social networks:

> I think management and some workers usually want to do that because they don't have the culture to use them. So they don't even know that social networks may have the potential to improve activities. So the management sees them as a threat. [Int. 4]

In change, the 2nd participant agreed on banning social networks by organizations if the work done there does not has to do with social networks, the reason she gave was because they are distracting and they would decrease productivity.

> I think is a good idea because these networks are very addictive and productivity would decrease dramatically. The temptation is too great for people to access them. It can be a prudent thing if the work to be done has nothing to do with social networking; it distracts and stray people's attention. [Int. 2]

4.1.14.2. Academic Staff's Perspective

The general attitude the professors had was that social networks can be used with good results in organizations and it doesn't mean they would undermine performance.

> I think it can work quite fine, if it creates groups for discussions, I think that's been done for a long time using these learning management systems. I of course prefer to put every teaching material on a more open environment but for discussions among members it would be better a LMS [Learning Management Systems]. It would depend whether it would be instead of physical interactions, it can improve them. [Int. 5]

> I suppose to a certain extent it depends on the setting, certainly it should improve performance. [Int. 6]

I think they have wide applications, much wider than I'm too old to learn new tricks, you are used to my teaching, where I use chalkboard but I do think it has a great potential indeed, both as a medium for exchange between students and as a source for I would not hesitate to use Wikipedia articles for my curriculum, as long as I have read them myself. It's difficult to say how it would undermine performance. Generally I would say that the voice of two people constitute sometimes more than one voice. I think Wikipedia is a good example of that; the communality of voices is something more than two people having a difference of opinions about something. [Int. 7]

I think social networks can help the organization because I can work from my home with these tools sometimes more effectively than being here in the office. [Int. 8]

When asked about what they think about banning, the professors' reactions were negative towards the thought of some organizations banning social networks. Their answers reflected that they see them as that necessary break we need in the day in order to resume work with more motivation or energy and technologies which we have to learn to work with, not dismiss them. One of the interviewees claimed that he understands why some organizations may ban them and it is because of fear of their power.

I can't understand that, if it a problem that some spend hours and hours on social networks at work I can understand that. In the other hand I think most institutions have embraced them and don't take that measure. I would be against a banning but I would be pro limitations of its use, but if I would be the leader of an organization I would say, you may have access to Facebook at your work time, everybody needs to have some moments of relaxation however that time is spent like with having a cigarette or a coffee or going to Facebook. But of course it should be within limits. [Int. 5]

That's rubbish. You have to know these things to know where can be used and you can't just say "no, you can't use them" because they're becoming part of life and we've got to learn how to work with them. [Int. 6]

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I think is worrisome, I can understand it in a sense because this is a powerful way for people to organize for a lot of different purposes and I think we have seen this, people going to the streets on the basis of tweeter messages or things like that. But I think that in general public expression should be free and is a good way for allowing public expression. [Int. 7]

4.1.15. Communication vs. Alienation

The participants were asked if they think social networks are really improving relationships between people or they are just alienating them. This was asked because as we have seen social networks are powerful communication tools, but what if some people get too attached to them, to the point of being alienated by them, preferring them over physical and personal communication forms.

4.1.15.1. Students' Perspective

Among the participants, the two male students agreed that social networks are powerful communication tools for communication, but misuse can lead to alienation. One of them stated:

[...] they are connecting people personally. I can know a person only by a social networking site and then meet in person, it is not only important for my personal life but also for my career. It actually brings people together. Sometimes I'm more in touch with my social network friends than with my offline friends. [Int. 3]

One female student stated that they are improving relationships, in her case she knows more about her friends' cultures and the things they are engaged with.

I see who shares with whom and understand some of the relationships between them. It is a very fast and practical way to communicate with fiends, and to show some kind of attention towards them. [Int. 4]

The jury is out on that one, it can be either way, you can use it to keep in touch with people who live in other parts of the world whom otherwise you are not able to. It can help cement relationships. In the other side maybe some people doesn't interact on a one to one basis, they are not going to pick up the phone and have an actual conversation or to get together with friends because you already know what's going on by monitoring this little one sentence snippets that are posted somewhere. It does take away the desire or the need for actually getting together to do something. For the question of alienation: some people may not want to have personal contact because of the virtual being available. These people aren't necessarily living on the real world. The question of what is a friend and what is not a friend, and using the word friend to define any type of relationship. [Int. 2]

4.1.15.2. Academic Staff's Perspective

Similarly to what the students expressed, the professors' main points were: firstly that they improve communication, as one of them put it, it would be hard to imagine distance relationships without them; and secondly, that misuse can lead to negative habits, including alienation.

On the one hand you have people getting in touch using Facebook. On the other hand you would have people spending all the time on social sites, making them the most important contact way. It could improve some connections but also be a problem if it's kept to the extremes. [Int. 5]

I mostly say things about them like they are improving, they are improving people's communication, making connections easier but that instance I said about the conference is certainly a darker side of it, and I'm not sure about that. [Int. 6]

For better or worse, now I know more about my students than I would if I didn't follow their activities on Facebook. In a sense it gives me a different relation because I know something about their feelings, their likes and dislikes. [Int. 7]

It depends on the relationships because I have distance relationships and without networking it is hard to imagine relationships. [Int. 8]

4.1.16. Negative Consequences

The participants were asked two questions, firstly, if they had a problem with an organization or person for their use of social networks; and secondly, if they think negative things can happen because of the use of social networks.

4.1.16.1. Students' Perspective

Even when the students did not mention if they had a problem with a person or an organization, they acknowledged different negative consequences that can happen for the use of social networks. They were: the things you or your friends publish can damage your image or relationships with others. There can be problems when you meet someone first through social networks and then in person, and that person can be completely different. Too much use in the workplace can lead to problems. Dictatorial governments can be prosecuting people who post information criticizing it. They mean dangers for children, like cyber bullying or child predators. A good way for avoiding some problems is by not fueling controversies.

The male students agreed that negative things can happen, mainly because of not having explicit limitations in their use of them, and abusing the freedom they allow in expressing anything.

I think negative things could happen because of the things you publish or your friends publish about you. One good example is pictures in parties or certain comments that can damage your image, and also certain relationships, especially with loved ones. [Int. 1]

A critical case is people who forge intimate relationships on social networking sites, friendships for other purposes than academic. Then, when they meet in person there is

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a gap, because the way people behave, write or talk online and offline may be differ and that can bring some problems. [Int. 3]

If you don't know what amount of free time you can have for this in your working environment can be a source of problems. I know of some cases where people inside or even outside the country shared real news about the government, and if the government considers these news to be against it, they try to get to the people who publish these news even through their families still in the country, putting some of them in prison. For example some students who are studying abroad, after some time they go back to see their families and they find them arrested because of the things they shared on social networks. This is why for me it is important not to share everything and to be very careful of what I share. Facebook is filtered in my country and people sometimes use software to crack these filters. People use email a lot as a social network to communicate because it's more difficult to filter, but the government use to hack email accounts. News are sometimes published in batches on emails which are forwarded between people. [Int. 4]

[In order to avoid problems] I try not to comment on other people's postings that are offensive or I don't comment if I don't have something nice to say about it. I don't want to post anything negative on a public forum, or contribute to an ongoing argument. There have been crimes related to social networks like cyber bullying or pedophiles predating for children. I think parents need to be very involved to monitor the activities, be vigilant of their children's activities on social networks. That's something that kind of worries me if I have children someday: how to control this because I didn't grow up with these tools and I see all the things that are out there. How can you protect your children from these things? It's nearly impossible. So parents need access to the [children's] accounts. I think, or maybe there should be some sort of child profile types where personal information can't even be posted or should restrict the functionalities of the tool for them. [Int. 2]

4.1.16.1. Academic Staff's Perspective

Some respondents provided anecdotes of the 5th and 6th participant about instances were negative consequences of bad use of social networks were evident. The 7th participant spoke about identity theft and he inspired a label used throughout this thesis, the social networks' "horror stories". The 8th participant has not seen of negative things, but she is aware that she has been a lucky user.

On a social network [of my country], somebody have indicated that I was responsible for something that I wasn't' responsible on a message board, what I did was to get in touch with the administrators of the website and discussed with them what to do and they found that probably the best thing was to contact the person who made that accusation and tell them if it was possible to delete it and that's what we did. In another case would it be on another media I would go to the administrators to make sure to get rid of that stuff, but it can be many things, if I were too stupid to put out my credit card number on a page, of course someone would misuse it. I would follow the opportunities I could find to stop this. [Int. 5]

There was a key speaker presenting [in a conference] and he was a quite boring speaker and people were on Twitter making very rude comments about it and it turned into an almost bullying setting and since that one time, after that people were apologizing, it was a very big event, like 400 hundred people and people were shocked into apologizing and saying we went too far. But in the next day of the conference something similar happened and there was a presentation with someone who was a bit uncertain and somebody started tweeting about, like "I shouldn't have come to this one" It really was pretty damaging conversations for the person involved, seen that a couple of times I've got reservations about it. [Int. 6]

You can create virtual personas which would clash and you hear stories where the virtual world is used to create virtual personas that can be used for abuse in the real world. I suspect that these horror stories are exceptions rather than rules. [Int. 7]

I have realized probably I have been very lucky on social networks because I didn't find out too many negative things and they have never happened to me. I haven't thought about the social networks as a whole I probably saw this possibility related to my personal experiences and haven't considered some negative issues, so I'm probably a lucky user. [Int. 8]

4.2. Trends, Similarities and Differences: A Summary

As stated on the "Methods for the Analysis of Data" section (see 3.6), this present section was introduced on purpose between the data analysis and discussion to serve two purposes: firstly, to answer directly the research questions of this thesis: What are the trends and tendencies of users' information behavior in social networks? And how users confront Web 2.0 issues? The second purpose is to provide a brief summary of the interviews to make the reading of the discussion section easier. This section is divided by topics into 16 parts which reflect the same subdivision as the previous section of data analysis. In some cases the headings were slightly changed from the headings on the framework described in section 3.6 and used throughout the previous section. This was done to highlight in some way the most important trend identified.

4.2.1. Social Networks do Fulfill Various Roles

The answers of the participants were very similar in the sense that all agreed that social networks do fulfill other roles and one student and one professor stated that the potential to fulfill other roles will be explored in time. There are no important differences between the participants, apart from the fact that they mentioned different possible roles. The participants cited the following possible roles: entertainment, communication, academic purposes and career networking. So there in social networks have potential for fulfilling other roles that has not being totally explored. The role is a platform dependent aspect, as many different social networks can or cannot be used for certain roles.

4.2.2. There Should be a Reason to Add Someone

There are two main trends related to the participant's views on the friendship factor. First, the concept of "to know somebody" and the "friend" label are fuzzy things. Second, there are two exceptions mentioned and explained in 4.1.2, where the participants can add unknown persons to their social network: the friends of friends and the background exceptions. Apart from these exceptions, the participants usually add people they know in person or by reference.

4.2.3. Social Networks can be Used for Various Purposes

The answers of the participants were very similar in the sense that all agreed that social networks can be used for various purposes, it is platform dependent. The differences between professors and students are that professors cited as a purpose to be informed of their students' activities. Other differences were not so important, just the fact that they mentioned different purposes. The main purposes cited were: entertainment, to build and maintain friendships with ease, communication, sharing information, see what friends do or share, keep in touch or track them, know more about our friends, keep connections no matter how far the physical distance between them is and keep track of news. Important trends in behavior are: use their communication and connectivity capabilities to share information in various sources with many people; social networks have become an everyday habit; they can be used as compensation of being away from the people with whom we communicate closely.

4.1.4. Share Information but not Much Sensitive and Personal Information

Sharing information is platform dependent. The similarity among the participants was that sharing personal information is a delicate matter mainly for privacy concerns and they try not to share too much of it. The difference between participants' answers is that the professors reported to be more willing to share professional information. Among the participants, the keywords they used to describe the information they share are: fun, interesting, useful, political information, news, entertainment, music, likeable, some personal information, education, professional interests, groups where they belong and professional information.

Motivations for sharing are communication and interaction, information they think concern or they presume has certain usefulness to their friends or connections.

4.2.5. Social Networks Used

The social networks all participants use are: Facebook, Wikipedia and LinkedIn. The social networks not all participants use are: Interviewee 1 use Tumblr, Interviewee 3 use Google Buzz, Interviewees 6 and 8 use Twitter and Interviewee 8 uses blogs. There are many various uses and reasons for using each of them as the role, purpose and sharing of information are stated in previous sections to be platform dependent aspects and there are many reasons why the participants used different social networks (see 4.1.5.1 and 4.1.5.2).

4.2.6. Trust is on People

There is a common agreement among the participants that the trustworthiness of information posted on social networks depends on the person who publishes this information rather than on the tool itself. The use of real identities and knowing the person sharing the information play an important role in trust. Common methods for checking the validity of information are: checking the sources, checking the information via Google. The criteria for validating sources are: see the author, who says what, what people said before this, see the profile of the source and the people who refers to this information, the way it's written - if its written in a rush or bad style - how many people shared the information could mean how many people believes in this, comments people make about it, own knowledge and judgment. In any case, social networks are seen by the participants as complimentary sources of information to traditional and authority controlled ones.

4.2.7. Social Networks are Part of Society

Regardless of the negative aspects associated with social networks, the participants agree that academics and companies should have a positive attitude towards social networks.

They can be used as a marketing tool and their communication capabilities can be used successfully by academics.

4.2.8. Crowds can be Wise

The participants have a good perception about Crowdsourcing, best put in the words of Interviewee 5: "when you have many users who are controlling each other in most cases you will end up with something quite stable. Knowledge is not a very stable thing; it is developed as time goes by." The perceptions, limitations and motivations for participating were very similar between the two groups of participants. Positive perceptions were based in the fact that it can be used for retrieval and access reasons. All participants agreed on the same limitation of time. The motivations for students were: ethic ideals and to correct inaccuracies. The professors agreed that it must be about something interesting for them.

4.2.9. Quality Control

Quality control was commonly associated with Wikipedia, which has a system where any member of its user base can edit and create articles on it, and the participants have a good perception on this case. For the other social networks, quality control is about keeping the networks free from harmful content. Only interviewees 1 and 2 manifested their interest in doing quality control, the first already do it because he's volunteer in Wikipedia and Wikisource, and he reports negative groups on Facebook. The second would because she likes "to see that the things are correct and ensure that access is increased and information is reputable for people." Participants 4 and 6 question the importance of quality control stating that it can be against the free nature of the social networks, when information could end up controlled by a producer.

4.2.10. Information Needs and Overload

Regarding information needs, Interviewee 2 best put it as social networks are for "light stuff", that is, simple information needs. Similarities on the needs among the participants for

using social networks are related to people or companies. The professors said to use sites as Wikipedia for quick reference or entertainment. Regarding information overload, it is a hard element to cope up with. Similarities between the participants are to hide certain people from the networks from the feeds. The professors suggest using them more restrictively. The main difference here is that the students are less likely to disengage than the professors, but they would in change use the different settings available on social networks to limit the information they receive.

4.2.11. On Permanence and Volatility of Information

All the participants expressed their dislike for this problem; most of them would search for alternatives to the information they wanted and it is just not there anymore. The professors accept that is a problem of the web in general as a medium and most of them see this as a problem with the producer of the information which disappeared.

4.2.12. Reblogging and Repackaging to Multiply the Information

There are two different tendencies between the participants regarding reblogging and repackaging. However, this tendency is not determined by the group of the participant, meaning that for each tendency, there are students and professors supporting them. The first tendency is participants having some conservative ideas about this, either pointing out that they prefer to use private messages to share something or that it is important if the sources are cited, regardless of the nature of social networks, where information can be shared without losing data about the sources. The other group of participants sees this as the essence of social networks and that it is mainly a good thing because it multiplies the information and in some cases it adds meaning or value to it. The negative aspect about this is that it also contributes to information overload.

4.2.13. The Importance of Privacy

Privacy is very important for the participants. They agree that they publish very little personal information there to avoid problems. Almost all the professors expressed that they would stop using social networks if their privacy is compromised by them, just Interviewee 2 suggested this possibility to withdraw among the students. Different answers on what to do where equally given by students and professors, such as: change passwords or contact administrators of the network.

4.2.14. Organizations and Social Networking

Given the participants' answers about the roles and purposes of using social networks, it was expected that they agreed in the fact that social networking can be good on educational and working environments. They also agreed that performance can be undermined only by misuse of these tools. Only Interviewee 2 agrees with organizations banning the use of social networks if they do not have anything to do with the tasks performed, because they are very addictive. The rest of the participants did not like the idea of banning, as it would be like banning email or Internet use.

4.2.15. Communication vs. Alienation

The participants gave their thoughts on both and as in the previous section; there is an agreement about the tool ending up being a factor for alienation by misuse. Users can be tempted to prefer these means of communication over face to face interactions mainly because of its ease of use. At the same time, they are great tools to have close contact with friends living in different parts of the world.

4.2.16. Negative Consequences

The participants acknowledged that negative things can be derived from the use of social networks, where some information or pictures shared can damage one's reputation.

Some participants told some anecdotic cases of negative consequences. Along some previous sections, Interviewee 4 brought up the topic about her country prosecuting people because of what they publish on social networks. Interviewee 5 talked about when his reputation was compromised in a social network and Interviewee 6 about a professional conference where Twitter was used to criticize in a negative way the presentation of one participant.

4.3. Discussion

This section is divided by topics in 16 parts which reflect the same subdivision as the previous section of data analysis. Important topics brought by the participants are discussed relating them to the literature; in some instances no information was found in the literature in order to discuss some issues. There are some sections that include citations to parts of the interviews which serve better purposes here rather than in the first section of this chapter.

4.3.1. The Different Roles of Social Networks

People's views on the roles social networks can fulfill show the open mindedness they keep towards them, and it can have an influence on how they use them and what they share, which is an element on their behavioral pattern. For the participants of this study, there was a complete agreement on that even when primarily seen and intended for entertainment and communication, social networks can indeed fulfill many roles. Roles are platform dependent and most of the social networks are designed for entertainment and communication, because more or less that's what they do: you collect friends and then entertain them and yourself by communicating what are you doing and reading what are they doing. Entertainment is one thing we need, with all our daily activities. The time we spend in social networks, if we don't abuse it, can serve as that moment we need of catharsis or relax, away from daily issues. Communication, in the other hand, is one of the main and most common human activities and the role or purpose we use this communication for is on the "eye of the beholder." Our purposes in social networks are determined in the measure we see that they are versatile enough to fulfill different roles. As Buckley (2009) stated (see section 2.2.1), the personal and

work roles can be blurred, social networks can be used for both of them and it's not clear where the limits of each role are.

One student and one professor raised the issue that the possible potential social networks' have to fulfill other roles have not fully developed. They have mostly been used for entertainment, communication and probably shallow chitchat. Some different uses have been explored by social network tools, from a more professional side with LinkedIn. In the library and information science field also, there have been some instances where they have tried to do marketing of library services by making Facebook sites for libraries. It seems that only time will tell if social networks can be an effective marketing tool and if they can be successfully applied in educational and working environments.

Finally, there was an anecdote that is worth mentioning here related by the 7th participant about social networks taking other roles, in this case is about a national encyclopedia being discontinued and some discussions for Wikipedia to take its place.

In […] there is a big discussion because the […] national encyclopedia has been discontinued and there is a question of should the state take over the database of the encyclopedia and keep it alive. For instance, based on contributions of the universities, or should we say now we have Wikipedia so we don't really have any more need for the National Encyclopedia. There are two legitimate voices: the voice of the university professor who writes the encyclopedia article and this is what has been the basis for the National Encyclopedia for some 50 years and it is the voice of the interested public who has their opinion on what is important of a bird or a person. I think any kind of institution will be wise to allow these two kinds of voices to be heard. [Int. 7]

It can be a good decision to put similar efforts which were traditionally used in the edition of the national encyclopedia into the Wikipedia site of that country. It can also represent some way to save resources as no paper would be involved and no other costs related to traditional publishing either. I think it can be a good experiment if the people traditionally involved with a national encyclopedia contribute their know-how in building it again into a model like the one Wikipedia has. Also as the professor states, it can allow different voices to be heard, voices that can be as valid as the traditional ones. They could contribute in a special

way for example in the works of literature of the country, its oral tradition and history, which are very valuable assets of a nation's culture.

4.3.2. The Friendship Factor

Especially in Facebook, one's connections are labeled as "friends", and one's profile by default will treat all this so called friends in the same way, they will access all our content regardless of the fact if it was intended for them or not. We can have, as one professor stated a very heterogeneous mix of people there: friends, colleagues, professors, students, relatives and past relatives. The level of acquaintanceship is expected to vary from one connection to the other. Wellman et al. (1996) (as cited in Hersberger, Murray & Rioux, 2007, p. 2) stated that (see section 2.2.1), we can have strong, intermediate or weak ties, depending on the friend.

There is a general concern among the participants of this study about adding new friends to their social networks. This is mainly because of privacy issues, we want to be able to protect the information we put and to be safe among the persons we add to our networks and maybe it also has to do with having some sense of freedom in the way we express ourselves through them. This has to do with Kling and McKim (2000) (as cited in Matzat, 2009) second barrier related to trust when it comes to researcher's use of the Internet (see section 2.3.2.1.); this is discussed on the "Negative Consequences" section (see section 4.3.16).

As we have seen above, in the data analysis part, we can name two acceptable exceptions to the rule "never add someone you don't know in person": the friend of friend and the background exceptions. The first one is very self explanatory and as said before it is based on the principle that "a friend of yours is a friend of mine." In the second exception we can put several things inside that label: know the person's name from somewhere, it can be a colleague, a professor or a student. For example; there could be a common background based on profession or places of study. You can do a background check on that prospective friend, by searching and checking him/her profile on social networks or on the Internet. It is also possible to ask common friends or even ask this person looking for a reason to be safe on adding him/her. We can see that as Marchionini (2009) stated (see section 2.2.1), the

acquaintance process is very different than in the "real world society", because here it doesn't matter too much to know somebody in person in order to add him/her to our network.

4.3.3. A Question of Purpose

Just as the roles, the purpose we have when using social networks influence how we act there and which kind of information we share. This aspect is also platform dependent, as we may have a more loose purpose when using Facebook opposed to the use we intend for LinkedIn or our personal blog. Although also related to sharing, the communication purpose as exposed by Interviewee 1 is very interesting, "considering myself as a broadband channel, to share something with many people at the same time". This Web 2.0 allows us to be "information produsers" (see section 2.3.2.4) but we can also take on the task of selecting information for our followers or friends to read, by using RSS feeds and the integration that the different social networks allow.

Another topic was raised by Interviewee 4: learning more about your friends. I could say that there's a tacit premise in social networks: you are what you share. It is possible to discover likes or dislikes, challenges, hopes and ideas our friends have just by looking at what they share. Ideally this could bring us closer to our friends and be a tool to better understand them. An interesting dimension of this perspective came from the professors, where some said to follow their students' activities using social networks, also monitoring them. It can be a good thing because they can also assess their mood and challenges, if the students express them. This could contribute to a better academic relationship not bound to the classroom and school hours.

An important purpose is to use them as a communication tool to keep friendships with people around the world. This is not so new, as the email has many years with us, but I think social networks facilitate any social interchange because it's real time, as opposed to the asynchronous nature of the email. It is also easier because you don't need to write a letter-like email, with few clicks you can share something and start a dialog with your friends or comment what other friends put there. There are more possibilities with these tool and they are not bound to the limits of expression on an email.

Two interesting behavioral patterns were mentioned by Interviewee 8, where she states that she used to have her morning coffee with her email and her social networks sites, so it is another daily task to do. It is a question of habit to open social networks sites, but one has to be careful because it can be time consuming and even addictive, as expressed by the participants. She also states that she is more active on social networks at summer time, when she is away from the people with whom she communicates on a daily basis. This is a compensation for not being there.

4.3.4. Sharing is Caring

As Interviewee 4 put it: "sharing defines social life, even if it's virtual". This is similar to the tacit premise I mentioned previously: you are what you share. Sharing is a platform dependent aspect. There are different views from the participants about what and how to share, some of them just do it publicly and others like to do it as private messages only, going as far as disabling the wall functionality on Facebook. I think information sharing is a good thing and it is important, but it is vital to know which things we share are going to be welcomed by our friends and which kind of information can upset or even offend them. It is part of a netiquette, where you assess the value and consequences of what you want to do before you do it. The problem with this will always be that the usefulness and quality of the information we share is very subjective. Even so, it is important to think about the target we intend to reach, if it would be useful for them. In this sense, there is room for sharing different types of information because sharing is a platform dependent aspect.

4.3.5. Social Networks Used

The participants answers in respect of which social networks they use and why reinforce the elements that are platform dependent, as mentioned before are: role, purpose and sharing. It is also interesting that the participants together don't use a very large amount of networks, just 7 were named. It is not useful to mention again the reasons why the participants use certain social networks, as they are thoroughly presented in section 4.1.5.

4.3.6. The Issue of Trust

According to Kling and McKim (2000) (as cited in Matzat, 2009) there are two main barriers related to trust when it comes to researcher's use of the Internet (see section 2.3.2.1.). The first one is about trusting the reliability of a posting because of the person who published it. About this, there was a clear tendency among the participants to trust information posted in social networks if they trust the person who published it. The use of real identities in social networks increases the trust on social networks in some degree. An element cited in order to face trust issues was that one's information literacy skills play an important part in recognizing if a source is reputable. The second barrier expressed by Kling and McKim (2000) is about the possible damage to a researcher's career by the posting of certain information; this is discussed on the "Negative Consequences" section (see section 4.3.16).

The participants expressed a good perception towards Wikipedia but at the same time were cautious. The professors stressed that as information sources they are complimentary to more traditional ones.

When asked how they would check the validity of some piece of information, the 8th participant stated that this can be an intuitive process difficult to explain and that sometimes is not even worth checking the validity, it will depend on our purposes and if we could trust the person who posted the hypothetical information. However, other participants suggested the following elements: checking the sources, checking the information via Google, see the author, who says what, what people said before this, see the profile of the source and the people who refer to this information, the style of writing, how many people shared the information could mean how many people believe in this, comments people make about it, own knowledge and judgment and use traditional resources like encyclopedias, reference sources, books and journals.

This question of deciding how to check validity is related to the decision making process, as stated by Jungermann (2000) (as cited in Berryman, 2008) (see section 2.3.2.2). The decision making process is made when the user considers his/her alternatives, choosing between them. To the participants this process can be intuitive, maybe they are not called to continue searching more information, as they can be satisfied with what they have or they decide to validate it by searching on Google, on traditional sources or make judgments based on the characteristics of the piece of information itself.

4.3.7. On the Negative Views

There is an unanimous agreement among the answers of the participants, in a broad sense, they would like these sectors to have a positive view on social networks and exploit their features to everyone's advantage. It is interesting to stress that the professors think that to have a negative view on social networks is nonsensical because they know these networks can provide challenges and opportunities to use them for various purposes. Some ideas for their usefulness were given, such as they can be used as marketing tools and their communication potential can be exploited by academics wishing to make their research public, build connections and maybe create collaborations with peers from other countries. To have more scholars working in Wikipedia would be interesting, as expressed by the 1st participant, as they would study it and if they make contributions they could raise the usefulness and trustworthiness of this tool. I think that to dismiss social networks for their negative aspects is indeed an incorrect decision, by using and assessing them we can rethink information services and the way they can reach their stakeholders. The 4th participant mentioned that social networks must not be ignored because they are part of the society. As Carter (2005) stated, social networks they are being assimilated into "real life" (see section 2.2).

4.3.8. The Wisdom of the Crowds

The trends identified in section 4.2.8 indicate that the participants have a good perception about Crowdsourcing, and mainly if it is considered to be a good non commercial thing because there are two different views on this subject (see section 2.3.2.9).

About the motivations to participate in a crowdsourcing effort, the 1st participant does it for ethic ideals, as a volunteer. This is one of the reasons why some projects as Wikisource and Wikipedia are developing, also open source software and open content. It is a high ideal to have open content and software of quality in this age.

The 7th participant commented on the nature of the library catalog in his university, which uses a form of crowdsourcing by allowing users' contributions:

In the library catalog we have had traditionally two allowable voices, the voice of the author of the document, its originator, who has a legitimate view on what this document is about and why it is in a certain collection and then there is the mediator who has a legitimate idea of it as well. There is also the third equally legitimate view, which is the view of the user of the document, which after this point has not has a forum to be heard. Now we have the catalog which allows users' contribution. So what we do is create an opportunity for the third legitimate voice to be heard. [Int. 7]

The wisdom of the crowd is an important element that information professionals can use to rethink their information services. I think it can be successfully applied to a digital library, which would include full texts, and each document page would have the traditional cataloguing and classification for the item, including user created folksonomies to describe in more simple and engaging ways the same item. Forums and a repository of user created articles or essays related to the item can be implemented as well, it could be a very interesting experiment to implement the look and feel of social networks into a digital library, it would be especially useful for academic and national digital libraries.

4.3.9. Quality Control

Overall, the participants associated quality control with Wikipedia and they have a good perception on this case. For the other social networks, quality control is about keeping the networks free from harmful content. Even when quality control was viewed as a positive thing, the concerns raised by Participants 4 and 6 are interesting to comment. There could be a point where the quality control will challenge the free nature of social networks, ending up controlled by a producer. It can happen, if some of the stakeholders reach high levels of power or influence over what gets in and what gets out. However I think that in Wikipedia and other social networks, the philosophy of the wisdom of the crowd has been well implemented. In Wikipedia every change has to be reviewed by its community, where there are challenges to change an article, there are spaces were editors can discuss the issues and reach an agreement in how to write about something. Every Internet user can be an editor there and the openness and democracy of Wikipedia and other Wikimedia projects seem to work. In Facebook and

other social networks it is possible to report bad behavior or bullying, I suppose that if enough users complain, the administrators take actions. It is important to keep these environments safe from bad intentions and negative content, especially for the children. This case is discussed further below in the negative consequences section (see section 4.3.16).

4.3.10. Information Needs and Overload

Regarding information needs, the main idea is that social networks are just complimentary as information sources and the needs they can satisfy are not too much complex. However, they serve a strong purpose that is connecting people, letting us know about our friends and the things they want to share with us, and vice versa. As the information shared is platform dependent, the needs they can satisfy are varied in nature, but they mostly are around people, entertainment and interesting things. LinkedIn is a very interesting social network because it allows us to build a list of connections based on professional and academic relationships; it can be seen as some element which determines our online reputation, showing which colleagues we are connected to. Companies could be paying attention or start paying more and more attention to this network for recruitment. It can be a very powerful tool for them as well. Opposed to Agosto (2001) (see section 2.3.2.3), the sample interviewed was not constrained by their own knowledge, it is almost obvious that they are not as they are adults (as opposed to Agosto's sample) and they had a very clear idea of which information need they can satisfy through social networks, as Zach (2005) put it (see section 2.3.2.3), they use their personal expertise to find information. However, there was not enough data collected to determine when they stop their information seeking process.

Information overload is a hard element to cope up with, if the Internet alone made it more difficult, social networks are not helping in diminishing this factor. They indeed bring some options to filter and hide persons' updates, but why add someone that you will hide later? As with everything, disengaging or restricting oneself from using it is a simple solution; to have a controlled habit on how much will you use these tools. They can be time wasters and addictive, just as Parsons (2010) illustrated it (see section 2.3.2.4). As with other activities, one has to enforce self control to avoid misuse of it.

4.3.11. On Permanence and Volatility of Information

Most answers about this issue are not too much associated with social networks, so the data collected in this respect is not enough to make a definitive assessment here. It was a limitation of the questions and a flaw on the interview process. However, as social networks in nature are similar to the web in general, some points can be made from the interviews. Especially the professors understand that the permanence and volatility of this medium is in part expected, but at the same time they expressed that it says much about the information producer, its reputation and trustworthiness can be challenged in a negative way because of this. It is interesting to revisit the anecdote from the 7th participant presented on 4.3.1 about the possibility of Wikipedia taking the place of a national encyclopedia. If Wikipedia is bound to fulfill this very important role, its permanence has to be assessed, because after assuming this role, it is more important than ever that it could be where it is with the passing of time. As he put it:

I'm somewhat concerned that they [social networks] are taking on the role of the official information sources which in a sense demands a more permanent presence than this kind of cooperation really allows for, I mean, in a certain point the originators of Wikipedia may run out of money or loose interest and there is actually no warranty that this knowledge source will have the kind of permanent existence that its use calls for. If it will take the role of important sources like the national encyclopedia, you have to be sure that it would remain there in time. [Int. 7]

Going closer to the issue of permanence on social networks, for instance with Facebook, I can ask the following question: how can we find a status update of one friend that was posted one year ago? In Facebook we can spend hours browsing through just a few days of updates, clicking on the "older posts" link. The information can be there, but its permanence is dubious because it is not a successful system in managing the user content as a collection. The information doesn't have other point of access for retrieval purposes, apart from the name of the user sharing it. In the case of Tumblr, it is not so bad, because its search engine can retrieve terms on a person's Tumblr page, and the application allows users to insert tags to content and via the Cascading Style Sheets (CSS), the user can implement a way to

browse through the page by clicking on tags. The negative aspect with Tumblr is that all reblogged content can be lost if the original post is taken down from the Internet. This happens most often with Youtube videos and pictures because the application allows copying link locations for the resources and they will be replicated on a Tumblr page. The application also allows the upload of various documents, this will allow the content more permanence, but citing the original resource will be up to the user. When reblogging is used in this platform, the system itself adds the source and other people who have rebblogged the same document before you did. Twitter is a different case, the search engine allows searching for text and the user can use "hashtags", which allows tracking the tag in real time throughout the platform. There are also the trending topics, which allow checking the most used tags.

4.3.12. Reblogging and Repackaging

As summarized on section 4.2.12, there are two different views from the participants about this. First, a conservative view, where they prefer to use private messages to share something or that it is important if the sources are cited. This is perfectly fine, if the user considers that he or she has to share something with less people for any reason. This is a good way to do it, it can at the same time avoid information overload because it would not cause all friends to comment on that. The reasons for doing this can be that this information is intended only for a few contacts because it is very personal or it is just the kind of behavior the user has: he or she wants to have more privacy. The second reason is understandable but it can be more debated because reblogging is part of the essence of social networks, a sharing culture. In most of the ways we can post information which is not made by us, the social networks applications make sure that the original source is traceable, see the example of Tumblr, given in the previous section.

The second view is more liberal, as the participants see this as the essence of social networks and that it is mainly a good thing because it multiplies the information; it is useful when someone else with common interests selects it for you; or if meaning or value is added to it. According to the content pyramid stated by Carpenter (2009) (see section 4.3.12), the participants would mostly approve reblogging when it comes from the "commentariat" (they add value) or the "aggregators" (they gather and select).

In the old media models the editors were mainly the ones who determined which are the most important things to be published. In the web and especially on social networks, the most reblogged information has more importance. For example Google Reader has a RSS subscription which is called "What's hot on Google Reader"; the feeds in this subscription are the most read, liked and shared. Also the things that are most talked about have more impact, for example the trending topics in Twitter are the result of the mostly used "hashtags". Repackaging is very interesting indeed because common users can be adding value to the information presented in other forms, creating a new form of journalism, as we have seen with blogs. However, as a negative side, reblogging contributes to information overload, as people are multiplying information in a chaotic manner.

4.3.13. On Privacy

Opposed to the group studied by Taraszow, Aristodemou, Shitta, Laouris, & Arsoy (2010) (see section 2.3.2.10), this group of participants in this study is well aware of the dangers of using social networks, but they acknowledged that is worrisome when children use them because of the reason stated by these authors: they are unaware of the dangers they face by sharing personal information.

Privacy is overall a very important issue in social networks. Especially because of the "horror stories", as we have called them before. It can be obvious that if we take responsibility and avoid sharing publicly our most sensitive information we should be fine. Some social networks have reviewed one time after the other its privacy settings, such as Facebook. It demonstrates that it has not been enough. It is interesting to note that at some point when people started to use the Web, nicknames were mostly used; this social media era has brought the use of our real names. We might question if there will be a return of the nicknames to social networks. It can happen, as users become more dubious about the intentions of the organizations hosting our data, as has happened with both Facebook and Google. The usefulness of using our real names is clear, as people whom we have known in different stages of our lives can find us or a possible employer can see our achievements in LinkedIn, to cite two examples. But if using our real names will cost us damage to our reputation or some people can use our data to damage us, is it worth? Probably not. Facebook's privacy scheme

seems pretty safe as it is at the moment of writing this thesis but nothing is invulnerable to hacker attacks and we don't know how this organization is using our data; the terms of service we agreed can say something about it, is that it? Only time will tell.

Most of the participants reported to tweak the privacy settings of their social networks periodically. There are many options, for example you can limit if your name will appear in Google, limit who can see each type of information you share, who can invite or contact you and how.

4.3.14. Organizations and Social Networking

The participants expressed themselves against banning of social networking in organizations, either companies or education institutions, is nonsense. It can be like banning Internet use or phone or breaks. It can say something about the health of an organization. It would be nonsensical if an organization is using social networks but their workers don't have access to them, as stated by Kaplan and Haenlein (2010) (see section 2.3.2.11). Social networking must not be misused or abused, especially at work or at school. The individuals must know the risks of misuse and enforce self control for not abusing the use of social networks. Institutions must not ban the activity but they must have made explicit a policy of use, calling the workers to use it with measure, but it would be a stupid thing to do to ban them completely as they are becoming so important. Some parallelisms between the participants' opinions and the results of the surveys in section 2.2.2 [Cone LLC (2008), EHS Today (2009) and Wentworth (2009)] are found: the participants think that social networks are good for companies and they should use them for marketing of products and communication with their customers; also they acknowledge the need of policies to regulate social networks use; and the impression that some companies might be afraid of their employees using social networks. This fear is clearly stated by Deloitte Development (2009) (see section 2.3.2.11): social networks create challenges for companies when sensitive or confidential information could be exposed by employees.

They could be used at work or at school as well, as reported by the participants, they can be more engaging and friendlier environment to work with distant peers. Farr (2009) commented about social networks use at schools (see section 2.2.1): students are going to have

access to them anyway, so it's better to grant access and use it to everyone's benefit. Also it can be an opportunity to teach them about the dangers and net etiquette.

4.3.15. Communication vs. Alienation

Social networks are amazing as communication tools but misuse can bring alienation as with almost every human activity which can isolate an individual. In the case of social networks, alienation can happen when an individual prefers to use them as the only mean of communication, replacing face to face contact or telephone conversations. In an extreme case an alienated user could be using them not to even communicate, just to see what others share, in a kind of voyeuristic behavior.

4.3.16. Negative Consequences

As stated in the previous section, alienation is a negative consequence of the use of social networks. About other negative issues, there were two anecdotes from the participants where negative things happened through social networks. One happened to the 5th participant himself, were someone pointed out in a social network something that was not true and could damage his reputation. Damage to one's reputation is an important concern; it can happen like it was pointed out in this case, were someone with dubious intentions post something that could damage our reputation, or can be a friend posting some pictures from a party without bad intentions. This last case is also of concern because social networks are a "window" into our private life and some things posted there can damage our professional and personal image. This was expressed by Kling and McKim (2000) (as cited in Matzat, 2009) (see section 2.3.2.1), as the second barrier related to trust: be sure that information sent cannot harm a researcher's career. As stated by Interviewee 2 on section 4.1.7.1, a researcher must be careful about the information they share because it could be stolen by competitors; this aspect was also contemplated in Kling and McKim (2000).

Trust is an issue when befriending one's teachers or boss if some compromising or inappropriate things about oneself are posted. As presented in section 2.3.2.11, it has happened that people lose their jobs because of this clash with the real world. Most of these cases are obvious and the people losing jobs "had it coming". In these cases the employees, for

example, express disgust with their job or boss and they happen to be friends with the boss in Facebook. However, it can also happen that a person expresses in a social network a very valid opinion, his/her boss does not like it and decide to fire him/her, even when free speech is said to be a right in civilized countries.

The 6th participant told the other instance when she was in a professional conference when Twitter was turned in some sort of cyber bullying environment where people were tweeting about a boring speaker, even if it was true, it is not a polite thing to do, let alone part of a professional behavior. Cyber bullying is another concern around the negative consequences of the use of social networks; again as presented in section 2.3.2.11, there have been even cases of suicide because of this issue. It is worrisome, especially with children, which leads us to one of the heaviest concerns that are child predators. Children are being raised next to these tools which they are so willing to adopt and should be the concern of every parent how secure is the child sharing information there. As children they do not know the risks they can be having by sharing their information in an open way. Parents should be aware of this and supervise their activities, making sure they don't share information about their location, monitoring the people they are adding as friends and making sure the privacy settings are set to maximum. Other concern is when we have to maintain distance love relationships, as with chat or any written form, there is a limit to the expression levels in these types of communication, which can lead to misunderstandings. Also depending on how jealous is your significant other, he or she might be suspicious when some friend of yours is commenting or sharing too much with you, even if it is not true that he or she has a real reason to suspect.

Chapter 5: Conclusions

This chapter addresses directly the research questions, by stating the main trends and tendencies on users' behavior that emerged from this study and how the participants of this study confronted the issues of Web 2.0 social networks. Finally, some concluding remarks are presented about future research directions in this field.

5.1. Conclusions to the Research Questions

Research question #1: What are the trends and tendencies of users' information behavior in social networks?

Trends, tendencies, similarities and differences were identified in section 4.1 and summarized in section 4.2. However, the relevant trends which answer this research question are brought up again in this part. The list of trends of participants' information behavior in social networks is the following:

- The academic staff and students use social networks for many purposes and fulfilling different roles: for communication, entertainment, academic and professional work. They share information, build and maintain friendships, see what friends do or share, keep in touch or track them, learn more about friends, and keep connections and track of news (the keyword '**various roles and purposes'** illustrates this tendency).

- Social networks' communication and connectivity capabilities that enable to share information in various sources with many people have become an everyday habit for academic staff and students and they can be used as compensation of being away from the people with whom they usually communicate closely (the keyword **'the purposes of using social networks**').

- Academic staff and students do not use social networks as the main source of information but rather than complimentary sources of information (the keyword '**social networks are complimentary sources of information**').

- Usually academic staff and students are willing to share information in social networks, however, for privacy concerns they don't share information that is too personal or about their private lives or family (the keyword '**sharing and caring**').

- Usually academic staff and students add persons whom they know (either in person or by reference) to their network. However, adding someone they don't know in person, there should be a reason; for example, the person is the friend of friends or she/he has a relevant background (the keyword '**somebody I know**').

- There are differences in the ways how academic staff and students select or use selected information; some respondents select information from the Internet and use social networks tools to disseminate that information among their contacts, others just follow the updates of friends with shared interests, instead of selecting the information themselves (the keyword '**select or use selected information**').

- There are two opposed trends regarding reblogging: some participants prefer to send private messages and others are happy to share with everyone in their network. The positive aspect they see about reblogging is that it serves to multiply information even when it means that it can contribute to information overload (the keyword '**selective/non-selective reblogging**').

- The academic staff and students are aware that too much use or misuse of these technologies can lead to negative things, such as problems with the organizations they work in or alienation. They know they have to use social networks with caution, even restricting the time they put to them (the keyword '**use or misuse**').

- The academic staff and students are aware that social networks can also be a source of negative consequences. Therefore they should be careful on the kind of information shared as it can damage one's personal image or compromise privacy (the keyword '**avoid negative consequences**').

Research question #2: How users confront Web 2.0 issues?

This second question resulted to be very connected to the first one. However, the first question deals with common behaviors found on the participants' answers. The answers to this question in change, reflects also common behaviors found but related on how the participants

react to Web 2.0 issues. The issues present here are: trust, quality control, information needs and overload, permanence and privacy.

- The academic staff and students agree that the trust is on people; social networks themselves are not trustworthy. A piece of information is trustable when it is posted by someone they know, and they are sure that this person can be trustworthy (the keyword '**the trust is on people**').

- They use different criteria for validating trustworthiness of information**;** for example, checking the author, the profile of the source, the people who refer to this information, the way it's written - if its written in a rush or bad style - how many people shared the information could mean how many people believe in this, comments people make about it, own knowledge and judgment (the keyword '**use different criteria for validating trustworthiness of information'**).

- The most common needs the social networks satisfy are about entertainment, people and organizations; because social networks are complimentary sources, the information needs they satisfy are not too complex in nature (the keyword '**information needs**').

- The most common strategy to cope with information overload was to hide updates from certain friends and also restrict the time they spend in social networks. Any extra feature that allows filtering or clustering of friends or updates is welcomed by the participants (the keyword '**filtering or clustering**').

- Academic staff and students dislike the issue of the permanence and volatility of information. However they understand it as a typical issue of the Web and the common behavior to address this is just to search for alternatives for the content that is no longer online (the keyword '**look for alternatives**').

- Privacy is very important for academic staff and students; they are careful about what information they share. If their privacy is compromised the first things they would do is contact the administrator of the network and change passwords. In an extreme case some of them would even consider to withdraw from the networks (the keyword '**be careful with privacy**').

- Academic staff and students have different approaches to quality control. Quality control is good when it is used to keep the harmful content out of the networks, it can

also improve reliability and access. The downside is if the information is controlled by a producer and this can be detrimental to the networks. Some participants manifested interest in doing quality control themselves (the keyword '**quality control**').

5.2. Implications for Further Research

After this investigation, the same method proposed can be applied to a different sample of other professionals or more diverse user groups to see if the results are different. Most of the issues covered in this thesis can be further studied.

This study could be taken as a starting point for one more complex and ambitious with bigger and more heterogeneous samples of participants. It can be also interesting to find quantitative values to the issues discussed on this work, and implement social network theory, social network analysis or the framework to study virtual communities, as they were shown in section 2.3.1. A type of study to implement these frameworks needs to be more closed in the sense that it could use focus groups or log analysis to study interactions among groups of participants. It should be a longer study with participants willing to invest time to it and perform different tasks, acting as a sort of limited or laboratory like social network.

A future work can study if there are differences in participants' information behavior in social networks between locations, level of specialization, gender and profession. Also, a study can analyze deeper uses of social networks, such as the information behavior in users who utilize the integration the different social networks allow, the participants of this study did not provide any insights into this.

Some of the results of this study and similar ones can be taken into account for the design of a learning management system or digital library with the features of a social network.

5.3. Conclusion

To summarize, this thesis started by setting a context by providing background information, the research problem and justification for the research. The research questions along with the aims of the study, central definitions and limitations completed the context for this study.

A brief review of the literature which was relevant in this study was the purpose for Chapter 2, while Chapter 3 detailed the methodology used. The data was collected and analysed according to methods discussed in Chapter 3.

Chapter 4 contains the result of data collection and analysis. This chapter presented the interviews in an extensive way, then a summary was provided and at the end of the chapter, a discussion confronting the results with the literature addressed in Chapter 2 was provided.

This final chapter presented conclusions about the findings of this thesis in relation to the research questions. Implications for theory and practice have been suggested in the form of ideas for further research on this area of study.

Information behavior in social networks is an interesting and pertinent area of research. They are part of society now and rather to dismiss them, we should study them in order to understand better how this technology can be used for different serious purposes. They are very powerful tools we can use to engage users to use and produce information, but we have to understand how the users behave with them in order to implement them successfully.

In conclusion, the participants interviewed were very willing to embrace and support social networks. However, there is a dark side to them; we have to be conscious about the negative consequences social networks can bring and as with everything: we have to handle them with care.

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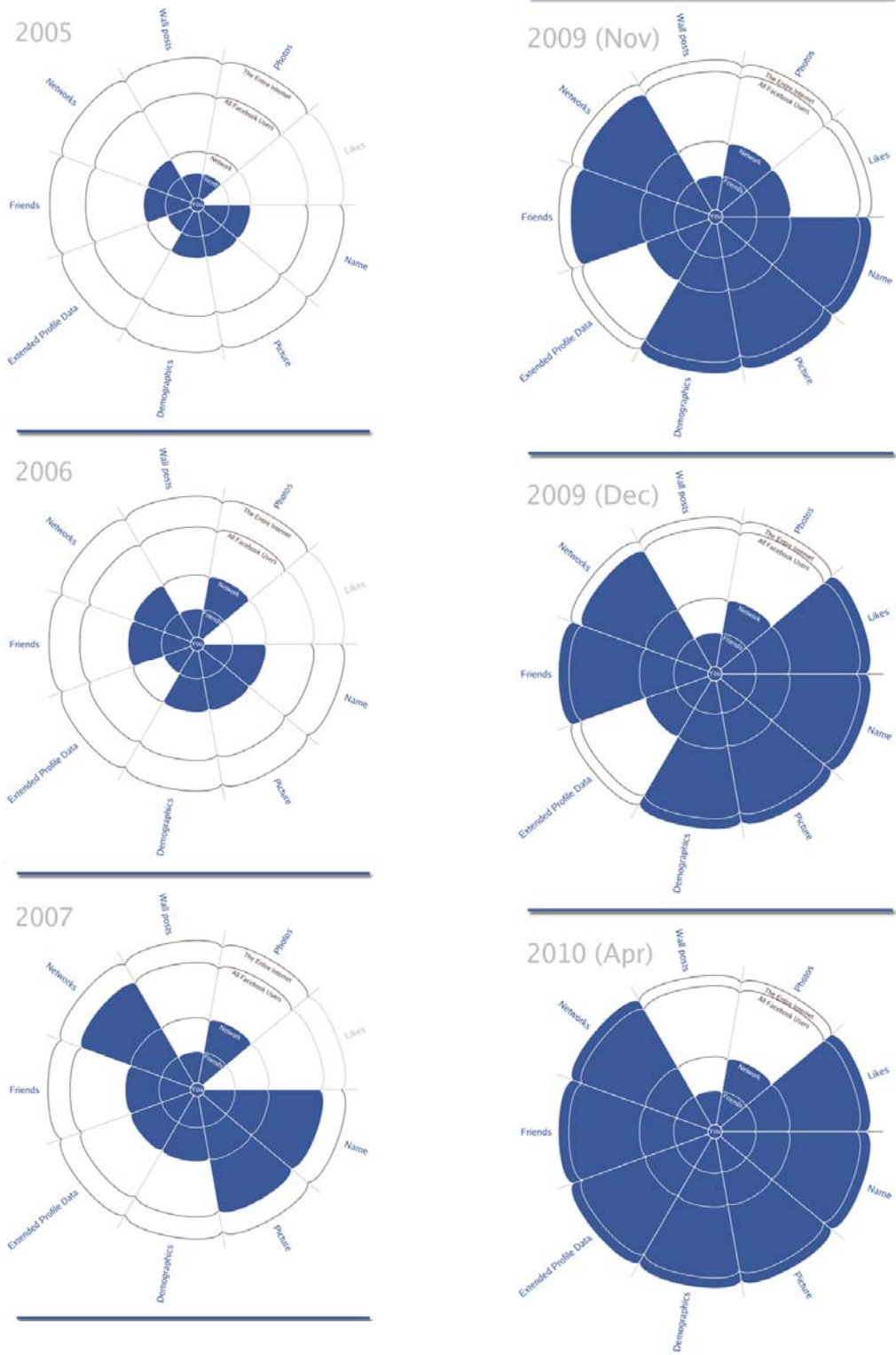
Appendices

Appendix 1: The Boom of Social Sites
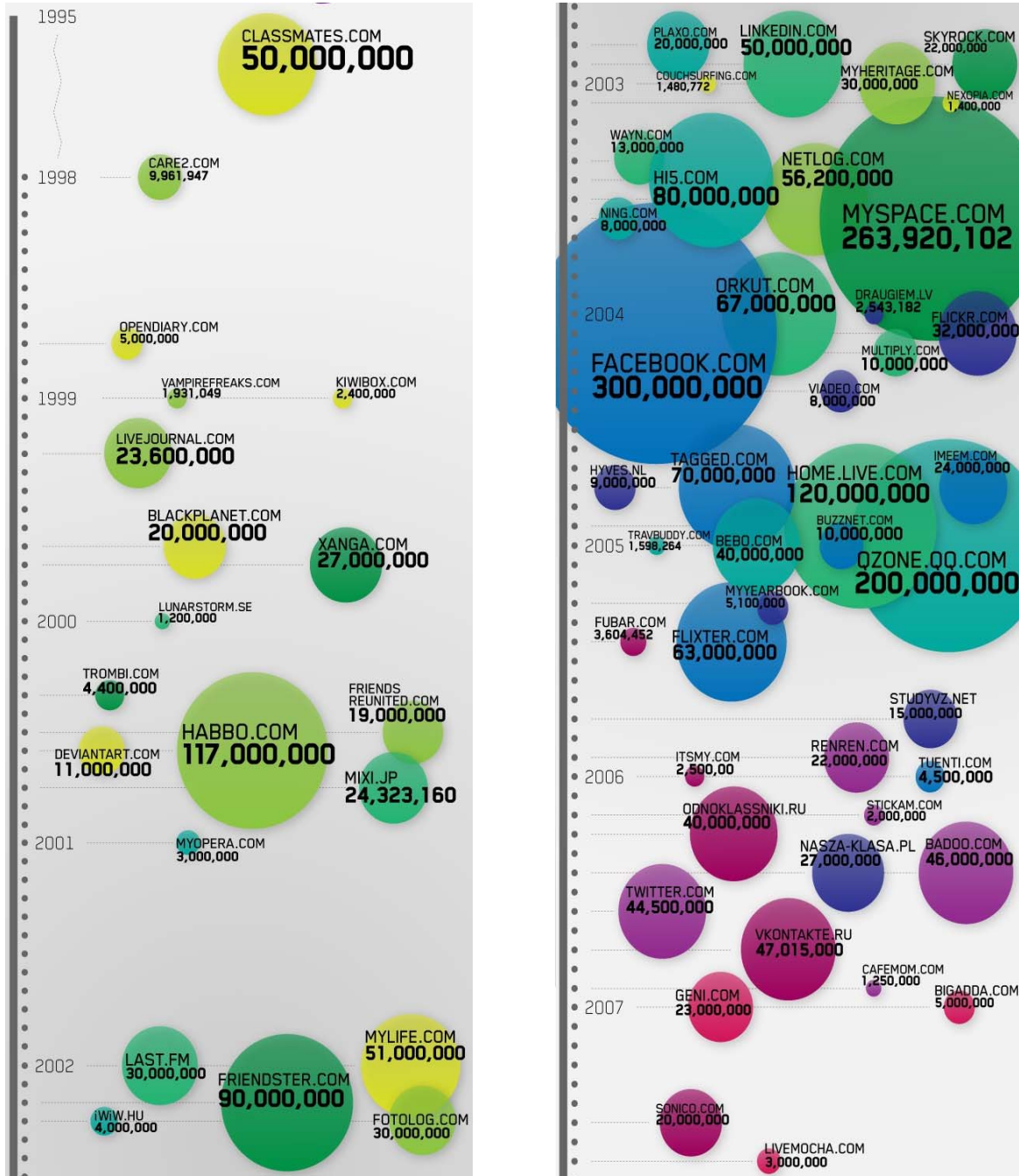
Taken from: Focus (2009). The Boom of Social Sites.
Retrieved from: http://www.focus.com/fyi/other/boom-social-sites/

Appendix 2: The Evolution of Privacy on Facebook

Taken from: Matt McKeon (2010). The Evolution of Privacy on Facebook
Retrieved from: http://mattmckeon.com/facebook-privacy/

Appendix 3: Privacy Statement

I, Juan Daniel Machin Mastromatteo, student of the International Master in Digital Library Learning, declare the following privacy statement for the participants of the interview for my master thesis which have the title "Exploring Information Behavior in Social Networks":

- No personal data which can help to identify the participants will be used in the definitive work.
- No personal data of the participants is needed for the completion of this study, the only facts that will be put into the work are the education level and sex of the participants in order to differentiate profiles and make conclusions about the data obtained by the classification of participants.
- The interviews will be recorded in audio and/or video, depending on the participant's choice, such recordings will be destroyed when the study is finished.
- The interview recordings will not be handed under any circumstances to third parties.

Juan Daniel Machin Mastromatteo

Appendix 4: Interview Questions

General Questions

- Do you think that social networks are just tools for entertainment or can we expect them to fulfill other roles?
- What are the conditions you put to be "friend" of someone on a social network application? Is it necessary that you know physically that person?
- Which are your primary purposes when using social networks?
- Which kind of information do you share and how do you decide to share something?
- Which social networks do you use and why?

Issues of Web 2.0 and Social Networks:

Trust, Loss of Identity & Crowdsourcing

- Do you trust information presented on social networks? To what extent or in which cases?
- How would you check the validity of something posted on a social network?
- Do you think academics and companies should change their negative views on social networks, if they have a negative one?
- Do you know what Crowdsourcing is? What do you think about Crowdsourcing? If you were to participate in such a project which would be your conditions, motivations, and way of contributing?

Decision Making & Quality Control

- When presented with controversial information posted on different social networks, how do you decide which information is reliable?
- Which social network can be reliable for you and why?
- What do you think about quality control on the information posted in social networks?

- Are you involved or would you want to be involved on quality control initiatives? Why?

Users' Satisfaction & Information Overload

- How or why do you decide to satisfy an information need by accessing social networks?
- How do you cope with the information overload brought to you by social networks?

Permanence & Repackaging

- How do you act if a website you used a while ago is not there anymore? What do you think about this issue of permanence?
- What do you think about the repackaging or reblogging of content?

Privacy

- How important is your privacy on social networks to you?
- How do you protect yourself from privacy issues in social networks?
- What would you do if your privacy is compromised?

The Clash with the Real World

- What do you think about using social networks in educational and working environments? Do you think the use of social networks undermines performance or productivity, or can improve it?
- What do you think about organizations trying to ban any social networking activities?
- Do you think social networks are really improving relationships between people or they are just alienating them?
- Have you had a problem with an organization or person for your use of social networks?
- Do you think negative things can be produced from the clash of the virtual with the real world?
- Is there anything important you would like to add?

Appendix 5: Some notes on the social networks mentioned by the participants

Facebook: it is the first application that comes to mind when talking about social networks. Every member has a page where he/she can write status updates, reblog or share information taken from other places of the Internet. It also includes a chat feature.

Wikipedia: it is an important social network but we cannot say it is just a social network because it is primarily an online reference source, but then it is also developed thanks to contributions from its own network, where users contribute content to it and discuss on it continuously.

LinkedIn: it is useful to build one's own connections for professional purposes, being academic or working purposes, you would never know when one possible institution or business partner would care to take a look at your profile in this network. So it can be a career tool and one for marketing oneself too.

Google Buzz: is integrated to Gmail and connected to Google Reader, this makes it useful to people not using the Reader, as they would receive their friend's feeds from Buzz or Reader.

Tumblr: it is like a small version of Blogs, because most of the things blogged there are supposed to be small in size. In this network, one member has followers and reblogging is an important aspect of it. When one person reblogs something reblogged before, the post will automatically contain information about who has done it also.

Twitter: the micro social network application by excelence, all postings are limited to a fixed 140 character length.

Blogs: probably the oldest form of social network, they are like diaries in the sense that all entries (called posts) are by default shown in a reverse chronological order. The social aspect of them is that they allow implementing comments and the sharing of publishing responsibilities among several persons.