

EXPLORING SELF-DISCLOSURE
IN ONLINE SOCIAL NETWORKS

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ABSTRACT

JAVIER VELASCO-MARTIN: Exploring Self-Disclosure in Online Social Networks
(Under the direction of Gary Marchionini)

This project explores how experienced adult users of social media disclose personal information over online social networks (OSN). This work introduces a four-dimensional model to serve as a foundational framework for the study of online self-disclosure (OSD); these four dimensions are personal, social, technological and contextual, and support the complexity of decision-making behind OSD.

The dissertation is comprised of two complementary studies that explore OSD in quantitative (survey, n=1092) and qualitative (interviews, n=21) terms. Results reveal how variables related to the four dimensions of the model can have strong influence in OSD processes and how these variables and dimensions are interconnected. Findings reveal that there are differences in perceptions of intimacy for particular channels and that this influences OSD behaviors, also that the intended audience plays a central role in OSD decisions, and that the intended audience is critical for channel selection. The first study provides robust data on some important factors that influence OSD, including frequency of use as a strong predictor of OSD: the second study gives a nuanced picture of how experienced users share personal information on OSN. These interviews reveal a strong role of OSN in relationship maintenance and development; they also speak of a positive role of OSD in people's lives.

In general, we find support for the four dimensional model, suggesting that future research on OSD gains in robustness from exploring factors from all of these dimensions. This research also

makes methodological contributions; the methods used here have been shown to be effective and can be repurposed and enhanced to explore this phenomenon further, and to test these results on different populations. The results in general speak of highly adept people making complex decisions on the fly, as well as positive yields from online disclosure.

DEDICATION

To Pilar, my guiding light through this adventure.

And to Victor, my superhero.

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CHAPTER 1

INTRODUCTION

Communication and interpersonal relationships are central to human nature and our evolution as a species (Dunbar, 1996; Maturana & Varela, 1987). As social animals, we seek companion, support and collaboration in others, and this has allowed the development of our culture. Social participation and organization do not involve sharing everything about our selves in the open; privacy is an integral component of social interaction. Privacy involves controlling access to the self and information about the self (Petronio, 2002; Westin, 1967), and this is frequently managed by trusting information to select others (Altman & Taylor, 1973; Petronio, 2002).

Balancing participation and withdrawal is a fundamental problem of our social lives (Petronio, 2002). We resolve this by selectively presenting aspects of our selves in particular contexts; by using our *expressions* to influence the *impressions* others will have of us, by way of *impression management* we make sure particular people see their appropriate part of who we are (Goffman, 1959).

As the variety of communication technologies grows, our communication patterns will inevitably change as people embrace the new possibilities given by the new tools (McLuhan & Gordon, 2003). Currently, the fast evolution of computer-mediated communication is affecting our social interactions, including patterns of information sharing (Mesch & Becker, 2010; Palen & Dourish, 2003). Through social media, people are currently

sharing private aspects of their lives to uncertain groups of others (Marwick & boyd, 2011; Stefanone & Jang, 2008), which include distant acquaintances and strangers alongside friends and relatives. This presents a challenge for impression management and privacy management.

Given the variety of options that current communication technologies have to offer, people develop a sense of what is appropriate communication on particular tools, and the selection of specific tools for delivering a message conveys a meaning in itself (Trevino, Lengel & Daft, 1987). This research project explores how different tools of social media imply different privacy environments for people, and how this relates to their self-disclosure behaviors. An important focus of this study involves exploring how the uncertain audiences that social media tools impose affect the perceptions of the specific tools and self-disclosure behaviors.

Motivation

The problem of privacy in Online Social Networks (OSN) has quickly become an important research topic within Computer-Mediated Communication (CMC) and Human-Computer Interaction. There is evidence to suggest that in OSN, people are sharing private information that would not be available to such large groups of people by other means (Mesch & Becker, 2010; Stutzman, 2006). OSN are creating changes in the way we manage our privacy and disclose to others (Barnes, 2008; Palen & Dourish, 2003). Given that in face-to-face communication, the selection of an appropriate conversational partner is fundamental for the disclosure decision (Rosenfeld & Kendrick, 1984), it becomes especially intriguing that in CMC tools—where the audience is unclear (Marwick & boyd, 2011)—some people are willing to share more personal information than they would offline. For

example, people share more personally identifiable information on their OSN profiles than they would give to strangers on the street (Mesch & Becker, 2010).

This research project explores the phenomenon of online self-disclosure, with an emphasis on exploring the role of tool perceptions, and of the audience people envision when using these tools, in their acts of self-disclosure. As a growing number of people struggle to find a balance with their online participation and privacy, this becomes an increasingly important phenomenon to understand and clarify. The findings from this project should provide a base for future theoretical work in online self-disclosure, and should inform the development of a new generation of social media interfaces, where people can better keep track of who their audience is, and retain a better sense of control over their disclosures.

Central Concepts

Experienced adult users. This study seeks to understand the behavior of experienced adult users of social media. The emphasis on this group is based on two assumptions: In terms of age, these people are not expected to be undergoing major life transitions as a group. While some of our participants may be going through important transitions individually, it is expected that most of the group should lead a relatively stable life in terms of work and family. This is valuable because most research to date has focused on college students who are going through important life transitions as part of their status (Bargh, McKenna & Fitzsimons, 2002; Joinson, 2001a; Stutzman, 2011; Tidwell & Walther, 2002). By establishing a minimum age for our population at 30 years, it is expected the project will be informed by participants who have graduated from college several years ago, they will have important work experience in their chosen fields, and are likely to have established their own families or have stable partnerships.

In terms of experience with OSN, the goal is to work with people who are familiar with the media, people who have gone through an initial stage of experimentation with these tools of communication, who have found adequate patterns of behavior in their usage of these tools. The changes that media produce in people are not seen until the media have become transparent, once they have been adopted and adapted to people's daily life (Haythornwaite & Wellman, 1998; McLuhan & Gordon 2003). Novice users are experimenting with these new tools, students are going through important life transitions; thus, professional adults who are particularly experienced with these tools are more likely to use them in a stable manner. In operational terms, experienced users were defined as people who have been using these tools on a regular basis (several times a week or daily), for at least one year. Wellman and Hampton (1999) found that frequent Internet users tend to have larger networks and communicate more openly than others, this also supports our focus on this population as people who are more likely to disclose online.

Online social networks (OSN¹). OSN will be defined for the purpose of this research as Internet communication platforms that allow people to broadcast and receive messages with others on their social network. Also referred to in the literature as Social Network Sites or Social Networking Sites (SNS), these tools share some common structural features including a user profile where users describe who they are, a list of contacts or friends, a time-based collection of all the messages the user has posted, and a screen where the user can view the posts made by her or his contacts or friends (boyd & Ellison, 2007).

¹ Commonly referred in the literature as Social Network Sites (Boyd & Ellison, 2007) or Social Networking Sites (Beer, 2007), this document opts for the term *Online Social Networks* in order to step away from the notion of Websites, as these tools are increasingly taking shape of platforms and applications that are used not only via traditional web browsers.

This research explores people's behavior with five social media tools, and then focuses on two popular OSN platforms, Facebook and Twitter.

Self-Disclosure (SD). SD is “the act of making yourself manifest, showing yourself to others so they can perceive you” (Jourard, 1971, p. 19), is a fundamental aspect of social relationships, and lies at the core of privacy management. An operational definition of Self-Disclosure from Adler, Rosenfeld and Proctor (2010) considers a series of factors:

Self disclosure (1) has the self as subject, (2) is intentional, (3) is directed at another person, (4) is honest, (5) is revealing, (6) contains information generally unavailable from other sources, and (7) gains much of its intimate nature from the context in which it is expressed. (p. 87)

Alternatives to self-disclosure are deception, equivocation, and hints (Rosenfeld, 1999).

Social penetration theory (Altman & Taylor, 1973) measures self-disclosure in a three-dimensional space with depth, breadth and length as axes. *Length* refers to the amount of information being shared, for how long people speak about a personal topic. *Breadth* refers to the range of personal topics. *Depth* is associated with the intimate nature of the information being shared; the more intimate the information being shared, the deeper the act of self-disclosure. The basic premise of social penetration theory is that disclosures grow in these dimensions as relationships develop. That is, new acquaintances will only discuss a small range of topics superficially, close friends will have covered a wide range of deeply intimate information in longer conversations. In this project, the depth of disclosure was evaluated by the subjects themselves.

Media choice. There is currently a rich array of communication methods people may use in their communication, including those that are face to face and those mediated by technologies that range from handwriting to mobile social media. Media selection is a fruitful research topic (Hartmann, 2009), and research suggests that selection of a particular medium conveys meaning in itself (Clark & Brennan, 1991; Trevino et al. 1987). CMC tools become

spaces for interpersonal communication, and the features of each tool provide a contextual setting for this communication (Mesch, 2009), influencing what appropriate behaviors are, and what levels of intimacy people attribute to each (CMC) tool.

Imagined audiences. While in face-to-face communication, people have reasonable control over who receives the information they share; in OSN, this control becomes highly uncertain. In a process that could be compared to traditional forms of broadcast media, such as television and radio, it becomes impossible to get a precise account of the people who will read what one will post on social media; yet, people will still keep a subset of their friends in mind when posting to their OSN accounts. Something similar happens to book writers, who develop a sense of an imagined audience, and keep this audience in mind when writing. When someone posts a note to an OSN, this note is broadcast towards their network of friends or followers. This network can range in the dozens, hundreds or thousands of people—or millions in the case of celebrities (Marwick & boyd, 2011). At the same time, this note is also stored in the sender's profile page, as a persistent archive that is sometimes public, available to any person who can browse the web, and to search engines. This scenario means that potentially, the note can reach anyone in the world. However, this is not very likely; most frequently, users of OSN are read by the people who follow them, and this list of followers is usually composed of friends, acquaintances and others who may have an interest in the person who writes—whether out of professional, personal interest, or otherwise. Usually, strangers only reach people's OSN posts if they are looking for information on a particular topic (e.g., marketers actively hunting opinions on their products). I call this total possibility of people who can reach a user's social media profile the “potential audience,” and it includes anyone with an Internet connection and a shared language. It is unlikely, however, that we have all of these people in consideration when

posting our messages online; as boyd's (2007) ethnographic research on teens reveals, users of these platforms develop their own sense of an "imagined audience", that includes the people who they are aware are following them (total list of followers can easily be lost track of) and more prominently, the people who engage in conversations with them via these tools. For any given post in time, it is impossible to determine the full list of people who read it (this could be called "factual audience"), especially given the time-flow nature of these platforms where many messages can be lost in the mix of a daily flow, between all of the other writers each reader is subscribed to.

Research Problem and Justification

The problems around online privacy management are growing in importance with the pervasiveness of online social media. Of all the problems associated with the phenomenon of online self-disclosure, the role of an imagined audience in mediated communication stands out as an important challenge to people's privacy management. While engaging in face-to-face communication, an appropriate conversational partner is key to the disclosure decisions (Rosenfeld & Kendrick, 1984); in social media, the audience is uncertain, yet people are choosing to disclose. Thus, understanding the role of these imagined audiences in disclosure decisions is a relevant problem to explore in order to provide a basis for future theoretical work around online self-disclosure. This problem leads to a set of general research questions that were addressed in this project.

Research Questions

RQ1: Do people attribute different levels of intimacy to different CMC tools?

RQ2: Do people's perceptions of tool intimacy relate to their levels of self-disclosure?

RQ3: Do people associate different audiences to particular channels?

RQ4: Does the audience users have in mind when posting to social media affect the depth of their self-disclosure?

RQ5: If both audience and tool perceptions affect online self-disclosure, once a person decides to share particular information online, do they choose a particular channel based on their intended audience, or do they choose a tool first and then consider its audience.

CHAPTER 2

LITERATURE REVIEW

Privacy and Self-Disclosure

Privacy. Privacy is a fundamental part of our social lives and especially in the development of intimate relationships. Its first discussions date only to 1890 when it was defined as the right to be left alone, free from the scrutiny of others (Warren & Brandeis, 1890). Privacy can be understood as a dynamic process where people manage the boundaries of what information about the self others will have access to in different contexts (Palen & Dourish, 2003; Petronio, 2002). In social terms, privacy is fundamental to all types of relationships, including collaboration and competition. If we were to live in absolute privacy, there would be no meaningful interaction between people, no relevant relationships in terms of emotional intimacy, for example. On the other hand, if we were all to tell everything about ourselves to everyone, there would be no place for intimate relationships either, as there would be no difference in what we share with others, nobody would feel like a special recipient of our trust. This tension between being part of our social world, sharing our thoughts and feelings, and the need to maintain certain information private, is central to interpersonal relationships and social behavior (Jourard, 1959; Petronio, 2002; Rosenfeld, 1999). Westin defines privacy in terms of access to information: "Privacy is the claim of individuals, groups, or institutions to determine for themselves when, how and to what

extent information about them is communicated to others” (Westin, 1967, p. 7). This focus on privacy as related to control of access to personal information is central to this project.

Self-Disclosure (SD). When we talk about close relationships, there’s a common base of privacy as a fundamental part of such relationships, *something* is shared between these friends, which is not shared in public contexts, this *something* usually implies access to information about oneself (self-disclosure) that is generally unavailable, that is, private information: “We cannot be close to someone without revealing some personal, and often private, information about ourselves. Friendship means sharing, and sharing means relinquishing some privacy” (Ben-Ze’ev, 2003, p. 453). However, the sole sharing of private information does not constitute an emotionally intimate relationship unless that information is shared within a context of *caring* (Introna, 1997). Self-disclosure is a complex process that is largely dependent on context (Cozby, 1973); the topic discussed is not enough to consider what is a disclosure (Antaki, Barnes, & Leudar, 2005).

Intimate disclosures usually create an expectation for reciprocation (Jourard & Lasakow, 1958) in what is known as the *reciprocity norm*. Not only is SD basic for creating relationships, SD can lead to benefits in psychotherapy patients (Jourard, 1959); and furthermore, in a meta-analysis, Frattaroli (2006) compiled research where experimental disclosure was found to have beneficial impact for physical and psychological health of people in a variety of situations.

Research on the relationship between self-disclosure and social distance between interactants has found opposite effects between strangers and friends: when interacting with strangers, the larger the social distance, higher levels of self-disclosure can be found, people feel free to open up to others who they don’t expect to see ever again—Stranger on a Train Effect (Rubin, 1975). On the other hand, when interacting with known others, self-

disclosure is associated with high levels of closeness and intimacy (Cozby, 1973). We could describe the relationship between SD and social distance as a U-shaped function, where both the closest friends and furthest strangers afford high levels of privacy, while fewest is shared with those people who fall in between (Figure 1).



Figure 1. Relationship between Social Distance and Self-Disclosure

Social penetration theory. Altman and Taylor (1973) put Self-Disclosure (SD) at the center of relationship development. This theory is framed within Social Exchange Theory and it proposes that communication participants will initially disclose superficially, and the level of depth in their SD will increase over time as the relationship develops. The level of disclosure to exchange on each interaction is determined by a reward/cost analysis each participant does, anticipating and forecasting the consequences. The deepening of the relationship is the *reward* people receive for their disclosure. At the same time, self-disclosure from your relational partner is usually considered a reward in itself (Worthy, Gary, & Kahn, 1969), a token of trust. Self-disclosure (SD) has been linked to liking: we disclose more to people whom we like, and people who disclose more are generally more likable, this can be analyzed as a *Social Exchange* process (Altman & Taylor, 1973; Thibaut & Kelley, 1959; Worthy, Gary & Kahn, 1969). Social Penetration can be considered an extension of Social Exchange theory that is focused on SD, and where time has been included as a critical factor (Cozby, 1973). Social penetration theory measures self-disclosure in terms of three

dimensions: *breadth* (range of topics), *depth* or intimacy, and *duration* or time spent developing an idea or argument.

Communication privacy management theory. In terms of interpersonal communication, Communication Privacy Management (CPM, Petronio, 2002) offers a powerful framework for describing how people regulate the disclosure of their private information through the creation of personal and collective boundaries, and the management for the permeability of such boundaries. CPM starts by defining that people own their personal information, and therefore are entitled to decide which information they can share with whom; once information is shared, there is an expectation (somehow negotiated) in regards of those others who now co-own such information, that they will handle its privacy in an adequate manner. When these expectations are violated, boundary turbulence occurs (Petronio, 2009). CPM has been developed from over a decade of research in different areas of application (Petronio, 2007), and has been used in research focused on social media for development of a measure for blog privacy (Child, Pearson & Petronio, 2009) as well as in research on Facebook privacy management (Waters & Ackerman, 2011). At the same time, the principles of CPM establish the underlying framework under which OSN interfaces allow users to control their privacy settings.

Online Social Networks

Evolution of CMC into OSN. Computer Mediated Communication (CMC) has penetrated the world to a point that it is now a regular part of life in all modern cities. Thanks to the strong penetration of CMC, researchers are currently focusing on its study not as isolated, by independent medium as during early years of CMC studies, but rather, they are now regarded as part of a series of communication tools that people use throughout the day in order to keep in touch with their friends, families and weak ties (Baym, Zhang & Lin,

2004; boyd, 2007; Haythornthwaite, 2005; Quan-haase, 2007). This is consistent with the Media Ecological Perspective (Barnes, 2008).

Online Social Networks (OSN) are the most recent form of Online Community infrastructure and have quickly gained popularity throughout the world. As the natural next step in the evolution of CMCs, OSN are purposefully designed to take advantage of and empower their users' social networks. This adaptation to our social reality, along with usable interfaces, has been critical to their rapid success. The basic premise behind OSN is that they allow people to hold group conversation with an audience of predefined contacts, which reflects their actual social network to some extent. Once in an OSN, participants broadcast their messages into their particular network.

Starting from a series of communication features often found in online communities, online social networks explicitly add the structure of people's social networks into the communication platform. In these systems, messages are broadcast to a list of contacts that represents the writer's social network. Some of these OSN will have an open structure in which authors are mostly followed by their friends and acquaintances but can also be accessed by the public, while others have a semi-closed structure; in which pre-approved members of the author's social network are the only ones who can read the messages.

"People in SNSs (OSN) are connected in a person-to-person manner, which is more direct and interpersonal than other online communities" (Rau, Gao & Ding, 2008, p. 2758).

Wellman describes these ego-centered networks as *personal communities*, the foundation of an era of *networked individualism* in which people are at the center of their social lives and make use of technology to leverage their social interaction (Chua, Madej & Wellman, 2011; Wellman, 2002, 2007).

OSN have quickly become critical elements in our communications toolbox, and for college students in particular, OSN have become such an important component that not checking them (e.g., Facebook) will keep people out of what is happening among their peers (Golder, Wilkinson & Huberman, 2007). Although OSN are frequently associated with teenage use, their population has been steadily increasing towards older segments of the population (Levy, 2007). Part of this can be explained by a rising use as a means to keep in touch across generations within families, as older adults strive to learn about and keep in touch with their younger relatives who are leading important parts of their lives online (Pfeil, Arjan & Zaphiris, 2009), and due to the networked diffusion of OSN; the more older people get into them, the more likely their peers are to come online.

With the evolution of the Web, our information tools are merging with our communication tools. People are using the Web daily to communicate with one another, not only for retrieving information, but also for actively exchanging it and for the maintenance of social relationships. Many of the most popular websites these days are focused on this social participation; *social media* as they are known, represent a new form of communication that is a hybrid between interpersonal and mass media, allowing ordinary people to broadcast their messages to hundreds, thousands, or millions of people, depending their popularity.

Online Social Networks (OSN) a set of computer-mediated communication (CMC) tools, and also part of the social media, allow us to communicate with a group of people who are part of our social network. These social networks can include both friends—*strong ties*—and acquaintances—*weak ties* (Granovetter, 1973); these tools are becoming part of our daily routine, adopting a role in our communication patterns by allowing us to stay in touch with a variety of communities to which we belong.

Mayfield (2007) describes OSN as bottom-up, people-centric, user-controlled, context-driven, decentralized and self-organizing; in contrast with online communities, which he characterizes as top-down, place-centric, moderator-controlled, topic-driven, centralized and architected. The basic structure of an OSN contains a profile page that identifies an author, a list of his or her contacts or friends, and some space where these contacts can leave comments (boyd & Ellison, 2007). OSN can be generally classified into two groups, *object-centered* and *ego-centered* (Stutzman, 2009). Ego-centered platforms are shaped around the people themselves; some examples of these are Friendster, Myspace, Orkut, Windows Live Spaces, Hi5 and Facebook. Object-centered networks, on the other hand, are organized around the sharing and exchange of information objects; examples of these are Youtube and Vimeo (videos), Flickr and Fotolog (pictures), Livejournal, Xanga and La Coctelera (blogs), LastFM, iLike, Songza and Muxtape (music), LinkedIn (resumes), Slideshare (presentations), Twitter and Jaiku (microblogging).

All of these platforms share the common elements described before in one way or another, and include different approaches to their architecture that afford differences in their dynamics of participation. Some of these systems require bilateral sign-off before establishing a relationship between people (non-directed network), while other systems let users follow people with no reciprocity (directed network), and although some of these describe all relationships between users in terms of friendships, the list of people that users collect ends up including both friends and weak ties equally. The user groups formed around these profile pages are not closed homogeneous groups, but rather, organically shaped heterogeneous groups just like our (offline) social networks.

The recent popularity of OSN provides a rich and natural tool to support the development of human communities; this is already becoming a fertile field of academic

research (Beer, 2008; Blanchard, 2004; Boyd & Ellison, 2007; Fogel & Nehmad, 2009; Gross & Acquisti, 2005; Java, Kolari, Finin, Joshi & Oates, 2007; Stutzman, 2006).

The popularity of websites that offer open access to the publication of contents by end users has led to the development of a new generation of CMC tools that is known as Social Media. Thanks to the traceable nature of CMC platforms, Social Network Analysis (SNA) can be applied to Computer Mediated Communication study in a straightforward manner: the World Wide Web (WWW) itself constitutes a social network, or a representation of the network of the different actors behind the websites that constitute the WWW. “When computer-mediated communication networks link people, institutions and knowledge, they are computer-supported social networks” (Wellman, 2001, p. 228).

Social Network Analysis (SNA) is a sociological framework that focuses on the relationship between people more than the individuals who compose the network. In SNA the social world is analyzed in terms of the connections between people; this view borrows from graph theory to describe society as a series of nodes (people) connected by arcs (ties, relationships), and some of the basic concepts of SNA include the distinction between strong and weak ties to describe close and distant relationships between people (Granovetter, 1973, 1984). ONS appear as a technological evolution of online communities that are based on SNA and take the base of networked relationships to enable people to organize around technology platforms. Networks appear as a more natural and organic form of describing informal human groups than a fixed set of pre-established communities, focusing on social relations and structures (Wellman, 1999). For a review of Network Theory see Barabasi, 2002.

In terms of CMC, SNA can be used to review the use of Email, IM, email lists, websites, online communities, and blogs (Ali-hasan & Adamic, 2007; Eckmann, Moses &

Sergi, 2004; Haythornwaite, 1996). Blogs have proven fruitful material for recent research, thanks to the way in which they prominently reveal connections between authors, readers and the author's sources (Java, et al., 2007; Kolari et al., 2007).

Haythornthwaite (2005) establishes a direct relationship between tie strength, the need for privacy and the variety of media used, in a concept known as *media multiplexity*. She poses that the mere creation of a network infrastructure allows for the creation of latent ties as people join the system, and as people start to interact among each other there are more opportunities for weak ties to develop. Weak ties can be built upon common need, shared interest, or business. These group-only spaces are unlikely to develop strong ties. Strong ties require private channels of communication where a stronger sense of intimacy and trust can be developed: thus, growth of tie strength can be described in terms of moving from public to private exchanges—this falls in line with Social Penetration Theory (Altman & Taylor, 1973). If the online infrastructure is shut down or undergoes important changes that affect the dynamic of the network, weak ties will probably disappear, while stronger ties are more likely to prevail as these usually connect through a variety of media.

Scholars working under the Social Network Analysis approach, find a direct relationship between self-disclosure and tie strength (Granovetter, 1983; Marsden & Campbell, 1984). Recent research exploring the relationship of perceived privacy across multiple media (including some CMC tools) on disclosure reveals that perceived privacy of the tool affects disclosure, especially for topics regarded as intimate (Frye & Dornisch 2010).

Another factor related to tie strength is intimacy (Granovetter, 1983). When analyzing blog content, it has been shown that verbal and affective intimacy are positively correlated with posting frequency (Rau, Gao & Ding, 2008); given this, bloggers who are

more extroverted and share higher degrees of self-disclosure in their posts tend to maintain larger strong-tie networks around their blogs (Stefanone & Jang, 2008). For a review on the evolution of CMC, see Walther and Ramirez (2009).

Media ecological perspective. The Web has been available to us for over two decades and is now part of our daily routine. Computer-Mediated Communication (CMC) and Social Media are part of the set of communication tools we use for performing our work and sustaining our social relationships (Baym, Zhang & Lin, 2004; Haythornwaite, 2005). CMC and Social Media should not be analyzed in isolation; the concept of a cyberspace that exists independent of our physical world is no longer sustained (Baym, Zhang & Lin, 2004), social media are used in conjunction with other media and face-to-face connections (Baiocco, Laghi, Schneider, Dalessio, Amichai-Hamburger, Coplan, ...Flament, 2011; Mesch & Talmud, 2006). The Media Ecological Perspective (MEP), which was born before the Web, allows for the study of communication patterns taking place in social media and how these form part of our overall lives (Barnes, 2008).

MEP views media as arranged in a complex interconnected system that is best considered in ecological terms: as a *media ecology* that has an influence in our society and culture by means of its shape, independent of the messages exchanged. The Media Ecological perspective argues that changes in technology will create changes in society, not in a techno-deterministic manner, but rather, because of the way in which people adapt it to form part of their lives; by how society incorporates it into their culture.

Over 45 years ago, McLuhan and Fiore (1967) depicted electronic media as extensions of our nervous system: A global network that would allow our minds to engage in collaboration. Back then, they were mostly thinking of television, yet it's easy to imagine how these ideas can fit into this current landscape with CMC offering an important part of the

landscape. Developers of the first computer networks had similar ideas about enabling collaboration between people (Licklider & Taylor, 1968).

However, we cannot see the actual impact of a medium until it has become part of our everyday lives (Wellman, Salaff, Dimitrova, Garton, Gulia, & Haythornthwaite, 1996). Currently, media ecologists believe that the impact these tools have on our lives depends on how we use them (Barnes, 2008); this means that the media does not directly change our lives, but it is our usage of the tools that produce changes in our habits of behavior. This lies at the core of this research project: to understand how people's use of online social networks is changing their self-disclosure behaviors.

Online Self-Disclosure

Intimacy on CMC. Initial CMC research questioned the utility of CMCs for maintaining rich and complex relationships: The *Information Richness Model* sustained that text format is best for concrete tasks, not personal communication (Daft & Lengel, 1986). The *Social Presence Model* argued that text only is a low presence medium, creating low levels of intimacy in communication (Short, Williams & Christie, 1976). The *Cues-filtered-out view* proposed that lack of cues on CMC leads to depersonalization (Keisler, Siegel & McGuire, 1984). These early theories emphasized the limitations of the media and focused on the negative impact their broader adoption could bring into society.

As the Intrenet acquired more reach and its users were more familiar with it, and as the medium matured to offer more sophisticated and unique features, studies started finding opposite effects: Frequent Internet users tend to have more social contacts and engage in more open communication with their friends than otherwise (Wellman & Hampton, 1999). In response to concerns with lack of richness in the media, and lack of co-presence, researchers would discover how users were able to adapt their behavior in order to

overcome the aforementioned limitations of the medium. For example, under the *Social Information Processing Model*, Walther found that our basic need for social bonding is satisfied the same on CMC as face to face (Walther, 1992).

Some researchers emphasize the capacity of CMC to create and sustain intimate social relationships, for example, Rheingold (1993) goes as far as attributing high levels of self-disclosure to the nature of the medium, and the role of screens as mediators. Rheingold points out how people who communicate through the internet usually will do so from private locations where they feel comfortable. Along similar lines, Walther proposes the theory of *Hyperpersonal Communication*, by stating that CMC can actually be *more* friendly, social and intimate than face-to-face communication (Walther, 1996.) “The increased level of intimacy of these micro-level behaviors may lead to perceptions of extraordinary affectionate relations, or hyperpersonal states” (Tidwell & Walther, 2002, p. 339). However, most of this research has been conducted in studies among dyads of strangers, and based on college students (Bargh, McKenna & Fitzsimons, 2002; Joinson, 2001a; Tidwell & Walther, 2002). College students may differ from the larger population in their use of CMC; as they are in a stage of life where they are thriving for establishing new relationships, and may not always be reflective on their privacy management.

People with closer relationships will use more varied media in their patterns of communication (Haythornthwaite, 2005); yet, the majority of CMC research to date has also focused on one tool at a time. My research covers a variety of CMC tools simultaneously in order to compare them, and create a better model of their use in context. This is important because the context has an important role in the process of Self-Disclosure, and because social media are not used in isolation but as part of a larger array of communication tools that people use throughout their day.

Research on email use has found it is strongly used to sustain existing relationships (Stafford, Kline, & Dimmick, 1999), most people use email to communicate with their relatives (Lenhart, Rainie, Fox, Horrigan, & Spooner, 2000), and it helps people develop relationship with their peers (Jones & Madden, 2002).

Research over self-presentation in dating websites (Gibbs, Ellison & Heino, 2006) has found support for social penetration theory (including interaction anticipation), social information processing theory and the hyperpersonal perspective. In other words, users of online dating sites will share growingly intimate information as a relationship develops over time, they exchange personal information in order to adjust to the lack of cues in the mediated format, and finally, they share more intimate information through the mediated platform than they would share face to face.

Intimacy on OSN. The main reason people use social media technologies is to reduce the cost of sustained contact with the people on their social networks, particularly with their strong ties (Jang & Stefanone, 2011). As part of this sustained contact comes self-disclosure; SNA research finds that SD plays an important role in tie strength (Granoveter, 1983; Marsden & Campbell, 1984); verbal intimacy is correlated with relational intimacy.

If we factor in the frequency of these communications we can see that levels of verbal intimacy and affective intimacy are positively correlated with posting frequency (Rau et al., 2008); and that within intimate relationships, people communicate more frequently, and cover a broader variety of topics with deeper disclosure levels (Laurenceau, Barrett & Pietromanco, 1998; Marsden & Campbell, 1984). Moreover, when people have stronger relationships, they end up using a wider array of the available tools for their communication—*Media Multiplexity* (Haythornthwaite, 2002; Haythornwaite & Wellman 1998).

There is already an important body of research on OSN, and some important advancements have been made in the area of blogs, the first of these tools to appear and frequently used as a research focus in the early OSN research. The success of these tools is proving how people are using CMCs to reach their contacts: “the reconfiguration of websites into interactive blogs is symptomatic of the recurring trend to adopt technology for interpersonal communication” (Stefanone & Jang, 2008, p. 126).

Although most blogs can be considered online diaries, describing people’s lives, thoughts and feelings (Herring, 2004; Herring et al., 2005), and that most bloggers are truthful in the way they present themselves in their blogs, including information about their sexuality and romantic relationships (Huffaker & Calvert, 2005; Lenhart & Fox, 2006), most blog authors do not use the available controls that enable them to protect their information from the eyes of strangers. (Lenhart & Fox, 2006)

Extraversion and self-disclosure in blogs are an effective way to maintain relationships (Stefanone & Jang, 2008), and that people choose sharing over withdrawal as a means to sustain their close relationships (Nardi, Schiano, & Gumbrecht & Swartz, 2004), which is consistent with Social Penetration Theory (Altman & Taylor, 1973), yet this comes at a cost as bloggers have run into trouble at some point for cause of their postings: Viégas (2005) found that 35% of bloggers in a 492-participant survey had gotten into some kind of trouble for information they had posted in their blogs, and that these problems were correlated with frequency of self-disclosure.

Four Dimensions for Online Self-Disclosure (OSD)

This project, after examining the extant literature in the field, explores the problem of online self-disclosure as grounded on four major dimensions into which the variables intervening the process can be grouped: these are Internal, Social and Technologic, while the

Context should also be kept in mind (Figure 2). *Internal* drivers for self-disclosure include psychological motivations, interpersonal differences, and several factors included in traditional cost/benefit analyses of self-disclosure. *Social* drivers cover elements that are determined by our social surrounding, including cultural norms of what adequate disclosure is for a given context, reciprocity norms, impression management, and relationship management, to name a few. This dimension also includes some of the aspects traditionally included in cost/benefit analyses of self-disclosure. *Technological* drivers refer to features of the media that affect disclosure processes, even if we don't notice this influence directly. There seems to be something in the way we relate to technology that leads to heightened disclosure, this effect has repeatedly found but is yet well understood. Finally, *contextual* settings as have long been found to be influential to self-disclosure, must also be kept into consideration when researching acts of self-disclosure.

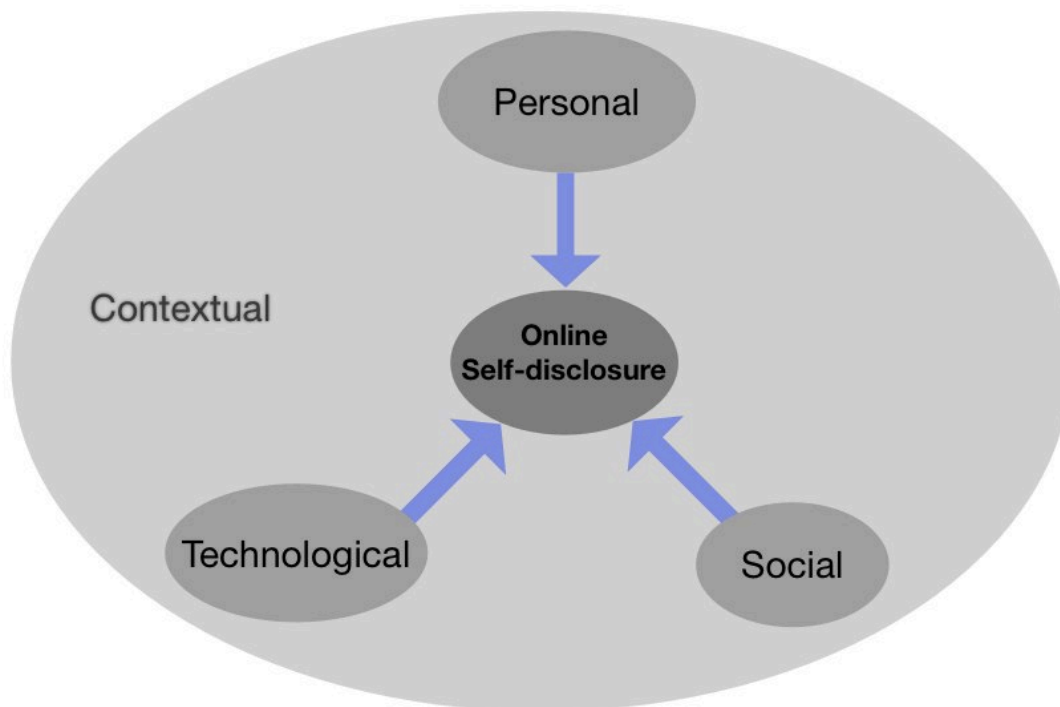


Figure 2. A four-dimension model for explaining online self-disclosure.

The following list describes some of the variables that represent the different dimensions for this model. This list is not exhaustive, but represents a starting point for broadening the understanding of the process of online self-disclosure, a seed towards a research track that could potentially develop a theoretical model.

Internal drivers for OSD. Internal drivers for OSD include individual differences between communicators, such as psychological traits and demographical indicators, as well as personal motivations that people may have at any given moment when deciding to disclose. These internal drivers are shared in interpersonal and mediated settings, for example: catharsis, self-clarification, and self-validation. Interpersonal differences include demographic and psychometric variables.

Catharsis. Catharsis is an important factor for disclosure, especially for disclosing to friends (Rosenfeld & Kendrick, 1984).

Self-clarification. Many times, putting thoughts into words or discussing our situations with others will help us clarify our ideas and points of view (Rosenfeld, 1999).

Self-validation. Self-disclosure is also used as a means of searching validation from others; it can help validate the self-concept according to how one is seen by others (Rosenfeld, 1999).

Loneliness. Experimental research based on instant messaging found that loneliness was not related to disclosure depth, but inversely correlated with valence, accuracy and amount of self-disclosure between conversational partners (Leung, 2002).

Self-esteem. Research comparing different media (face-to-face, letter, phone and email), has found that people with low self-esteem prefer email for communication when there is perceived risk in the communication scenario, while people with high self-esteem

preferred face-to-face interactions in these cases. Additionally, as the chance of rejection increased, email was preferred over face-to-face communication (Joinson, 2004).

General self-disclosure. Self-disclosure can be measured as a personality trait, with some people having greater propensity for disclosing than others (Wheless, Nesser, & McCroskey, 1986).

Self-Consciousness. There are two aspects to self-consciousness; People high in private self-consciousness orient themselves towards their internal world, with a high awareness of the self. Conversely, people high in public self-consciousness are focused on the reaction of others to the self (Fenigstein, Scheier & Buss, 1975). People with high levels of private self-consciousness tend to disclose more than those high on public self-consciousness (Reno & Kenny, 1992).

Sex. Gender differences have been of interest to the research on self-disclosure for decades. Meta-analysis shows higher tendency to disclose for females (Dindia & Allen, 1992).

Social drivers for OSD. As has been covered in this document, self-disclosure plays an important role in social relationships. The process of decision for self-disclosure is largely influenced by a series of social factors both in interpersonal and mediated settings. Here we will cover some frequent social motivations that lead people to disclose personal information.

Impression management. The selective presentation of information that is seen in offline disclosure (Goffman, 1959) also plays an important role in OSD, this includes the display of connections as a form of augmenting people's reputation (De Souza & Dick, 2009). The selection of an appropriate space for the display of determined aspects of the self to determined groups of others is a central problem in this research project.

Reciprocity. Following the conversation of friends in CMC and OSN creates the same need for reciprocity as in other contexts. In collective spaces such as OSN this can even take the shape of peer pressure, where people feel the urge to share similar types of information that their friends are sharing (boyd, 2007). Further, Moon (2000) was able to yield higher levels of self-disclosure in conditions of reciprocity for people interviewed by a computer in experimental research: when computers revealed more information of their characteristics, people would share more personal information. Reciprocity has also been experimentally tested in the context of online surveys (Joinson, 2001a)

Intended audience. Just as the target person plays a central role in decisions about offline disclosure (Rosenfeld & Kendrick, 1984). Although OSN provide space for non-directed self-disclosure, the intended audience plays an important role in the intimacy of disclosure: Bloggers who target their strong tie network have been found to display a range of intimate content on their posts (Stefanone & Jang, 2008); although the exact audience that will read people's posts in an OSN is not known, there is always a target audience the user is thinking of at the moment of disclosing, and this moderates her levels of disclosure. On another aspect of this, research based on dating websites has found that expectation of future interaction led to higher levels of self-disclosure, and more honesty in particular (Gibbs et al., 2006).

Relationship maintenance. Continued disclosure is positive for the sustenance and improvement of long-term relationships. Ceasing to disclose in existing relationships will "cool them off." Disclosure has been found to be a predictor of marital satisfaction (Derlega, Metts, Petronio & Margulis, 1993; Rosenfeld & Bowen, 1991). In terms of mediated communication, it has been found that convenience of relationship maintenance is one of the most important drivers for people using CMC (boyd, 2007; Krasnova,

Spiekermann, Koroleva & Hildebrand, 2010; Stefanone & Jang, 2008). OSN are particularly convenient since one can broadcast a single message into one's larger network of friends and acquaintances that are connected there. Considering how relationship maintenance and enhancement plays a fundamental driver for disclosing to friends (Rosenfeld & Kendrick, 1984), the convenience of an OSN for maintaining existing relationships becomes a powerful driver for this disclosure.

Cultural norms. Cross-cultural research on interpersonal self-disclosure has found that people's cultural norms can influence what they disclose (Chen, 1995; Diaz-Peralta & Downey, 2003; He, Zhao, & Hinds, 2010). For example, Diaz-Peralta & Downey (2003) compared found that Argentinians presented higher levels of self-disclosure than people from the USA. Similar results have been found in CMC settings, including OSN, and have been validated by study 1 of the present project (Velasco, Stutzman, Capra & Marchionini, 2013).

Social capital. Finally, research on social media has found that people actively use these tools to increase and make use of their social capital (Burke, Kraut & Marlow, 2011; Yoder & Stutzman, 2011)

Technological drivers for OSD. Next, the literature on online self-disclosure reveals important evidence to suggest that the process of online self-disclosure differs from interpersonal settings in an important way. Technology seems to be playing a role in privacy management for mediated communication, and people appear to be sharing more intimate information online than they would otherwise. This problem dimension is central to the contribution of this research by exploring how technology is affecting the process of self-disclosure.

Some of the factors in this dimension include:

Buffer effect. The reduction of social cues, and physical isolation during CMC communication can lead people to forget some of the threats of self-disclosure. The use of telecommunication adds a layer of distance between conversational partners; this gap is sometimes described as “relative anonymity” that reduces our inhibitions while communicating with friends and family, while acting as a barrier to access to us. This gradual reduction in social cues, that some authors frame in terms of a continuum of anonymity offered by CMC tools acts as a powerful control of privacy (Bargh, McKenna & Fitzsimons, 2002; Christopherson, 2006; Joinson, 2001b; Mesch & Becker, 2010 Rheingold, 1993; Tanis & Postmes, 2007).

Social response. There is substantial evidence on how people treat computers and other media as social actors (Reeves & Nass, 1996; Nass & Moon, 2000; Moon 2000). When communicating through computers, people mindlessly apply social rules and expectations, including politeness and reciprocity although they are aware on a conscious level that machines are not human. When interacting with text-only interfaces, people are especially prone to orient themselves to the computer (Moon, 2000). In light of this, we can argue that people develop a relationship with the devices and media that they frequently use; and that this relationship—and the trust deposited in it—acts as a moderator of our online self-disclosure.

Frequency of use. There is also research supporting that online self-disclosure is associated with frequency of use (Rau et al., 2008; Frye & Dornisch, 2010; Mesch & Becker, 2010). However there is no causal explanation for this relationship yet; it is not clear whether people who are more comfortable disclosing on the Internet use CMC tools more often, or if there’s some type of familiarity effect where people who use CMC tools more frequently feel more comfortable disclosing there. Furthermore, one could find possible explanations in

Social Response Theory by arguing that people who use CMC tools more frequently develop a sense of social closeness with these tools; Alternatively, a Dual Coding Theory explanation would posit that frequent users engage in CMC in a heuristic way while for less frequent users this behavior is more reflective.

Interactivity or immediacy of dialogue. Interactivity is another salient feature of the media that influence people's engagement and feelings of co-presence. Some of these CMC tools afford quick dialogue, which in turn allow us to become focused in the conversation and focused on the ostensible relational counterpart, thus a user may become immersed in a conversation and reduce their attention on the setting being used, and the possibility of an undesired audience reaching our information. Related to this, another important characteristic of some CMC platforms, and social media in particular, is how the audience is never absolutely clear.

Tool privacy. The sense of privacy that people have within a particular CMC tool will have an impact in their disclosure behaviors. This sense of privacy is composed of a variety of factors. Providing users with controls for managing their privacy settings can help mitigate the feelings of risk in disclosure for particular online environments (Krasnova et al., 2010; Stutzman, Capra & Thompson 2011); additionally, the consumption of the system's privacy policy also moderates privacy risk (Stutzman et al., 2011). Perceptions of risk in online disclosure can also be mitigated by the user's trust in the service provider (Krasnova et al., 2010; Stutzman et al., 2011).

Interface design. Most CMC tools and OSN in particular have evolved to present interfaces that quickly become transparent to the user, leading to heuristic type of behaviors. Some of these tools are based on an interface that actively prompts the user to reveal their current activities and/or thoughts (i.e.. Twitter; "What's happening?," previously "What are

you doing?”). In fact, a narration by one of the creators of Twitter of the initial description of the project by Evan Williams, “His idea was to make it so simple that you don’t even think about what you’re doing, you just type something and send it” (Sagolla, 2009). At the same time, some of these tools present a range of fields in the user’s profile (e.g. city, relationship status, date of birth) and actively encourage the user to fill them out by displaying a rate of completeness.

Contextual elements affecting OSD. As has been discussed before, self-disclosure is a highly contextual process. Contextual factors will have an important role in defining disclosure situations. Here we will cover a couple of the contextual factors and how they affect the process of OSD.

Physical context. Familiarity and perceived comfort of the location from where people are engaging in CMC has found to predict levels of OSD (Stefanone et al., 2009): As the use of CMC over mobile devices grows, communication tools are used from a wider range of contexts. People using CMC from intimate physical environments will feel more comfortable disclosing intimate information through these tools.

Environment norms. Context is an important factor in determining what constitutes self-disclosure and when it is appropriate (Adler et al., 2010). OSN can be considered public commons where people socialize and the interactions that take place in these spaces will define what appropriate disclosure is for these contexts (boyd, 2007).

Conclusion

Online Social Networks give users fast and broad access to their friends, family, colleagues and acquaintances. ONSs could be considered a coming of age of Internet communication, while previous formats of CMC all somehow emulated previous settings of human communication. OSN are changing the way their users communicate by allowing

them to reach their entire social network with a single posting action. This distribution model presents an inflection point in communication technologies, and is enabling social dynamics that are unique to this media.

This same distribution model, however, presents a serious challenge to privacy management, making it hard for people to know who will access the information they share on OSN. The process of disclosing towards an uncertain audience through an OSN is an important problem and is central to the present research project. This research project seeks to explore the nature of online self-disclosure by taking into consideration many areas of this process.

CHAPTER 3

METHODS

This research project explores the phenomenon of online self-disclosure by way of a mixed methods approach. The combination of a quantitative exploratory study and a qualitative descriptive study allows for a better understanding of the variables of interest and how these interplay in the process of online self-disclosure (Table 1). The first study tests people's likeliness to share personal information related to hypothetical scenarios; the second study adopts the Critical Incident Technique in order to stay grounded on people's behavior, asking participants to explain the situation in which they actually shared personal information in the recent past.

Study 1	Study 2
Quantitative	Qualitative
Exploratory	Descriptive
Survey	Interviews
Hypothetical Scenarios	Past Behavior (CIT)
Statistical Analysis	Content Analysis
n=1274	N=21
International	Local (RTP)
Email, IM, blogs, Facebook, Twitter	Facebook, Twitter

Table 1. Comparison of the two studies, complementing methodologies.

First, an exploratory study measures perceptions of tool intimacy and willingness to share different types of information across five tools of CMC, while controlling for demographic, psychological, technology usage and cultural variables. The use of questionnaires to collect self-reported data has been useful in social science research for

decades for measuring both dependent and independent variables (Delvin, 2006). In order to account for the multiplicity of contexts for self-disclosure, willingness to share is inquired over four different communication scenarios; given this and the measurement across five different CMC tools, we have a multi-level design. Differences between participants were compared in terms of demographics, psychometrics and measures of usage for the CMC tools in question, and country of origin is measured as a cultural indicator.

Second, a descriptive study uses qualitative interviews to examine the experiences people have when sharing private information in OSN. While the first study accounts for a broad array of CMC tools and variables associated with OSD, this second focuses exclusively on two popular OSN platforms: Facebook and Twitter. The conversations focus on a subset of central variables and how they interrelate: perceptions of the tool, relationship to imagined audience, and self-disclosure (DV). These interviews inform an inductive analysis that helps generate a framework for understanding how these variables relate.

By working with the Critical Incident Technique (Flanagan, 1954; Butterfield, Borgen, Amundson & Maglio, 2005), this study explores the context of self-disclosure decisions for behaviors that people report having committed in the past, specifically, acts of sharing via online social networks (i.e., posts). The CIT is appropriate for the study of information behaviors, it allows for the study of infrequent acts that may not be readily available by other means, and enables participants to more accurately recall specific incidents instead of their behavior in general (Luo & Wildemuth, 2009). Another advantage of the CIT is that it permits researchers to quickly find patterns in the data: categories stabilize with few subjects (Andersson & Nilsson, 1964). In this study, incidents are acts of online self-disclosure, posts that participants have published containing revealing information about themselves. Participants were asked to find two recent incidents of this type and to describe

the situation they were in at the moment of sharing, the questions around these posts in question cover the four dimensions of the model.

It has already been pointed out that this project focuses on intensive and experienced users; as results from the first study in this project suggest, higher intensity of usage is associated with higher levels of self-disclosure. This supports the selection of experienced users as well suited for this second study, given that experienced users should have more, and more recent, incidents to recall.

Study 1: Survey “Mapping Self-Disclosure over Social Media”

The first study for this project involved a survey where self-disclosure was measured in the context of four communication scenarios that involve different levels of intimacy, across five communication tools. This study was conducted during October 2010 and was approved by UNC with IRB # 10-1498.

Sample. Participants were recruited through email lists, blogs and online social networks. A total of 1274 people responded to the survey, 1092 responses were considered complete for the analysis. This sample includes people from 53 different countries, their ages ranged from 16 to 69 years ($M = 33.56$, $SD = 10.85$), 60% of the sample is composed of women, and 45% of participants work in a field related to information systems (Table 2). They are experienced users of computer mediated communication tools (Table 3).

Measures. Online Self-Disclosure (OSD) was measured across five CMC tools (email, IM, blogs, Facebook and Twitter) for four scenarios:

Mood, “You're having a very bad day.”

Family, “You've just had a

Demographic	Values
Age	$M = 33.6$, $SD = 10.485$
Education (yrs.)	$M = 17.1$, $SD = 4.567$
Work Exp. (yrs.)	$M = 10$, $SD = 9.585$
Gender	60.7% Female, 39.30% Male
Info Sys. Work	45% Yes, 55% No
Countries (% of sample)	USA 57%, Chile 22.8%, Argentina 2.1%, Canada 2%, Mexico: 1.9%

Table 2. Demographics of Survey Participants.

conflict with someone in your close family.”

Politics, “You have just heard some political news that makes you upset.”

Health, “You just got very bad news from your doctor.”

Each scenario is presented

	Email	IM	Blogs	Faceb.	Twitter
<i>Users (%)</i>	1,087 (100%)	884 (81%)	448 (41%)	924 (85%)	678 (62%)
<i>Experience</i>	14.52 (3.89)	11.09 (4.02)	5.70 (3.39)	3.98 (1.29)	2.53 (1.07)
<i>Frequency</i>	4.74 (.65)	3.67 (1.27)	2.37 (.85)	3.48 (1.15)	3.72 (1.23)
<i>Expertise</i>	3.49 (.65)	3.03 (.86)	2.59 (.90)	2.89 (.79)	2.62 (.94)
<i>Intimacy</i>	3.71 (1.49)	4.31 (1.44)	3.04 (1.40)	3.00 (1.35)	2.38 (1.3)
<i>Audience Size</i>	47.48 (91.12)	10.13 (29.11)	4.121 (11.23)	28.68 (174.0)	27.59 (309.3)
<i>Audience Closeness</i>	4.49 (.67)	4.75 (.75)	4.05 (.96)	4.44 (.72)	4.06 (.94)

Table 3. Tool usage and perceptions; Means and SD.
SD in parenthesis.

above a matrix of the CMC tools and a six point Likert scale: “How likely are you to share your feelings about this via [tool]?” Independent variables included tool intimacy, scenario intimacy, audience types, closeness to audience types, tool experience (in years), frequency of tool use, and tool expertise (Table 4). Controls included sex, age, country, education, work experience (Table 2) and psychometric scales for disclosiveness and self-consciousness. For psychometrics, we utilized a 15-item abbreviated version of the General Self-Disclosure Scale (GSDS) (Wheless 1978). We also utilized the Public Self-Consciousness (PubSC) and Private Self-Consciousness Scale (PrivSC) by Fenigstein, Scheier and Buss (1975), abbreviated to 10 items. All items in the psychometric measures were presented in randomized order for each respondent.

Study 2: Interviews “Discussing Contexts and Motivations for Self-Disclosure on Social Media”

A second study used qualitative interviews to explore people’s perceptions of different social media tools, their audiences, and how these variables affect what they share. The interviews were semi-structured and had a special interest in exploring how the

Variable	For each	Question Format
Tool Experience	Tool	Prompt: “How long ago did you start using (tool)?” Choices: List of years, based on the age of the tool (e.g. Twitter started in 2006)
Tool Frequency	Tool	Prompt: “How often did you use (tool) in the last month?” Choices: Never, A few times a month, A few times a week, About once a day, Several times a day.
Tool Expertise	Tool	Prompt “How would you rate your (tool) expertise?” Choices: Novice, Average, Advanced, Expert.
Audience Size	Tool	Prompt: “Approximately, how many people did you communicate with via (tool) in the last week?” Open response
Tool Intimacy	Tool	Prompt: “Intimate: Private information and personal thoughts/feelings. How intimate is (tool)?” Six-point bipolar scale: Not Intimate to Very Intimate.
Audience Type	Tool	Prompt: “(Tool) is for communicating with:” Choices (check all that apply): Friends, Colleagues, Acquaintances, Grandparents, Online fans, Parents, Online friends, Coworkers, Spouse / Partner, Siblings, Sons & Daughters, Girlfriend or Boyfriend, Cousins”. These options were presented in counterbalanced order.
OSD	Scenario / Tool	For each scenario, for each tool, we asked: “How likely are you to share this information via (tool)?” Choices: Very Unlikely, Unlikely, Somewhat Unlikely, Somewhat Likely, Likely, Very Likely
People Closeness	Audience Type	For each audience type, we asked: “How close do you feel to the following people?” Choices: Very Close, Close, Somewhat Close, Somewhat Distant, Distant, Very Distant, Does not apply.
Scenario Intimacy	Scenario	For each scenario, we displayed the description and asked: “How intimate is this information to you?” Six-point bipolar scale.: Not Intimate, Very Intimate.
Audience Closeness	Tool	Computed as mean of (audience type) by (people closeness).

Table 4. Variables and method of data collection.

imagined audience could influence perceptions of the media, perceptions of intimacy in for the media, and the type of information people share through these tools.

Based on the Critical Incident Technique, the interviews asked participants to go over their history of social media tools and describe the context for posted messages that they regard as self-disclosure. Participants were asked to discuss two different cases where they had posted information that they somehow regard as intimate on either Facebook or Twitter. The conversations focus on subject’s conceptions of the channels being used, their

ideas about the audiences they are addressing, and information regarding the context of those acts of sharing.

Recruitment. Participants were recruited in North Carolina, focused on people from North Carolina Triangle and surrounding towns; The NC Triangle has as vertices the cities of Raleigh and Durham and the town of Chapel Hill. Printed calls for participation were posted with a title call asking “Do you use social media? ” at lunchtime hotspots for professionals and coffee shops in the area. Second, people were recruited via the TriUxPA newsletter, with 1200 local registrants. The newsletter included a call for participation on five different occasions. After a few slow weeks, there were some changes in the recruitment procedure: Eligibility was broadened to active users of either Facebook or Twitter, not necessarily both. The age range was expanded from 30-39 to 30-49. The copy on the recruitment material was edited to de-emphasize the focus on intensive users—to users—and on the sharing of personal information in favor of just information sharing, a \$50 gift card drawing was added as incentive, and recruitment was released via OSN. This study was declared exempt by the IRB with file number 12-12480.

Potential participants were screened for age and social media experience, they were required to be active users of either Facebook or Twitter. Finally, selected participants were scheduled for an interview. The initial target was to reach 20 to 30 depending on convergence in the results (Rubin & Rubin, 1995). The actual recruitment process collected 35 interested subjects, 23 interviews were recorded at which point initial notes started finding patterns, and the final analysis contains 21 interviews as two had to be eliminated due to problems in their recordings that did not allow for extracting significant amounts of data in the transcription process.

For this study, the age group was narrowed from all adults to people in their thirties and forties, a range that spans Generation X and some Millennials (or Generation Y). Focusing on generations helps control for cultural differences related to age. Generation X is particularly interesting to study in relationship with Internet technology as they are people who grew up in parallel as the technology itself: Gen Xers were in high school and college when Internet connectivity started reaching homes, as the web evolved, these people were solidifying their careers, and now being heads of family, the Internet has reached maturity and is an important part of these people's life activities including commerce, banking, research, and interpersonal communication. Gen Xers are the adult group with the largest growth in social media use in recent years (Zickuhr, 2010). Millennials are younger, they were in grade and high school as the Internet became popular and are the most active group of adults online (Zickuhr, 2010).

Procedure. Face-to-face interviews were conducted with participants in a quiet location of their convenience; most interviews were conducted at cafes, or restaurants, two at subjects' private offices and three at the subjects' residences.

Interviews were planned to last 45 to 60 minutes, in reality they ranged from 22 to 77 minutes, with most of these lasting between 30 and 45 minutes. Upon scheduling, participants were informed about the nature of the study and requested to think in advance about the scenarios they would like to discuss during the interview. See Appendix II for participant instructions. Interview sessions were completed over a period of six weeks.

On the date of the interview, participants were greeted, reminded of the main purpose of the study (to understand how people share personal information in OSN,) they were informed about why they had been chosen as experienced adult users, members of the type of users this project focuses on, why they are of particular value to the study, and the

steps that would be taken in order to make the data anonymous in order to protect their identity. Finally, they were asked to sign a consent form for their participation in the study and audio recording of the session for later analysis.

Once the subject agreed to participate, the researcher began with some general questions or comments about the location or the weather in order to establish some rapport, and then proceeded to ask participants about their general usage patterns and thoughts about the OSN in question, asking them to compare their overall ideas of Facebook and Twitter and each tool's audiences. Next, the researcher followed by asking the subject to focus on the two incidents of sharing they had chosen to discuss and taking them through the main topics of the interview in an unstructured manner that adjusts to focus on areas of interest that the subject does not cover spontaneously; these questions explore the four dimensions of the model. The interview guide can be found in Appendix I. Once the topics of relevance had been exhausted, the researcher thanked the participants for their insight into this project and noted the importance of their participation.

Analysis. The interviews were audio recorded and later transcribed by both the researcher and assisting contractors. Content analysis was performed on the transcriptions of the interviews in order to find themes (Rubin & Rubin, 1995) around people's ideas of the media, their audience and how this relates to their sharing of private information. Since the formalization of the CIT by Flanagan (1954), content analysis has been applied as a powerful method to study the collected incidents. Using a constructionist approach to grounded theory, analysis was conducted in several iterations (Marvasti, 2004): first, during the interviews, notes were taken to highlight the descriptions of the incidents being narrated. Then, audio recordings were transcribed into word processor documents (text), at this point data was stripped from any personally identifiable information. A round of initial coding was

run based on the transcribed interviews, coding schemes were developed from the interviews around the central variables and concepts: incidents were then categorized for topic, audience types, audience closeness, media privacy, information intimacy, and self-disclosure. The digital files containing the audio recordings were managed in a password-protected folder, and will be erased six months after the dissertation's defense date. Finally, the transcriptions were analyzed on NVIVO 10 for focused coding.

CHAPTER 4

RESULTS

Results for Study 1

Repeated measures ANOVA found a main effect for tool intimacy ($F=348.89$, $df=(4, 2903)$, $p < .0001$; Figure 3), responding to RQ1. With this, we find evidence to support differences in the intimacy levels that people see in different communication scenarios. Of note in this analysis is that when conducting pair-wise comparisons using the Tukey-Kramer adjustment at an alpha level of 0.05, there was no significant difference for the rated intimacy of Facebook and blogs, yet the difference was significant for all the other pairs.

Before testing the effect of scenarios and tools in self-disclosure, repeated measures ANOVA was used to test the

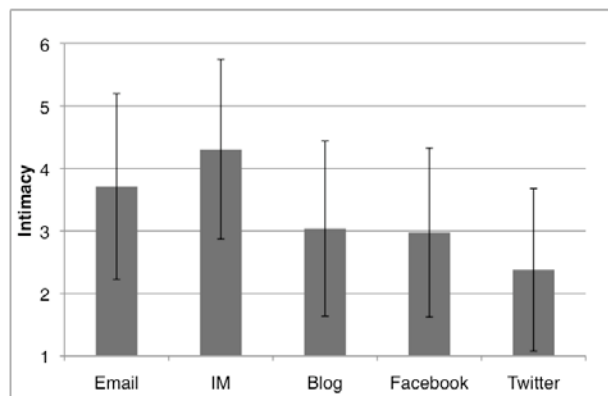


Figure 3. Mean intimacy for tools, SD in bars. Intimacy rated on 6-point Likert scale.

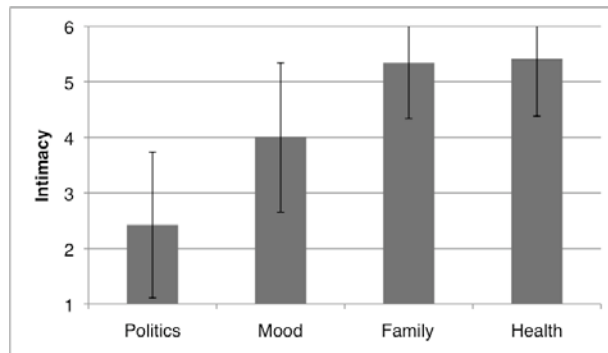


Figure 4. Mean intimacy for scenarios, SD in bars. Intimacy rated on 6-point Likert scale.

effectiveness of the scenarios in covering a range of intimate information, a main effect for scenario intimacy was found ($F=2093.95$, $df=(3,3245)$, $p < .0001$;

Figure 4). Counts on the types of people the participants communicate with via the given tools show differences for audiences on these tools (Table 5), and answers RQ3. We then proceeded to conduct multi-level regression analysis to predict OSD across tools and scenarios. The

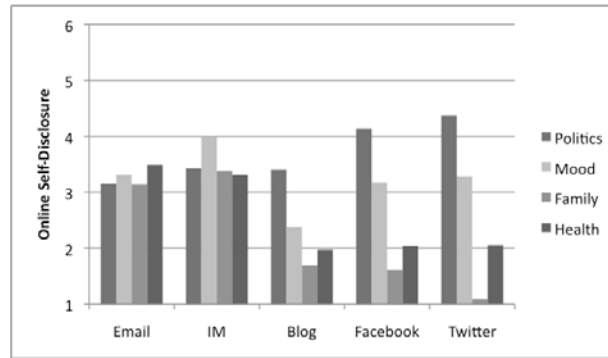


Figure 5: Mean OSD for tools, by scenario. Disclosure measured on a 6-point Likert scale.

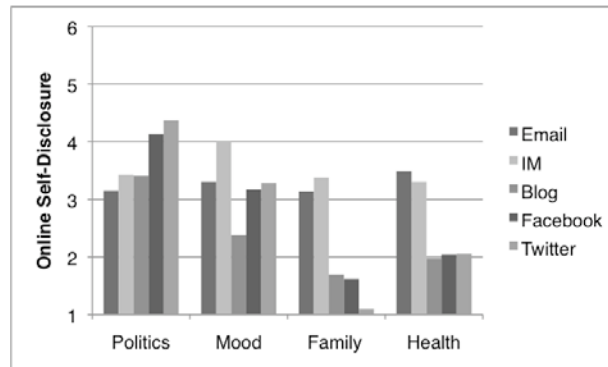


Figure 6: Mean OSD for scenarios, by tool. Disclosure measured on a 6-point Likert scale.

regression analysis (Table 6) revealed main effects for tool and scenario intimacy on OSD: with a positive relationship for tool intimacy (RQ2) and negative for scenario intimacy (comparisons of means for tools and scenarios can be visualized in Figures 5 and 6).

Frequency of use was a strong positive predictor of OSD, with experience in terms of years using the tool had a significant if small effect, and size of audience shows a negligible but statistically significant effect; this means that most intensive users display higher levels of self-disclosure. Self-rated expertise, however, was not related to OSD. Closeness to overall imagined audience for the tools was also related to OSD (RQ4), meaning that people share more on tools to which they associate communicating with closer people. Sex was positively related to OSD, however, education was not; women displayed higher levels of disclosure than men, and there is a slight but significant decrease in disclosure levels as age grows. All

of the psychometric measures significantly predicted OSD; people with higher tendency to disclose in general were more likely to disclose scenarios across tools, and people with higher scores in either public and private self-consciousness were also presenting higher scores in OSD. Finally, the two largest countries of origin in the sample were compared via a dummy variable in the regression in order to test for cultural differences, revealing that participants from Chile displayed significantly higher OSD scores than those from the USA.

Results from Study 1 show that personal (psychometric and demographic measures), social (closeness to audience, country of origin), technological (tool intimacy and usage measures, frequency in particular), and contextual (scenario intimacy) factors play a role in

determining online self-disclosure. However, quantitative measures limit the depth of understanding in this phenomenon; before exploring structural relationships between these dimensions towards a theoretical model, it is necessary to turn to qualitative research that will allow us to reveal nuances of the problem. Given that

Audience Type / Tool	Email	IM	Blogs	Facebook	Twitter
Spouse or Partner	731 (60%)	452 (46%)	87 (18%)	387 (38%)	135 (18%)
Sons & Daughters	464 (38%)	247 (25%)	63 (13%)	290 (29%)	58 (8%)
Girlfriend or Boyfriend	638 (53%)	521 (53%)	83 (17%)	445 (44%)	137 (18%)
Parents	901 (75%)	407 (42%)	111 (23%)	484 (48%)	86 (11%)
Siblings	779 (64%)	453 (46%)	108 (22%)	611 (60%)	132 (17%)
Grandparents	406 (34%)	124 (13%)	65 (13%)	193 (19%)	33 (4%)
Cousins	667 (55%)	351 (36%)	98 (20%)	672 (66%)	103 (14%)
Friends	1,126 (93%)	892 (91%)	311 (64%)	980 (97%)	564 (75%)
Coworkers	1,088 (90%)	583 (60%)	214 (44%)	555 (55%)	386 (51%)
Colleagues	1,095 (91%)	533 (54%)	267 (55%)	602 (59%)	485 (64%)
Acquaintances	772 (64%)	291 (30%)	239 (49%)	642 (63%)	407 (54%)
Online friends	678 (56%)	505 (52%)	354 (73%)	684 (67%)	610 (81%)
Online fans	314 (26%)	119 (12%)	356 (73%)	292 (29%)	478 (63%)

Table 5: Rated audience types by tool; counts and percentages.

OSD	All Countries	Chile / USA
Scenario Intim.	-0.242*** (0.01)	-0.272*** (0.01)
Tool Intimacy	0.211*** (0.01)	0.202*** (0.01)
Tool Experience	0.026*** (0.00)	0.031*** (0.00)
Tool Frequency	0.321*** (0.01)	0.316*** (0.02)
Tool Expertise	0.040* (0.02)	0.024 (0.02)
Audience Size	0.001*** (0.00)	0.000*** (0.00)
Aud. Closeness	0.093*** (0.02)	0.105*** (0.02)
Sex (F=1)	0.157*** (0.03)	0.197*** (0.03)
Age	-0.007*** (0.00)	-0.006*** (0.00)
Education	-0.002 (0.00)	-0.003 (0.00)
GSDS	0.022*** (0.01)	0.016* (0.01)
PrivSC	0.014*** (0.00)	0.020*** (0.00)
PubSC	0.024*** (0.00)	0.024*** (0.00)
USA/Chile (1)		0.175*** (0.04)
Constant	0.538** (0.20)	0.544** (0.21)
Observations	14509	11357

*t-Statistics in parentheses. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$*

Table 6. Regression Estimates for Multi-level Regression Predicting Online Self-Disclosure.

the imagined audience is a rupture that OSN present to privacy management, and that there is important but insufficient research with this focus to fully unravel this dynamic, the imagined audience is a central part of the follow up study that aimed to clarify how imagined audiences affect perceptions of the media and OSD.

Results for Study 2

The recruitment process focused on finding some subjects who were particularly knowledgeable on the media in order to understand how people are sharing parts of their personal lives while being aware of the situation, its risks and benefits. I had the privilege of interviewing subjects who were experienced and reflective users of the media; there were several participants who used multiple communication channels and had always been at the front of the adoption curve, always exploring and analyzing new means of communicating with their peers in a critical and active manner. This was highly valuable in the nuances that these results reveal. The following quotes from the participants have received some minor editing to improve clarity when shifting from spoken language to written format.

These results find support for the general model proposing that a thorough analysis of online self-disclosure needs to consider factors from personal, social, technological and contextual dimensions. These areas were all strongly represented in the discourse and are deeply interconnected in complex manners. Online self-disclosure is indeed a very complex

problem for people in terms of their privacy management, yet the people we spoke with seem to be very skillful at managing their behaviors. Overall, these stories speak of people who feel like they have more to gain from sharing their lives online than by keeping information to themselves “I feel like I've gotten a lot more out of being emotionally or somewhat connected to people than becoming a hermit (P 11.)”

There is an interesting reflection from one of our interviewees about how online media adoption and its role in the evolution of culture; he discusses how the active Internet users are at the forefront of social change: “...the stuff that is really fascinating is more Internet culture than popular culture. What we do online is a leading indicator of what we do offline and how the culture moves (P 14.)”

We spoke to a person who framed her online sharing in the context of her family history, which reminds us that the practices we are sharing are not a complete departure from people’s pre-Internet behaviors, but just an extension and improvement of these. Here we see how she reminds us that writing personal diaries is not something new, and neither is sharing these with a circle of trusted others. As we will see during the presentation of these results, the major departure in the dynamics of OSN is the inability to control the audience, yet this seems to generate problems only rarely:

I have a family history that goes back a couple generations of writing family chronicles or diaries. For instance, my grandfather wrote the [name] chronicles that was kind of stories or travel logs of when he would take the family camping or to the outer banks to go fishing. He used the tools of his time, a typewriter and a mimeograph or Xerox machine, and he sent those around. My other grandfather was similar. He used a typewriter every day to type out a really short kind of itinerary of what he did, went for a walk, went to Mass, went to dinner, went to bed. So I created a family blog called the [name] chronicles online, and tried to get my family to share more of these things in a public way. (P 21)

We had learned from Study 1 that both perceived audience and media channel have an influence on people’s online self-disclosure behaviors, and that different channels have

different audiences. This time, we wanted to dig further into this relationship in order to understand the direction of this relationship. Participants were asked if once they decide to share particular information about themselves, they think of audience or channel first (RQ6), if the media selection is driven by the audience or the tool itself: 14 of the participants (70%) said the audience determines the channel for them, five of them said (25%) it works in either way for them in different contexts, and only one (5%) said this did not apply to him because he wrote for himself and did not have particular audience projections (Figure 7).

The people I have in mind make me select a particular channel. Sometimes I'll say "This is a link I want to share, where should it go better, should it go on Twitter or should it go on Facebook?" And sometimes I'll do both, and sometimes I'll just do one, and I'll do the whole thing where it goes to Twitter, Facebook, Google Plus and Livejournal all the same, but that does not happen very often. But yeah, it definitely depends on who is available in that channel that I think should see it. (P 08)

We now continue to present the results based on the four dimensions of the model, how the discussions explored the personal, social, technological and contextual dimensions of online self-disclosure and some particular variables related to these. As we will see in the quotes from the participants, the variables are interconnected across dimensions.

Personal. There were important differences in what people consider personal information and how they feel about sharing it on social media. Subjects evidence this in their connections' behavior:

You can feel very public if you want. It depends on what you want to do, it really depends, I think there are a lot of people who are only posting "light things" to say or posting to share that it's an event. [... people on Facebook] reveal [their] personalities. Some people are more closed, they probably are not going to share public information

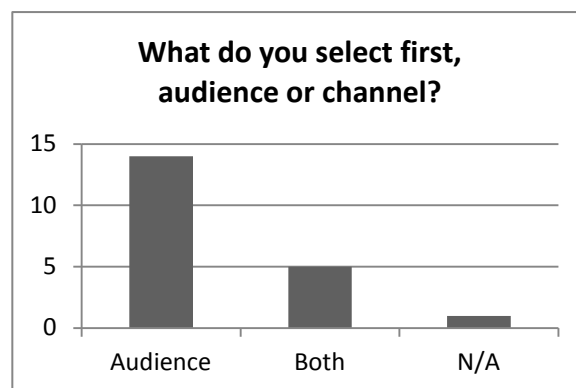


Figure 7. Direction of audience-channel selection process, asked once per participant.

from them or their family, and there are people who don't care at all and they share everything, that's really on you. (P 13)

It was apparent from the interviews that people develop complex patterns of social media behavior that are unique to them according to their personality, beliefs, social reality and technology expertise. Although for some of the interviewees the terms personal and private did not have much difference, others make a sharp distinction, and this determines what they discuss online:

There's a real distinction for me between personal and private. I'm very comfortable, sharing personal information. There's a couple of examples... my partner and I had a fight. I was really angry with him and unhappy with how the fight went down. And I tweeted about it and what I tweeted was just without context it was "One of these days I would really love it if you would prioritize being kind to me over being right." you know, no context, no names. [...] Private information is information people don't have the right to know. I don't like it when people are doing birthdays on Twitter, because your birthday is used as a credential, or an identity verification at least. [...] So I'm very comfortable putting personal information on Twitter, I'm pretty tentative about putting private information on Twitter. (P 16)

Overall, participants felt like the rewards of sharing online compensate for the risks.

At the same time, and they felt confident in their decisions.

I tweeted an announcement of his birth and a picture of him 90 seconds after he was born [...] I felt comfortable having shared that information and because it was a hospital setting, because I worked at that hospital, I was very aware of additional layers of privacy concerns. (P 21)

Some subjects used sophisticated mechanisms for managing who had access to which pieces of information. One of the subjects has a secondary zero-followers Twitter account, which nobody can read, where he can freely vent during the day, like screaming into a blind hole. Another subject has a secondary, pseudonymous, Twitter account where he shares an unfiltered version of himself with both close friends and total strangers. Yet another interviewee is deeply invested by principle to make all her broadcasting public and this determines her tool of choice:

If they want to see what I am doing they can go and do it in an open forum not a walled off [one]. There's nothing that pisses me off [more] in this social media

construct, than that. [...] They [Facebook] are locking away content for their benefit, for their profit. And I believe strongly in a free and anonymous, and uncensored Internet. And that is at the core of why I'm on Twitter rather than Facebook. Twitter is compatible with that principle, and Facebook is not, and Google Plus not at all. (P 16)

There was a variety of motivations for sharing and benefits from disclosing, although the catharsis and connecting with loved others appear as a recurring factors, just as described through decades of SD research:

For me, Facebook is sometimes like a catharsis, especially because I don't have my family close, my friends, so I know they are going to understand my feelings. They are probably going to be in my shoes, you know? They will share something, or they will reply something, but it's comforting, sometimes. (P 13)

There were also clear mentions of the need to reach out: "Because I was feeling alone at the time and it was a way to connect with my friends" (P 20). Some subjects also mentioned that social media has become such a regular part of their lives that it feels natural to share: "It was just good news. Actually I posted it before I called my wife [laughs]." (P 05)

There were also a couple of subjects who discussed another frequent benefit of self-disclosure, self-clarification:

Oh, yeah. One, I felt much better. I was able to understand my own feelings about it and two, it was nice to get it out, I would say nice to put it on paper, but nice to put it down. Even before getting any response. (P 08)

Other subjects mentioned the power and practicality of OSN for reaching their people:

It was sort of the fastest, easiest way to communicate this news to a lot of people, without having to go to the unpleasant details over and over and over again, feeling confident that I would get a lot of support from my friends once they found out the news. (P 20)

Yet there were others who had motivations of a societal order:

Because I wanted people to think, because I want this to change, because I was hurt. And I envision a world when stuff like this doesn't happen to anyone else's grandmother, and I don't know how to get us there, and I'm hoping this might be a tiny, tiny, little step. You know, people to acknowledge (that this needs to change). (P 16)

We have another great image from this same subject but from her other post, on how rewarding this experience can be, covering aspects of catharsis, self-clarification, and social support:

After posting it, before people started to reply, I felt lighter. [...] I articulated the thing, the particular thing that was bothering me, and being able to identify and express it, made me feel better. And then after everybody started replying, I just really felt loved, and supported, and better, confident. (P 16)

In the large majority of cases collected, participants felt good after having shared their thoughts: 29 (69%) of posts made people feel better, nine (21.4%) the same, three (7.1%) tense, and only one post was regretted (Figure 8). Interestingly enough, this last person had posted while drinking, and acknowledged having lower inhibitions at the moment. This post generated turbulence in his workplace:

Not very [deliberate]. It was a spur of the moment kind of thing, I had a couple of drinks, so, lower inhibitions, and that particular post has made me much more cautious of what I share. The reaction to it made me more cautious of what I share. (P 20)

These subjects were being fully deliberate and truthful when sharing personal information. All of the participants said their posts had been truthful, yet described their truthfulness in different terms: 17 (40.5%) posts were described as absolutely truthful, nine (21.4%) as very truthful, 15 (35.7) as truthful, and one (2.4%) was truthful yet sarcastic

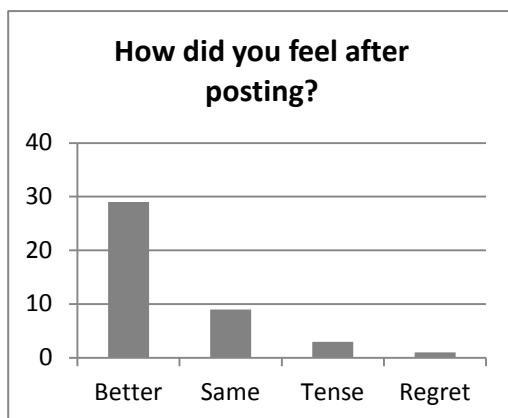


Figure 8. Change in emotional state after sharing the post. Data is sum of two stories per participant.

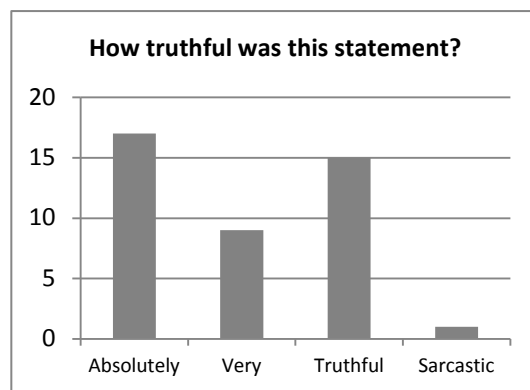


Figure 9. How truthful people were being at the time of sharing. Data is sum of two stories per participant.

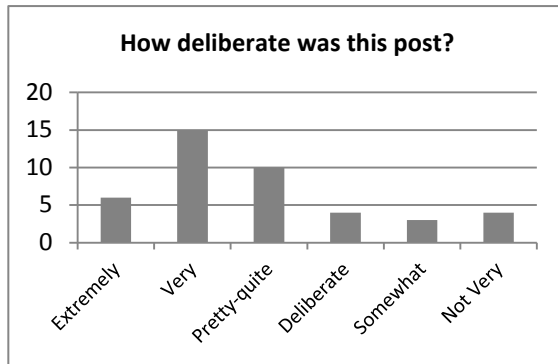


Figure 10. How deliberate people were being at the time of sharing. Data is sum of two stories per participant.

(Figure 9). Posts were also largely described as being deliberate: six as extremely deliberate (14.3%), 15 (35.7%) very deliberate, ten (23.8%) as pretty/quite deliberate, four (9.5%) as deliberate, three (7.1%) were somewhat deliberate, and only four (9.5%) were not very deliberate (Figure 10).

There was also a range in how revealing people considered the discussed posts to be (depth of disclosure): Three were described as extremely revealing (7.1%), seven as very revealing (16.7%), ten were pretty/quite revealing (23.8%), 13 were somewhat revealing (31%) and nine were not very revealing (21.4%) (Figure 11).

Participants were also asked whether they had planned on writing their posts, 25 (71.4%) of the discussed posts had not been planned and ten (28.6%) had been planned in advance (Figure 12). This is interesting because it speaks about how these people have become adept at sharing in the moment, yet in a conscious and deliberate manner.

Social. Social connections appeared once and again during the participants discourse. The most frequent of all words in the corpus of data was “people,” with 875 occurrences, representing 2.75% of all words of five or more letters spoken by participants; the word “friends” comes in at fifth place with 307 mentions (.96%). Words

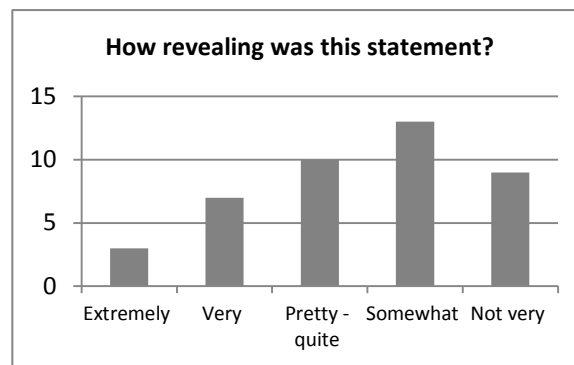


Figure 11. How revealing the posts were from the participant’s point of view. Data is sum of two stories per participant.

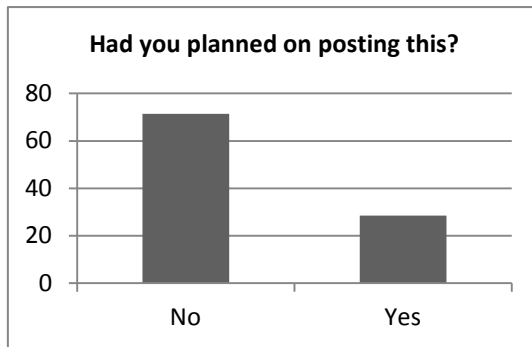


Figure 12: Anticipated planning of post. Data is sum of two stories per participant.

of five or more letters were included in this frequency analysis (Figure 13). This was also clearly articulated on the discourse of what these communication tools mean for people:

I've written about the four C's: connections that lead to conversations that lead to collaborations that reflect a community. It's a way of building a network, being part of an overlapping network, finding connections, coming up with a really interesting conversation that leads to collaboration. It's a community-building tool. (P 21)

These interviews also revealed that OSN can play an active role in people's social lives, both for people who are actively social "I think of those people on a regular basis, a lot of them are my regulars that I hang out with a lot." (P 14) as well as for people who are far from their loved ones:

Well, it is very sad, but I think [Facebook] is a very big part of my socializing, because I have a kid, and I am a graduate student, so I don't have time to hang out with people. So I use it not only for posts and for checking, like, what's up with people, I chat with people on FB. But my main view of FB is [that it is a] distraction [from work]. (P 17)

This subject was trying to reduce her Facebook usage.

There was a range of mechanisms that subjects use for determining who enters and stays in their networks, from not doing anything at all to actively managing one's network:

I don't follow just anybody, I use a rule where it's usually people I know in real life, and I weed regularly, which is not easy, and say I say 'you know, I haven't really thought about this person in a long time, why would I want them there' and I try to go through it. I'm usually a pretty open person but Facebook sort of became to me a place for super intimate, personal things. I been pretty recently un-friending people that I know in real life, I just can't take the gun craze anymore, so I just let them go. (P 11)

Subjects consciously oriented their discourse to an audience of others they keep in touch with through the media. They often cited the capacity of keeping in touch with friends



Figure 13: Wordcloud, frequency of recurring terms from interview corpus data.

and distant contacts as a motivation for using online social networks. Here's an example of how these technologies can enable different levels of social contact:

P 18: [Facebook] means I can share parts of my life that I want to share, and I can keep up with people who otherwise I would not even know were still out there. Both are important.

Researcher: What does this [private] Facebook group mean to you?

P 18: A lot. These are my... these are the girls who know the most about me.

R: What is the role of the group?

P 18: Almost like a therapy group

R: What role does the FB group play with regard to the face to face group?

P 18: Just to let everyone know what is going on, because we normally only see each other once a week and when we have things that are coming up like this we can let each other know immediately, or sooner than we would see each other.

Subjects discussed the value of participating in shared conversations and the

possibility to reach others they had lost access to. There were also mentions of Twitter—

being a mostly open channel—as a broad community where people have collective

conversations “the Twitter community has sort of become my social, social media, my social forum.” (P 16). One particular interviewee had a notable reflection that further included her relationship with Facebook as a company:

I was writing about the contract I get with these, what am I getting in these tools and what are they getting from me using them? And how I might adjust my usage so that it feels fair. So with Facebook, I'm getting family, my family wouldn't know me at all, I don't see them [...] So Facebook has given me a family. That is worth the information that they are getting and using to market. (P 03)

Study 1 had found some cultural differences in OSN, this study did not have a large enough sample to make such kinds of comparisons, although some of the conversations suggest that in some countries it is more normal to discuss politics than in others. And on the topic of cultural differences of OSN behaviors, one of the subjects explained us that among her friends in Poland, it was very common to use modified names for their Facebook accounts, this would be an interesting area of research in itself.

We also found in the conversations with participants that the imagined audience people project on these tools is constantly shifting. This sense of audience is influenced by the context, different topics of conversation will engage different subsets of their total possible audience, and different times of the day are also associated with different receivers:

There was really no crossover in those groups of people [for each post]. One group of people was the acquaintance friend type of person. And the other group was more like I said, the co-worker, who you communicate with to learn from or to help learn. Not necessarily office. (P 09)

I think of audience more during the daytime because they're at work and because of Twitter being the way it is I know that there are some people only following like 30 or 40 people so they're probably going to see every post that everyone makes but I also know that for the most part people are looking at it at a specific point in time and so daytime twitter and nighttime twitter seem to be different audiences. And I think I worry a little less or think a little less of who is going to see a post at 11 o'clock at night than I do at 1 in the afternoon. (P 14)

Although most subjects had hundreds of connections on their platforms, when posting, they tend to orient themselves to the people they interact with most often, a closer subset of their potential audience composed of people they trust and keep in mind regularly:

Some fairly close, I mean some I would, some I would call really close acquaintances, others I would follow into a fire. So I mean in that subset of people... Some, you know, I would consider close friends, not necessarily a friend in the popular sense of the word but a close friend, and others I have known for almost the entirety of my life, and still others that I have known much shorter periods of time but that I would literally follow into a fire. (P 09)

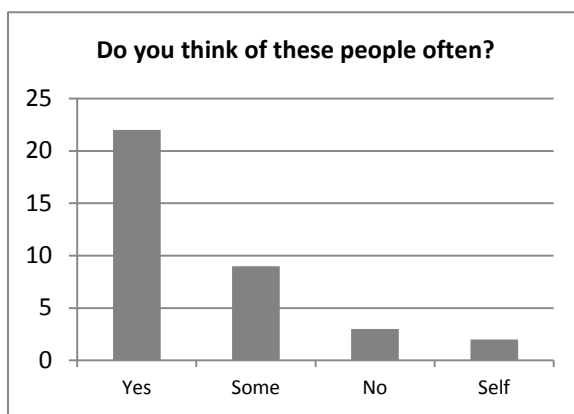


Figure 14: Thinking of audience often. Participants were asked whether they usually kept in mind the people in the audience they had projected their posts towards. “Some” means they think frequently of part of this group. “Self” means the person had not projected towards an audience, but posted for their own sake. Data is sum of two stories per participant.

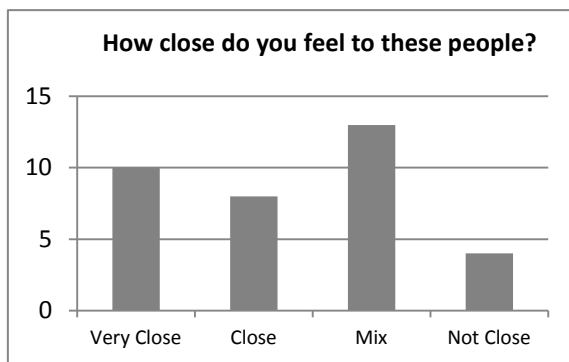


Figure 15: Closeness to imagined audience. How close people felt to the audience they were projecting their posts to. Data is sum of two stories per participant.

When asked if they think of the people in their expected audience for these particular posts frequently: 22 (61.1%) were yes, 9 (25%) were cases where they think often of some of the people in that audience but not the rest, 3 (8.3%) said they don’t think of this audience often, and for 2 (5.6%) of the studied cases the subjects said they had written mostly for themselves (Figure 14).

When queried about how close they felt to these expected audiences: 10 (28.6%) described them as very close, 8 (22.9%) as close, 13 (37.1%) said they felt close to some but not to

others, and on 4 cases (11.4%) people felt their expected audience was not close people (Figure 15).

Although subjects oriented themselves to certain types of contact, they didn't always have specific people in mind when disclosing online. They only thought of particular people under specific contexts that made some subjects relevant, such as the mention of shared friends, or particular topics that may engage specific people in their audience.

When disclosing, subjects rarely expected their audience to re-share their posts, making them available to newer social circles. This is interesting because it seems to support Petronio's Communication Privacy Management theory, in how information shared within certain boundaries is not expected to be shared beyond such boundaries. They expected others to share their disclosures under specific contexts, such as when sharing joyful and proud moments.

It is also important to note that for the disclosure acts discussed in these interviews people overwhelmingly shared information similar in nature to what they had seen their peers sharing previously: 38 (97.4%) yes, and only one post no (2.6%). This resonates with concepts of reciprocity and the establishment of social norms that help define what adequate sharing is in determined channels.

Finally, we had a moving story about how one cannot control what others will reply to our posts, and this can generate troubling conflicts in people's relationships:

So I ended up shutting my whole Facebook down for a while, this is supposed to be fun, entertaining, it shouldn't be affecting my relationships with real people. I knew I'd eventually bring it back, but I thought maybe after the elections were over, when emotions weren't as high. But my relationship with my friend hasn't recovered. And that hurt me because she was a really good friend and I feel like I lost a friend over a Facebook post. She agreed with what I wrote but didn't agree with how people were attacking her father verbally. (P 15)

Technological. The ideas people have of the media, and their history of interaction, also play an important role in what people share.

I think I have positive feelings about Facebook, via some of the feelings I have for the people I have on the network, less than the technology or the company. Frankly, I try not to worry about it but the way they have handled privacy I feel it's extremely ham-fisted. I also think it's an amazing spy network. (P 11)

Subjects who used these channels frequently felt that sharing information became a natural act for them. "Facebook has become such a natural part of my life, it just seems natural to share the picture, to make the post. It was more interesting than waking up and complaining about how I didn't want to exercise." (P 10)

I'm online all the time, so I'll go back and forth between Facebook to work and Twitter to work has never been a challenge for me. Does it get in the way of my work? No, I actually get paid to do it! So, you know, it's just part of what I do. (P 11)

The intimacy that these tools can afford is influenced by how others interact in the media, again hinting on the development of social norms:

I don't think they are very intimate either of them. If I had to say one is more than the other, it's probably Facebook is more, and that's only because of the type of people I follow, they tend to share on Facebook because they see it as private. But people talk about, the death of their wife, they don't necessarily tweet it out there. (P 03)

And while some participants were skeptical about intimate conversations on these channels, others were not, and described the language of online intimacy, with notes of social grooming:

Intimacy means I think of intimacy with my wife, very deep understanding of who each of us is, there's physical intimacy, emotional intimacy. Public intimacy means recognizing, actively listening, and re-sharing, retweeting, reposting, are all ways of showing a close connection to someone. Someone I follow on Twitter could be thousands of miles away, but because of our interaction of sharing each others tweets we can really show intimacy or closeness. (P 21)

One very interesting concept that was mentioned spontaneously by different participants during these conversations was the idea of a relative anonymity that OSN offer. Despite having their own names and photos associated to each post, OSN present a gap

between them and their audiences that makes them feel anonymous in some way, and this feels differently for them on Twitter and Facebook:

Again, it's more of who I think the audience might be. I'm actually a little more open in a public forum because it's almost anonymous even though you have a username. The audience is so broad no one really cares. On Facebook I'm more inhibited because I know its going to get personal real fast, my mom might see it or my aunt might see it, and then there's going to be a thousand questions or follow up, whereas on twitter sometimes you can just put something out there and you might not get any responses. (P 15)

Yes, absolutely, I think I feel more anonymous on Twitter than I do on Facebook. Event though, just the lack of being able to elaborate very much, and there seems to be more plausible deniability on Twitter than on Facebook, because it doesn't have as much personal information about you. There's still my name and face on Twitter but there's not as much density of personal information that Facebook likes to collect. (P 08)

For some of these people, their opinions on the company behind the technologies had an important incidence in their usage. Subjects had a clear opinion of how the principles set by these companies affect the shape of the media and its social consequences, and what this all means for their relationship with them as users. Other people stressed about loss in trust due to constant policy changes:

I'm not using Facebook, I made that decision a long time ago, to avoid it. I think they do a lot of things wrong or unclearly. And they change the rules all the time, which is not very conducive to being private or confidence-building. (P 01)

There were also important differences in how people used the privacy settings on these platforms. Twitter has only one option that allows users to make their whole accounts public or private, if private they will only be read by pre-approved followers. Most people use Twitter in an open manner. Facebook, on the other hand, makes all connections reciprocal, and allows users to cluster their connections (friends) into different lists in order to later set up many possible combinations to what kind of information is reached by different friends based on these lists. Some of the subjects make use of these controls to carefully manage who has access to which posts, and have a sense of confidence in having

control over their information: “So ‘my privacy settings are working’ because, people can't necessarily just find me, which I like. I say I hide out on Facebook, that what I feel comfortable sharing what I do share, what I want to say.” (P 10).

On the other hand, there were people who had problems when changes in the privacy controls interface had resulted in an unannounced modification to the settings they had thoughtfully adjusted, and her presentation management was affected when the shared information left the boundaries of Facebook into office conversations:

But it has failed sometimes, after Facebook changes something in privacy. Around the election, actually, all my settings where down because they changed it, so I thought I was posting this without the work environment [in the audience]. With my work environment I wouldn't be so intolerant. [...] And I know that one of my colleagues shared some information with some of my bosses, he commented on the comments on Facebook, when I thought I had it blocked from my bosses, or anyone in my job, my political views, because it's not relevant. And I found out through a conversation with them, that actually they saw my post. So then, the answer your question, did somebody see my post without my knowledge, yes they did, and I was upset about it, after I found out. (P 17)

However, others do not trust the privacy controls altogether, and prefer to think of Facebook as a public forum: “(Facebook is) not private at all [chuckles]. I mean, sure, there are privacy controls, I just don't. I try not to post things on the Internet that I wouldn't expect to be somehow out in the world” (P 08). Another reason for lack of trust in Facebook's privacy controls was that regardless of any privacy setting, the company is still having access to people's posts: “(Facebook is) not private! [laugh]. Even if you try, you know? Lock down your privacy controls (yet) it's clear from the advertising that gets generated, almost immediately, that they are mining your information” (P 20). Yet others think of it as a public forum just out of principle: “I don't post anything I wouldn't want the whole world seeing, so I don't, you know, if it's something where I think I would be embarrassed if someone saw that, I don't put it up.” (P 05).

It was very interesting to discover how some people went even further and have a highly negative opinion about Facebook as a company. In fact there were only four people who used the term evil in the whole body of interviews, and it was always used to describe the difference between Facebook and Twitter as companies:

Hahaha! You know, I'm just ready for there to be something other than Facebook that does what Facebook can do. I don't like Facebook. I would not use it if you know it wasn't where everybody was. So I don't have much trust in either of them. Twitter I see as less evil, I guess, but you know... (P 02)

[Facebook] again, they are sort of, they are evil in some ways in that they are insidiously trying to get you to come back to their website and try to get you to not leave their website to do other stuff. They also make it hard to sort of take (information) from Facebook. [...] Twitter as far as I can tell is benign. All they seem to do is provide a service. (P 07)

I think that twitter is a more ethical company, [...] And Facebook I think is a little more naked capitalism, but I think the reason why I use them less is a lot less my feelings towards the company and more about how Facebook controls the user interface in a way that I don't enjoy. (P 14)

I think Twitter has done a really good job, I don't think they are perfect. [...] Facebook is the evil empire. There's pretty much nothing good I can say about Facebook. The only, only reason I'm on it is because I overcame my revulsion for their policies to give them as little data, and as much fake data as I could to get out of it what I wanted. (P 16)

This person had only opened her Facebook account six months before the interview after years of pressure from her sister and friends; she has only six friends on her account with a fake name.

Although we asked people what device they used to share these posts from, and how long they had been using the particular devices they posted from, this did not seem to be related to their disclosure behavior, the stories seem to suggest that the relationship

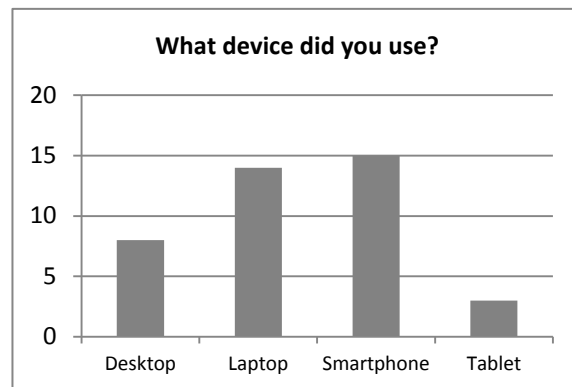


Figure 16: Device used for sharing post. Data is sum of two stories per participant.

people develop with the media channels and their audience is more relevant for their sharing behaviors than the physical devices they use when sharing. A tally of the used devices shows a range (Figure 16): Eight posts had been shared from a desktop computer (20%), 14 from a laptop (35%), 15 from a smartphone (37.5), and three from a tablet (7.5%). Yet there were mentions of how important mobile phones were to access.

The phone pretty much flipped my usage patterns completely. I think that tools are so important... connections and links and being able to keep up with contacts the way that I use those two. I put more thought into it, and I think that Facebook is a much better way of doing a lot of things that I used to do. (P 05)

Contextual. During the conversations with these participants it was also evident that the particular context for each post plays an important role in the process of online self-disclosure:

So, I kind of keep control, I try to keep control over that. You know, like, when I got here, I checked in here, and I put that up on Facebook because I've never been here before. I had a really good brownie a few minutes ago; I posted it, you know. But if I were here to talk about a job... I likely wouldn't even put that in, you know what I'm saying? So there are degrees of private. I'm, I'm fairly comfortable with it, but again, I try to keep an eye on it. (P 09)

Topic and emotional state can be incorporated into rules people use for their disclosure behavior. An interesting theme that appeared during these interviews were personal losses. Given what we were prompting people to discuss examples of disclosing personal information, we saw a variety of approaches to dealing with grief and its online expressions. We had both stories about not discussing loss online, and examples of doing it:

Another thing was when my grandmother died. That was one of the things that I chose not to put out there, because I found it more... [noise] they know what happened, they know how much my grandma meant to me, but my circle in general, it just didn't feel like 'I'm going to put this out there and I know what the reaction will be'... 'oh, I'm sorry'. I don't really know why... I guess I just didn't want to go through all that (P 05).

Last year my grandfather passed away around the same time as a friend of mine from High School. It was very traumatic obviously and it's not the kind of thing that I would have thought that I want to share on Facebook. But I ended up writing a relatively long post, several paragraphs, about the things that each person meant to

me and then posting it on Facebook. I think I actually posted it publicly, not just friends locked, just because I wanted to say "these people are important, this is what they meant to me, and this is what they meant to other people". And that is probably one of the most personal things I've shared within the last six months or so. (P 08)

This last example shows how Facebook was used to memorialize loved people in an attempt to engage with an audience. Most interview subjects had a set of principles to define what is appropriate to share:

I will never post something in anger or boredom. Those things annoying when other people... or sickness. Anger, boredom or sickness don't get posted. It's a policy, and it's because it annoys me when other people do this. Generally, if I post, if I write something and decide not to post it it's because I thought it was funny or because I thought it was somehow insightful, and on the passage of time realize it was not. I don't want to contribute just noise. I want to have this sort of economy of fewer, more valuable (P 03).

I have a general set of rules regarding what I post about my family and children. When they went to a school where they wore school uniforms, I never posted them in their uniforms, never said where they went to school, I never post about sex, about my intimate relationship with my wife, money, finances, very careful about sharing anything about work. (P 21)

Politics was another recurring topic in the discussed posts; there were several people who avoided speaking of politics online:

I have friends who post transcripts of their conversations with their kids, and I don't really do that. That seems more personal. And then politics: I have strong political views, but they don't generally make it online. Partly because I know that the audience of friends and family you know, it's mixed and half of them would agree with me and half of them wouldn't, and I like for the interactions that I have with people in real life not to be sort of tainted by whatever they would have seen online. (P 02)

I'm hyperaware, so I'm weary of it, but for the most part, certainly no health information. I share mostly things about kind of what like... location information sort of where I'm at or, you know, what I'm doing, I share that on my personal account. If there's something funny that my kid says or does or something, then you know, that's where that goes. I don't post pictures, so it's only text and it's usually limited to kind of an event or a location or something that happens you know at home. I don't talk about health stuff, I don't talk about family stuff. Like family and politics, I don't talk about politics on the personal one, I try not to say too much about nerdy professional things. Because I already have an outlet for that... and the other way around. (P 01)

In this case, the subject is comparing rules for his private and public Twitter accounts. Given that the interviews were conducted a few months from the latest presidential elections in the US, some of the stories revealed how important the electoral discussions become for people, and how they stir emotions and they feel compelled to state their opinions in spite of their own set of rules for online sharing:

Last October, and just prior to the election, so Facebook really got divided with folks regarding political beliefs, there was name-calling and all that. And I don't like politics a lot but I also don't like to sit and listen to people calling names. I made a political post, with a YouTube link, and it was a recap of the daily show, and I posted that with some commentary from myself. (P 15)

Some interesting environmental conditions that appeared in these incidents; people share from locations that are familiar to them (Figure 17): 28 (70%) of the posts had been shared from home, five (12.5%) from work, three (7.5%) from their car, two (5%) from other type of private room, and two (5%) could not recall where they had posted from. Interestingly enough a full 100% (38 cases) of these posts had been shared from places where the subject felt comfortable:

It's my kingdom! I meant it's this nice big office, it's mine, but it doesn't have closed doors, and I have a cat and two dogs, sometimes I'll have one of the dogs and the cat, simultaneously, on my lap, helping me type. So, very cozy, yeah! [laughs]. (P 06)

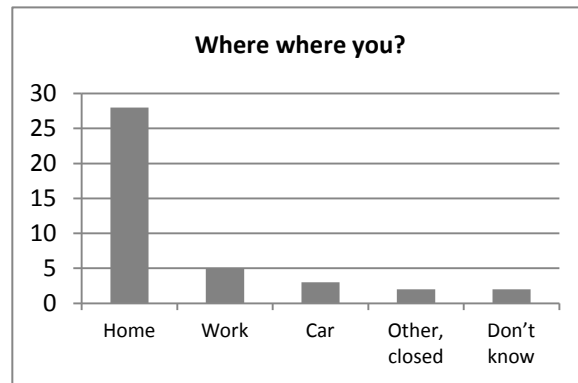


Figure 17: Location from where post was shared. Data is sum of two stories per participant.

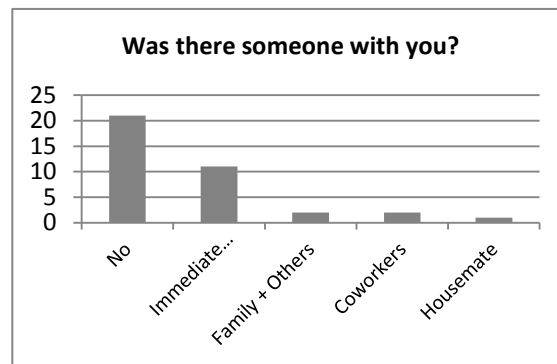


Figure 18: Social company at the moment of sharing the post. Data is sum of two stories per participant.

Additionally, this information had been posted at times where they are either alone or with trusted others (Figure 18): 21 alone (56.8%), 11 with immediate family (29.7%), two (5.4%) were in company of their immediate family plus trusted others that were determined by the physical context, two (5.4%) were with coworkers, and one was with her housemate (2.7%).

CHAPTER 5

DISCUSSION

Discussion for Study 1

This survey study shows results for online self-disclosure over multiple CMC tools, across a variety of topical contexts from an international sample composed of experienced adult users. There were significant differences in how people perceive intimacy in different channels (RQ1), and how that channel intimacy affects people's OSD (RQ2). This finding supports the basic MEP premise that different tools have different roles across a larger media landscape. This study also presents evidence that intensity of use is associated with higher levels of OSD, and frequency in particular: people who use social media with more frequency will be more likely to disclose personal information on these channels. This can be seen as support for Social Penetration Theory where people disclose more to others they communicate with more frequently, and the channel in this case could be regarded as a proxy, where people develop a sense of familiarity with the channel and its audience. Social Penetration Theory can also be combined with Social Response Theory for another explanation; if people treat technology as social actors (Social Response, Reeves and Nash, 1996) then frequency of use will be assimilated by people as developing a relationship with the technology, and the deeper the relationship, the higher levels of self-disclosure (Altman & Taylor, 1974.)

This study also found support for different media supporting different audiences (RQ3), and people disclose more personal information on media where they feel a closer attachment to its associated audience (RQ4). Other factors that were associated with OSD were sex (higher for females), which points back to a long-standing debate over the role of gender in self-disclosure. Finally, given the international population, the two largest countries were compared, revealing higher levels of disclosure for people in Chile, which could be explained by the concept of *familiality* other times discussed in Latin American cultures as related to self-disclosure (Diaz-Peralta & Dowey, 2003.)

Overall, this study presents support for an approach to analyze OSD with consideration to the four dimensions proposed by the project's model (Figure 2).

Discussion for Study 2

The interviews collected a rich data set of nuanced stories about how adult users of social media disclose personal information. As had been planned, the recruitment procedure allowed focusing on experienced and frequent users of the tools; many of the subjects had very clear and strong ideas about these channels, their usage, their audiences, and their relationship with the companies behind them. There were also some participants who used determined sets of rules to decide what to post and what not to post.

The CIT proved a useful tool for studying online self-disclosure and unraveling the complex environment that surrounds acts of disclosure. Subjects were able to recall many of the details of their posts, painting a rich picture of the context for their disclosures and how some factors were important for their decisions.

There are important distinctions in how the shape of the channels allows its users to connect in different ways, as well as how particular social norms evolve in these channels. It was brought up by some of the subjects how Facebook enables more reflective and

extensive conversations with others, while the 140 character limit per post on Twitter has an important influence in determining what type of ideas people put out, how these are expressed, and what type of response is to be expected—this goes in strong connection with MEP’s proposition that the shape of the channels affects our communication patterns.

There are also important differences in how different participants see the same tools: while some subjects declared feeling anonymous on Twitter due to its scale and speed, people who use it professionally feel accountable for the quality and accuracy of the information they share, and have to fact check everything they share.

OSN do not work in isolation, they are part of a larger repertory of communication tools and are adopted differently for each person; for some people, OSN communication complements other forms of communication that are maintained during the day with their closest connections, OSN are used by some couples as a complement to their telephone, email, and face to face interactions. For people who are geographically removed from their loved ones, OSN can become the primary communication channel.

All of this points towards supporting the Media Ecological Perspective, in proposing that different types of media inhabit a larger landscape of communication. Although Facebook and Twitter share some important similarities and are both prime examples of OSN, there are also some differences in their designs and policies that produce fundamental differences in how they are adopted by people. These interviews also describe support for Media Multiplexity theory; people use a broader variety of media to maintain relationships with their stronger ties.

There is support for theories of self-disclosure and privacy management that laid out the base for this research within the discourse of these advanced users. When sharing online, these subjects oriented themselves to a given set of closer contacts, and they did not expect

these people to share the information further, even as it's is publicly available on Twitter, unless the context implies sharing further. This points towards Petronio's CPM theory: information is shared within certain social boundaries and is expected to remain within those boundaries unless otherwise negotiated. This is very interesting considering how easy these technologies make it for people to re-share what they read, broadcasting it further towards their own network. This speaks to us about how social norms of privacy that have been developed in interpersonal settings translate to mediated settings such as OSN. What makes this finding most remarkable is that OSN rarely provide full control over who has access to certain information, and these subjects had audiences in the range of the hundreds of people, which in Twitter frequently included strangers, and distant acquaintances on Facebook. These participants transferred their norms of boundary management (Petronio's CPM) to their OSN behavior—they expected their recipients not to share the information further from the initial circle of trust—and this can be very risky as, since we have discussed before, OSN provide a very uncertain sense of audience. OSN make it very difficult to keep track of who is receiving one's messages, and even harder to control how these people expect the information to be handled and kept private, or shared, yet it becomes easy to track further sharing, re-sharing. Although these participants seemed to intuitively transfer their boundary management behaviors to OSN, and they did not expect their audience to spread their information further unless under certain contexts, this seems like a mistake. Users of OSN should be very careful not to make any assumptions of their audiences, and should also always take into account a majority of silent readers, which did not seem like a strong concept during the interviews.

It is important to keep in mind that the subjects interviewed in this study were particularly experienced and reflective users; therefore it is not surprising that they make

careful decisions at the time of disclosure. It is possible that the behavior of a broader and more inexperienced population may find higher levels of risky disclosures that may more frequently lead to social turbulence. The discussion below explores the findings as grouped in the four dimensions of the model:

Personal. Interpersonal differences are fundamental to understanding people's online self-disclosure. There were important differences in what people regard as personal information, private information, intimacy, and what kinds of information people feel comfortable sharing. The exact same topics could have different connotations for different people. For some participants, mentioning who they had lunch with is a slightly personal issue but is still not a trivial or typical disclosure for them; to others, this same information could be considered routine and not revealing at all, it is something they can share without putting much thought to.

The results from these studies display support for the early psychological research on self-disclosure: in terms of motives for people's disclosure, we found that catharsis and self-clarification were important factors.

Social. Based on these stories OSN, are—no surprise—all about connecting with others. OSN are the most effective way for these people to stay in touch with their friends and peers throughout the day and week. People who regularly meet their friends in person use OSN to keep in touch in between meetings, and as a complement to other media. Others who are geographically removed from friends and family bring OSN to the center of their communication landscape.

Many times their stories revealed that their history of years using OSN had effectively allowed them to connect with others, and they consciously chose to open themselves up in order to strengthen relationships with their online contacts; these ideas

came from both people making new connections on Twitter, and people who got to better know others from their past through their OSN interactions (participants did not mention meeting new people on Facebook). This supports social penetration theory and self-disclosure as social exchange: the connection that results from disclosure is worth the effort or risks.

There was strong evidence for reciprocity taking place in OSN and helping build cultural norms for particular communication channels; people will share information they have seen others sharing before, this makes it acceptable behavior.

Some of the participants felt more exposed on Facebook than on Twitter, which seems counter-intuitive given that Twitter is technically public while Facebook is not. On study 1, the participants rated Facebook as being more intimate than Twitter, yet it was interesting that Facebook was rated at a similar level of intimacy as blogs, which are just as public as Twitter—these findings address RQ1, with people associating different levels of intimacy on particular channels. These two findings seem to be pointing at the same trend: people do not feel as intimate on Facebook as one may expect. Participants from study 2 mentioned the presence of family members and people from their past on Facebook who are not on Twitter (RQ3: different audiences for different channels), so they feel compelled to maintain the self-presentation style they had historically kept with their families (impression management), who may have different opinions and values than their current, adult, selves. People feel uncomfortable being themselves in presence of people they have mixed feelings about, people who are part of their past but do not understand how they have evolved and matured. These participants felt more able to be themselves in Twitter, where they connect with people in their present, who understand parts of what their current lives are but also with complete strangers who may have mutual interests with them. This reminds

us of the stranger in a train phenomenon, where people feel free to speak with absolute strangers who they are not likely to see again or to have people in common, and the U-shaped relationship between social distance and self-disclosure (Figure 1); people will feel most comfortable sharing with closest friends and absolute strangers, while those in between fall beyond the comfort zone of sharing. This relationship carries over to OSN communication, and the audiences associated with particular tools or channels have an important influence in what people will be willing to discuss. As discussed by these participants, this difference between Twitter and Facebook is related to differences in adoption: while Twitter is still considered by some to be a tool used by tech-oriented people, Facebook has enjoyed a much broader adoption, and people's families are more likely to be on Facebook than on Twitter. This was also evidenced when we asked people who are on their networks, Facebook networks were more likely to include immediate and distant family members while Twitter networks are more likely to include professional contacts and public figures.

These results support previous research suggesting media are changing the way people manage their privacy and disclose to others (Barnes, 2008; Palen & Dourish, 2003): these interview subjects disclose personal information to large groups of others in a confident manner. One of the most important changes that we see in these stories is that, as opposed to self-disclosure in interpersonal settings, where the selection of target audience is critical for the process of disclosure (Rosenfeld & Kendrick, 1984), in OSN people seem to be getting used to share personal information, even strongly intimate information, with uncertain audiences. This is a critical departure from traditional disclosure behaviors. Along the same lines, the stories in these interviews also suggest that these people maintain

expectations of boundary management to work in similar forms as in interpersonal communication (CPM, Petronio, 2002), yet this is not possible to control in OSN.

Results from study 2 also present support for boyd's (20007) work with teenage populations where the imagined audience of OSN users is frequently influenced by the people who interact most often with the writer, and silent audiences are not as frequently acknowledged.

This study also presents strong support for social penetration theory; these stories speak of people who disclose in order to strengthen their relationship with others. Self-disclosure becomes a rewarding experience and the risks of disclosing are compensated by the reward of establishing meaningful interpersonal connections (Altman & Taylor, 1973; Worthy, Gary & Kahn, 1969). And this also validates research on blogs that found that people prefer sharing over withdrawal in order to create and sustain social relationships (Nardi, Schiano & Gumbrecht, 2004; Stefanone & Jang, 2008).

Technological. There were also important differences in people's opinions and perceptions of the media, and this seemed to have an important weight in their OSN participation.

Technology seems to play an important role in the process of OSD. One of the most curious concepts in this regard is the idea of *relative anonymity*: when people are communicating through their computers, writing alone on their keyboards, and unable to view their audience's reactions makes people feel like their identity is less ostensible, and no matter that they are signing each post with their names and photos, they feel like there is a certain anonymity to these channels. This is very interesting to explore further in relationship to OSN, it has been discussed as a factor of CMC in the past, but becomes most curious to understand in OSN settings where people sign each post with their name and picture.

Frequency of use, which had been an important factor in Study 1, appears again in the stories of these users—who had been recruited as frequent users. People spoke about posting to OSN becoming a very natural part of their lives, they feel in control of the situation and won't second-guess posting something unless it falls out of the comfort zone they have been shaping during years of daily interaction through the channel. This is also supporting earlier research that found strong relationships between posting frequency and disclosure in the context of blogs (Rau, Gao & Ding, 2008).

The use of privacy controls was another interesting element in the role of technology on OSD; while some of the participants did not trust the privacy controls offered by the OSN software at all, others relied on these controls heavily and had complex setups that allowed them to manage what information goes to which audiences. The importance of privacy controls had previously been discussed by Krasnova et al. (2010), and by Stutzman et al. (2011).

There was also evidence to suggest that, once a person has decided to share a particular piece of personal information, it is the audience they intend to reach what drives media selection (RQ5).

Contextual. The context surrounding a disclosure decision has always been an important factor to consider in interpersonal self-disclosure research, and this is not different for OSD. Given the timing of the fieldwork and its set-up requesting people to discuss disclosures they had posted in the latest six months, it became apparent that presidential elections have a strong effect in people's OSN streams: candidate speeches, debates and news stories related to presidential elections fire people's emotions and they feel compelled to respond to views they abhor (particularly in such a polarized campaign), people feel a sense of responsibility in making a stand, and stating their opinion despite having deliberately

avoided political discussions in the past. This is an example of how the context of historical events can influence OSD behavior.

Physical location was also an important element of the interviews, participant's disclosures were posted from locations where people felt physically comfortable and either alone or in company of others they feel comfortable with, this is a fundamental factor of OSD and had been detected early on by Rheigold (1993) in his work with Online Communities. Other important contextual factors that arose during these conversations include time of the day as associated with different audiences, and also topics, as related to audiences: different audiences will pay attention to different posts based on their topical interests.

Conclusions

Online Social Networks are indeed very powerful tools of communication that are replacing previous channels in several functions; they are a cost-effective way to reach people's social networks. The interviews in this project tell us that OSN are deeply embedded into the lives of these subjects, they replace and extend other means for communicating with others in their lives. While early research on CMC had a large dystopian sector that questioned the capacity of Internet communication tools for effectively managing social bonds, this project adds to the body of research suggesting that CMC tools can effectively support social interaction, emotional communication, relationship development and maintenance, and social support. OSN are currently part of people's daily lives and communication patterns, embedded into the fabric of their social interactions, they are regularly used for communicating with significant others, immediate and extended family, professional contacts and otherwise people from early stages of life (Table 2).

Study 1 finds differences in the levels of intimacy that people attribute to particular channels (RQ1), that the audiences also vary among channels (RQ3, Table 2) and this has an impact on people's levels of disclosure (RQ2, RQ4, Table 6).

Study 2 explains this and how these differences are shaped. For example, the differences in audience between Facebook and Twitter were described as Facebook representing a place where people collect contacts from their history, including family and high-school friends, while Twitter is used by more technologically-oriented people, current friends and professional contacts (RQ3). Study 2 inquired about the sequential order of audience and tool selection for the acts of disclosure (RQ5), and finds support for people considering their target audience first and choosing a channel adequate for such channel. Other important factors to keep in mind and to control for when researching the interaction between imagined audience, tool selection and online self-disclosure are (RQ6): Frequency of use, gender and cultural origin (Table 6), as found by Study 1. Then, Study 2 reveals trust in the company behind the channel as an important determinant of people's OSD.

While not covered in the data collected for these particular studies, it is relevant to remark how recent tragedies happening in the USA (Boston marathon's bombings of April, 2013 and the subsequent manhunt) stand out as strong examples of how Twitter can become two things at the same time on such events: On the one hand, it acts as an immediate source of information, citizen or crowd journalism, which rendered traditional news sources obsolete, as being slow and unreliable—although reporting from Twitter cannot be considered fully reliable, neither can the traditional media. Some major news TV networks completely gave up during this and other events and resorted to reading reports from Twitter on air while broadcasting. Second, and maybe more importantly, Twitter acted as a shared conversation—and this was effectively discussed during the project's

interviews—that allowed for social support and coping with the horror of this tragedy. People who were strongly afflicted by the events converged onto Twitter to stay informed of the latest events and shared words of support, generating a collective sense of catharsis.

Online Self-Disclosure is a highly complex problem, yet people in the interviews were adept at managing this complexity in order to manage their privacy. The people we spoke with in the second study felt confident in their ability to make correct decisions for their online behavior, they had developed a series of principles and skills in order to adjust their disclosure behaviors to what is comfortable and positive for them. For the most part, participants were correct in their feelings of control over their adequate disclosure behaviors, the data collected explains that people got more value out of reaching out and opening up to others than from withholding. There were very few instances of risky discussion... political...

For many decades, people have been keeping personal diaries and notes of both trivial and profound passages of their lives on paper, and sometimes sharing them within their circles of trust; OSN are but an extension of these communication mechanisms. However, the major departure that computer mediation brings to this process is the lack of control in the audience, we have explained in the earlier chapters of this work how OSN present highly uncertain audiences. During the interviews in Study 2, we witnessed how people are frequently aware of their audience and actively project their notes towards this audience. The largest gap we find in this process is how frequently participants oriented themselves to the closest subset of their audience. This is particularly intriguing if we consider how reflective and careful these people are about their usage of the media. This is interesting because experienced users should be familiar with the presence of passive readers, frequently referred to as “lurkers”, yet this type of audience was not brought up during the

conversations on Study 2. Activity in social media tends to follow power law distributions (Java et al., 2007; van Zwol, 2007; Kwak, Lee, Park & Moon, 2010), so it is misleading to assume that the people who react to one's posts are the only ones reading them; interview subjects frequently described this scenario when asked who they were expecting to read their posts. There is usually a multiple of passive readers for each person that reacts to information found online. This is an interesting finding that should be further explored in more detail; if experienced and reflective users do not consider passive readers when orienting themselves towards an audience, it is important to explore how this plays out with more inexperienced users. In general terms, this gap in the audience did not create problems for people unless something failed either on the software's privacy controls or on people's emotional state—such as inhibitions being lowered by alcohol.

There are large variations in how people adopt these tools for their particular needs. Reaching out to others appears as a central driver for OSN usage, some subjects mentioned how it becomes hard to leave Facebook as they feel trapped by social pressure to remain inside. We had an interview subject who was ethically against the way Facebook deals with information, who had recently had to give in to creating a Facebook account after resisting years of pressure from some of her closest friends.

Contributions

This work presents some important contributions to the problem of online self-disclosure. First, by addressing an important and under-studied population of adult users who have experience in using OSN tools, make intensive use of these, and are highly aware of their disclosure decisions. The selection of this population falls in line with the MEP framework, and results from these studies validate the selection of this group as an interesting target for OSD research, and that these frequent and experienced users have

adopted OSN as parts of their lives and have developed regular patterns of behavior and a series of rules for its use. We also find that, as predicted by the literature, frequent users will feel comfortable disclosing through these tools.

This research project is also contributing the basis for a theoretical framework to explore OSD while addressing its proper complexity: as a multi-dimensional process that includes personal, social and contextual factors that had been considered during decades of research in interpersonal self-disclosure, many of which had found previous support in CMC settings; and a series of factors that the technology brings into the problem. It seems like the mediation through technology produces changes in the way people disclose, and this dissertation aligns with some of the generative theories, where multiple studies find that people may disclose more personal information through technology than they would in interpersonal or written forms. This dissertation proposes that any comprehensive study of OSD must account for factors across all of these four dimensions: personal, social, technological and contextual, and results from these studies support this idea and reveal how these dimensions are strongly interrelated.

Results from these studies also reveal that although the audiences presented by OSN are highly uncertain, as well as invisible, the audience remains a critical element in disclosure decisions. The participants in these studies associated a certain audience to a particular channel and oriented their disclosures towards this imagined audience. Further, study 2 reveals that participants frequently projected their disclosures to a small subset of their potential audience, and this was often the people they felt the closest with, and those with whom they interact the most. This last point is important to consider given that the participants were particularly experienced and reflective users of social media, and this did

not stop them from expecting their closest friends to be their primary readers, which is something they cannot control.

This project also stresses the importance of context on OSD. Results show that elements of physical setting, social context, topic and timing are very important factors in the process of OSD. Findings also stress the importance of the users' opinion of the companies providing the OSN service. The stories in the interviews reveal that this has a very strong influence in the trust that users will give to each specific OSN channel, and this can have a huge impact on their behavior. This is a very important topic to consider on the part of the companies behind these tools, because they need to be very careful about how they manage their relationship with their users and their public image. This is a very fragile relationship where users are providing trust in the provider and their actions can make users feel manipulated. A very subtle change in the interface, or even an involuntary mistake can quickly threaten the trust deposited by the users.

Limitations

The focus on experienced and frequent users, including some early adopters, is valuable but may not necessarily reflect how larger audiences may adopt the technology. Particularly, many of the participants interviewed for this study were highly reflective on their usage of these tools. Their understanding of the media is deep and complex, it cannot be assumed that broader populations will behave in a similar manner; these results should not be generalized to broader populations.

The people interviewed in this study expressed a strong confidence in their usage of the OSN, it is possible that this may be tainted by the self-selection process of the volunteer call for participation, and may influence the results—people who were not confident on their usage of the media may have simply not felt confident participating in this study. This can

also be an effect of how the recruitment was focused on experienced adult users, it is likely that novice users, and younger people may be less careful and confident in their disclosure decisions.

Future Work

During years of work in this project, while exploring the extant literature and discussing with people at UNC and presenting this work at various venues, I have developed more questions and ideas for studies than I have been able to execute. The continuation of this research track could lead to the better development of a theoretical model, where some extended quantitative research can perform cluster analysis in order to better group the variables and explore patterns of behavior, and thus reinforcing the dimensional-model.

One follow-up study could involve quantitative surveys that can test some of the findings from Study 2 in a larger, randomized sample; In this study it would be interesting to test how the focus on smaller subsets of the audience holds with larger and broader samples of people. It would also be interesting to explore the strong relationship found between OSD and locations of comfort, as well as the post-sharing feelings of satisfaction, it is possible that broader populations exhibit more remorseful experiences.

Another study could use the Experience Sampling Method (Csikszentmihalyi, Larson & Prescott, 1977) to track sharing moments over a week and explore online self-disclosure as an ongoing behavior, revealing rich nuances to this phenomenon.

An experimental study could test the effect of closeness to imagined audience on self-disclosure: An analysis of the participant's historic Twitter activity is used to predict relationship closeness based on past interactions (Gilbert & Karahalios, 2009) and then, to rank the closeness of the contacts in the participant's network. Participants would be invited to run a one hour Twitter session in the lab, after assurance that they abstained from this

medium for the previous 24 hours. A manipulation of Twitter's writing interface will display faces of strong ties (condition 1), weak ties (condition 2), or mixed strong and weak ties (condition 3) next to the writing area, and displaying the regular twitter interface for a control group. My hypotheses are that participants in condition 1 should yield higher levels of disclosure than the control group, that participants in condition 2 should disclose less than regularly, and it will be particularly interesting to assess how disclosure levels for participants in condition 3 hold in comparison to the control group, these could lie either close to condition three or one. A quasi-independent variable can be added to this study to compare posts that are shared to the general audience and those that mention someone in particular (this can be easily parsed on the Twitter system).

After this experiment, a quasi-experimental naturalistic study could use text mining to compare disclosure levels of posts shared to the general audience and those mentioning someone in particular. The challenge in this project is to measure depth of disclosure via natural language processing, yet the advantage is the possibility of examining thousands of posts with high ecological validity.

An interesting question relates to network effects of self-disclosure in social media. Reciprocity has long been established as an important force in self-disclosure, as are cultural norms of what is appropriate in different settings. Through text-mining and network analysis it would be possible to visualize how a user's levels of self-disclosure are moderated by the people she or he interacts with on particular media, establishing new patterns of what appropriate disclosure is for each tool. Thanks to text-mining, online social networks present unique opportunities for this research that would be very hard to undertake in terms of non-mediated communication.

Another worthy problem related to audience closeness emerges from study 1 in this project. This study compared perceptions of intimacy for five CMC tools: Email, IM, blogs, Facebook and Twitter. Perhaps the most unexpected finding in this study was that participants saw blogs and Facebook as having equal levels of intimacy, this is interesting when we consider that blogs are usually publicly available, while on Facebook most profiles are private and the audience will necessarily be constituted by people who have been pre-approved by each user. If we consider that interpersonal research in self-disclosure had found different directions for the disclosure/closeness relationship when interacting with friends and strangers, adding up to a “U” shaped relationship, in which people will disclose the most to either their closest friends or their most distant strangers (stranger on a train effect—Rubin, 1975). The results of Study 1 may suggest that people feel similar levels of confidence relating to friends and strangers on blogs, than to friends and acquaintances on Facebook. This is something that would be useful to explore in more depth, probably starting with some qualitative research with people who are both users of blogs and Facebook.

These are some basic ideas for the type of studies that could help the development of a stronger theoretical model around online self-disclosure.

APPENDICES

Appendix I – Interview Guide

Below is the interview guide to be used during the sessions. As an unstructured interview, not all of these questions will be asked to each participant; the questions will be adjusted in order to cover areas the conversational partner has not covered before.

We'll start with a few questions about your general usage of online social networks.

1. How long have you been using Facebook and Twitter?
2. How large is your network of friends and contacts?
 - 2.1. Who is in your networks?
 - 2.2. Do you keep track of who is following you?
3. How comfortable do you feel about sharing private information on these tools?
 - 3.1. What do you think about the intimacy of these tools?
 - 3.1.1. Do Facebook and Twitter differ in this sense?
 - 3.1.2. What does intimacy mean for you?

From time to time, most people discuss important personal matters with other people. Sometimes they will discuss important matters in online social networks (OSN). Looking back over the last six months of OSN activity, can you find or recall two posts in which you discussed matters that are important to you?

We'll discuss these posts one by one, but you can feel free to compare them at any point during the conversation. Let's start with the first post:

4. Explain the general situation:
 - 4.1. Where were you?
 - 4.1.1. Did you feel comfortable there?
 - 4.2. Was someone else with you at the time?
 - 4.3. Were there other people around you?
 - 4.4. How were you feeling?
 - 4.5. How did you feel after?
 - 4.6. What device did you use? (Mobile vs. fixed)
 - 4.6.1. How long have you been using that device?
 - 4.7. What time was it?
 - 4.8. Do you recall what the weather was like then?
5. What type of information did you share?
 - 5.1. How revealing was it?
 - 5.2. How deliberate was this act of sharing?
 - 5.3. How truthful was your statement?
 - 5.4. Had you shared this information somewhere else before?
 - 5.5. Why did you want to share this information?
 - 5.6. Have you seen your peers sharing this type of information?
6. Where did you post it?
 - 6.1. Did you use privacy controls on the software?
 - 6.2. What does this online social network mean to you?
 - 6.2.1. How private is it?
7. Who were you expecting would read it? (This can include either groups of people or particular people).

- 7.1. Were you hoping anyone in particular would read it?
- 7.2. Were you expecting these people to share the information further?
- 7.3. Do you think of these people often?
- 7.4. How close do you feel to these people?
- 7.5. Did anybody you don't know get access to this information?
- 7.5.1. What do you think about that?

This is great information. Thank you! Now let's move on to the second post:

8. Explain the general situation:

- 8.1. Where were you?
- 8.1.1. Did you feel comfortable there?
- 8.2. Was someone else with you at the time?
- 8.3. Were there other people around you?
- 8.4. How were you feeling?
- 8.5. How did you feel after?
- 8.6. What device did you use? (Mobile vs. fixed)
- 8.6.1. How long have you been using that device?
- 8.7. What time was it?
- 8.8. Do you recall what the weather was like then?

9. What type of information did you share?

- 9.1. How revealing was it?
- 9.2. How deliberate was this act of sharing?
- 9.3. How truthful was your statement?
- 9.4. Had you shared this information somewhere else before?
- 9.5. Why did you want to share this information?
- 9.6. Have you seen your peers sharing this type of information?

10. Where did you post it?

- 10.1. Did you use privacy controls on the software?
- 10.2. What does this online social network mean to you?
- 10.2.1. How private is it?

11. Who were you expecting would read it? (This can include either groups of people or particular people).

- 11.1. Were you hoping anyone in particular would read it?
- 11.2. Were you expecting these people to share the information further?
- 11.3. Do you think of these people often?
- 11.4. How close do you feel to these people?
- 11.5. Did anybody you don't know get access to this information?
- 11.5.1. What do you think about that?

Thanks again, this is great. We just have a handful of questions left.

12. How would you compare the intimacy of the information you shared on these two occasions?

13. Was there any difference in the people you had in mind when writing these two posts?

14. Does your sense of audience change from post to post?

15. Sometimes we engage in conversations with a handful of people on social media. For example, you might do so in a series of replies on Twitter, or a conversation on someone's post, link, or photo on Facebook. How do these exchanges affect your sense of audience?

- 15.1. Is this audience different from the one you imagine when you write your regular posts?
- 15.2. How does this affect your willingness to share?
16. Have you refrained from posting online? If so, why?
17. When posting things online, most people believe different channels have different audiences. Does the channel you select determine who you think about, or do the people you have in mind determine which channel you will use?
18. In general terms, when it comes to sharing information about yourself and your life, are you a reserved or an open person?

Appendix II – Advance instructions for participants on Study 2

Meeting Confirmation Email

Thanks again for your help on this study. You have been especially selected as part of our population of interest—experienced adult users of social media—and your participation will be very valuable for this study. You have been scheduled for an interview on [Date] at [Time], this will take place at [Address]. If for any reason you need to cancel our meeting you can reach me via email at jvelasco@unc.edu and if you need to reach me on the date of our meeting you may call me at (919) 381-7764.

In preparation for our conversation on that date, I'd ask you to think about the following:

From time to time, most people discuss important personal matters with other people. Sometimes they will discuss important matters in online social networks (OSN). Looking back over the last six months of OSN activity, can you find or recall two posts in which you discussed matters that are important to you?

Please try to find or recall two posts like these that you have shared either on Facebook or Twitter, and try to recall as much as possible about what was going on in your life on that day. If you have any questions to this regard you may reach me at jvelasco@unc.edu

Appendix III – Consent form for study 2

University of North Carolina-Chapel Hill
Consent to Participate in a Research Study
Adult Participants
Social Behavioral Form

IRB Study # _____
Consent Form Version Date: December 6, 2012

Title of Study: Exploring Online Self-Disclosure

Principal Investigator: Javier Velasco-Martin.
UNC-Chapel Hill Department: School of Information and Library Science
UNC-Chapel Hill Phone number: 919-381-7764
Email Address: jvelasco@unc.edu
Co-Investigators: Gary Marchionini
Funding Source and/or Sponsor:

Study Contact telephone number: 919-381-7764
Study Contact email: jvelasco@unc.edu

What are some general things you should know about research studies?

You are being asked to take part in a research study. To join the study is voluntary. You may refuse to join, or you may withdraw your consent to be in the study, for any reason, without penalty.

Research studies are designed to obtain new knowledge. This new information may help people in the future. You may not receive any direct benefit from being in the research study. There also may be risks to being in research studies.

Details about this study are discussed below. It is important that you understand this information so that you can make an informed choice about being in this research study. You will be given a copy of this consent form. You should ask the researchers named above, or staff members who may assist them, any questions you have about this study at any time.

What is the purpose of this study?

The purpose of this research study is to learn about how people share private information in online social networks.

Are there any reasons you should not be in this study?

You should not be in this study if:

- You are younger than 30, or older than 39 years of age.
- You are not fluent in speaking and writing English.
- You are not a regular user of Facebook and Twitter.

How many people will take part in this study?

If you decide to be in this study, you will be one of approximately 30 people in this research study.

How long will your part in this study last?

You will participate in a single session that will last about an hour.

What will happen if you take part in the study?

In this study, you will be asked to think and/or review your recent Facebook and Twitter history in order to recall two posts on which you have shared information about yourself that you regard as private. You will be asked what you think about these media and their audience, as well as contextual information related to the postings you will be recalling. This conversation will be recorded, and will be removed of any link to your identity before being analyzed.

What are the possible benefits from being in this study?

Research is designed to benefit society by gaining new knowledge. You may have a personal benefit from this study by reflecting upon your use of online social networks and adjusting your behaviors after this reflection. Additionally, you may request the researcher to send you a copy of the results of this research, or keep track of his publications so you can learn more about the topic in question.

What are the possible risks or discomforts involved from being in this study?

We believe the risks in this study to be no more than those encountered in everyday life. There may be uncommon or previously unknown risks. You should report any problems to the researcher.

How will your privacy be protected?

We will also make audio recordings of the session. We will not record images of you. We will assign a numeric identifier to the data we collect and will not use your name. The data we collect may be stored on our lab computers and on computers used by members of our project team. These computers will be password protected. After this project is completed, we will delete the originally collected data and only keep aggregated data.

Participants will not be identified in any report or publication about this study. Although every effort will be made to keep research records private, there may be times when federal or state law requires the disclosure of such records, including personal information. This is very unlikely, but if disclosure is ever required, UNC-Chapel Hill will take steps allowable by law to protect the privacy of personal information. In some cases, your information in this research study could be reviewed by representatives of the

University, research sponsors, or government agencies for purposes such as quality control or safety.

Check the line that best matches your choice:

- ☐ OK to record my voice and screen during the study
☐ Not OK to record my voice and screen during the study

What if you want to stop before your part in the study is complete?

You can withdraw from this study at any time, without penalty. The investigators also have the right to stop your participation at any time. This could be because you have had an unexpected reaction, or have failed to follow instructions, or because the entire study has been stopped.

Will you receive anything for being in this study?

As an unfunded study, we cannot offer any material compensation.

Will it cost you anything to be in this study?

There will be no costs for being in the study.

What if you are a UNC student?

You may choose not to be in the study or to stop being in the study before it is over at any time. This will not affect your class standing or grades at UNC-Chapel Hill. You will not be offered or receive any special consideration if you take part in this research.

What if you are a UNC employee?

Taking part in this research is not a part of your University duties, and refusing will not affect your job. You will not be offered or receive any special job-related consideration if you take part in this research.

What if you have questions about this study?

You have the right to ask, and have answered, any questions you may have about this research. If you have questions, complaints, concerns, or if a research-related injury occurs, you should contact the researchers listed on the first page of this form.

What if you have questions about your rights as a research participant?

All research on human volunteers is reviewed by a committee that works to protect your rights and welfare. If you have questions or concerns about your rights as a research subject, or if you would like to obtain information or offer input, you may contact the Institutional Review Board at 919-966-3113 or by email to IRB_subjects@unc.edu.

- - - - -
- - - - -

Title of Study: Exploring Online Self-Disclosure

Principal Investigator: Javier Velasco-Martin

Participant's Agreement:

I have read the information provided above. I have asked all the questions I have at this time. I voluntarily agree to participate in this research study.

Signature of Research Participant

Date

Printed Name of Research Participant

Signature of Research Team Member Obtaining Consent

Date

Printed Name of Research Team Member Obtaining Consent

Intro & tool check

Statement of Consent

Clicking on the box below you are agreeing to participate in this study and that you have read the study description page.

The survey is composed of a series of multiple choice questions and scales, it should not take you over twenty minutes to complete it. The questions cover your usage of the mentioned communication tools, and finally some psychological and demographic questions that will allow me to compare usage patterns between different people.

All the collected data will be anonymous. The only identifiable data I'll be collecting are names and addresses of those who wish to enter the drawing for the Gift Cards, and that data will be stored separately from the survey data, it will only be seen by the main researcher and will be erased once the drawing has ended.

You can choose not to answer a question if you prefer so, although it is most useful for the study if you answer as many as possible. If duties of life interrupt your participation, you will be able to return to the online survey and continue on the page where you left, by clicking again on the study description page, you can do this within three days (72 hours) of starting your survey.

If you have any questions you can reach Javier Velasco via [jvelasco at unc.edu](mailto:jvelasco@unc.edu), likewise, you may reach my advisor Professor Gary Marchionini via [march2 at email.unc.edu](mailto:march2@email.unc.edu)

All research on human volunteers is reviewed by a committee that works to protect your rights and welfare. If you have questions or concerns about your rights as a research subject, or if you would like to obtain information or offer input, you may contact the Institutional Review Board at (+1) 919-966-3113 or by email to IRB_subjects@unc.edu. If you contact the IRB, please refer to study 10-1498

☐ I have read the study description and would like to participate in this survey.

When did you start using using the Internet regularly?

Have you done any of the following in the last month?

- ☐ Send an Email to someone
- ☐ Chat with someone via Instant Messaging (IM)
- ☐ Post on your Blog
- ☐ Post a new status on Facebook
- ☐ Send a tweet (Twitter)

Email

When did you start using email?

How often did you send email in the last month?

- ☐ Never
- ☐ A few times a month
- ☐ A few times a week
- ☐ About once a day
- ☐ Several times a day

How would you rate your email expertise?

	Novice	Average	Advanced	Expert
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Approximately, how many people have you sent email to in the last week?

Intimate: Private information and personal thoughts/feelings.

How intimate is email?

Not Intimate ☐ ☐ ☐ ☐ ☐ ☒ Very Intimate

Online friends: electronic correspondence without meeting face to face

Online fans: follow your work and posts but you don't know them

Email is for communicating with:

- | | | | |
|--|---|---|--|
| <input type="checkbox"/> Friends | <input type="checkbox"/> Online fans | <input type="checkbox"/> Coworkers | <input type="checkbox"/> Sons & Daughters |
| <input type="checkbox"/> Colleagues | <input type="checkbox"/> Parents | <input type="checkbox"/> Spouse / Partner | <input type="checkbox"/> Girlfriend or Boyfriend |
| <input type="checkbox"/> Acquaintances | <input type="checkbox"/> Online friends | <input type="checkbox"/> Siblings | <input type="checkbox"/> Cousins |
| <input type="checkbox"/> Grandparents | | | |

IM / Synchronous Messaging

How long ago did you start using Instant Messaging?

How often did you chat with someone via IM in the last month?

- ☐ Never
- ☐ A few times a month
- ☐ A few times a week
- ☐ About once a day
- ☐ Several times a day

How would you rate your IM expertise?

	Novice	Average	Advanced	Expert
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Approximately, how many people did you chat with via IM in the last week?

Write in numbers

Intimate: Private information and personal thoughts/feelings.

How intimate is IM?

Not Intimate ☐ ☐ ☐ ☐ ☐ ☐ ☐ Very Intimate

Online friends: electronic correspondence without meeting face to face

Online fans: follow your work and posts but you don't know them

IM is for communicating with:

- | | | | |
|---|---|--|-----------------------------------|
| <input type="checkbox"/> Acquaintances | <input type="checkbox"/> Online fans | <input type="checkbox"/> Grandparents | <input type="checkbox"/> Friends |
| <input type="checkbox"/> Parents | <input type="checkbox"/> Colleagues | <input type="checkbox"/> Girlfriend or Boyfriend | <input type="checkbox"/> Cousins |
| <input type="checkbox"/> Online friends | <input type="checkbox"/> Sons & Daughters | <input type="checkbox"/> Spouse / Partner | <input type="checkbox"/> Siblings |
| <input type="checkbox"/> Coworkers | | | |

Blogs

How long ago did you start blogging?

How often did you write on your blog in the last month?

- ☐ Never
- ☐ A few times a month
- ☐ A few times a week
- ☐ About once a day
- ☐ Several times a day

How would you rate your Blogging expertise?

	Novice	Average	Advanced	Expert
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Approximately, how many blogs did you comment on in the last week?

Write in numbers

Do you know how many people read your blog per week? If so, how many? If you don't know, leave blank.

Write in numbers

Intimate: Private information and personal thoughts/feelings.

How intimate are Blogs?

Not Intimate ☐ ☐ ☐ ☐ ☐ ☐ ☐ Very Intimate

Online friends: electronic correspondence without meeting face to face

Online fans: follow your work and posts but you don't know them

Blogs are for communicating with:

- ☐ Spouse / Partner ☐ Siblings ☐ Sons & Daughters ☐ Online friends

- ☐ Colleagues
 ☐ Parents
 ☐ Coworkers
 ☐ Friends
- ☐ Grandparents
 ☐ Girlfriend or Boyfriend
 ☐ Cousins
 ☐ Acquaintances
- ☐ Online fans

Facebook

How long ago did you start using Facebook?

How often did you post or comment on Facebook in the last month?

- ☐ Never
☐ A few times a month
☐ A few times a week
☐ About once a day
☐ Several times a day

How would you rate your Facebook expertise?

	Novice	Average	Advanced	Expert
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Approximately, how many people did you communicate with via Facebook in the last week?

Write in numbers

Approximately, how many friends do you have on Facebook?

Write in numbers

Intimate: Private information and personal thoughts/feelings.

How intimate is Facebook?

Not Intimate ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Very Intimate

Online friends: electronic correspondence without meeting face to face

Online fans: follow your work and posts but you don't know them

Facebook is for communicating with:

- | | | | |
|---|--|---------------------------------------|---|
| <input type="checkbox"/> Sons & Daughters | <input type="checkbox"/> Girlfriend or Boyfriend | <input type="checkbox"/> Grandparents | <input type="checkbox"/> Coworkers |
| <input type="checkbox"/> Colleagues | <input type="checkbox"/> Cousins | <input type="checkbox"/> Friends | <input type="checkbox"/> Spouse / Partner |
| <input type="checkbox"/> Acquaintances | <input type="checkbox"/> Siblings | <input type="checkbox"/> Parents | <input type="checkbox"/> Online fans |
| <input type="checkbox"/> Online friends | | | |

Twitter

How long ago did you start using Twitter?

How often did you post on Twitter in the last month?

- ☐ Never
- ☐ A few times a month
- ☐ A few times a week
- ☐ About once a day
- ☐ Several times a day

How would you rate your Twitter expertise?

	Novice	Average	Advanced	Expert
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Approximately, how many people did you communicate with via @reply or RT on Twitter in the last week?

Write in numbers

Approximately, how many people follow you on Twitter?

Write in numbers

Intimate: Private information and personal thoughts/feelings.

How intimate is Twitter?

Not Intimate ☐ ☐ ☐ ☐ ☐ ☐ ☐ Very Intimate

Online friends: electronic correspondence without meeting face to face

Online fans: follow your work and posts but you don't know them

Twitter is for communicating with:

- | | | | |
|---|--|--|---|
| <input type="checkbox"/> Cousins | <input type="checkbox"/> Online fans | <input type="checkbox"/> Girlfriend or Boyfriend | <input type="checkbox"/> Friends |
| <input type="checkbox"/> Parents | <input type="checkbox"/> Siblings | <input type="checkbox"/> Coworkers | <input type="checkbox"/> Online friends |
| <input type="checkbox"/> Grandparents | <input type="checkbox"/> Acquaintances | <input type="checkbox"/> Colleagues | <input type="checkbox"/> Spouse / Partner |
| <input type="checkbox"/> Sons & Daughters | | | |

Scenarios

Scenario 1: You're having a very bad day.

How likely are you to share your feelings about this via:

	Very Unlikely	Unlikely	Somewhat Unlikely	Somewhat Likely	Likely	Very Likely
Email	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
IM	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Blog post	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Facebook	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Twitter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Scenario 2: You've just had a conflict with someone in your close family.

How likely are you to share your feelings about this via:

	Very Unlikely	Unlikely	Somewhat Unlikely	Somewhat Likely	Likely	Very Likely
Email	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
IM	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Blog post	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Facebook	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Twitter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Scenario 3: You have just heard some political news that make you upset.

How likely are you to share your feelings about this via

		Very Unlikely	Unlikely	Somewhat Unlikely	Somewhat Likely	Likely	Very Likely
Email	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
IM	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Blog post	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Facebook	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Twitter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Scenario 4: You just got very bad news from your doctor.

How likely are you to share your feelings about this via

		Very Unlikely	Unlikely	Somewhat Unlikely	Somewhat Likely	Likely	Very Likely
Email	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
IM	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Blog post	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Facebook	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Twitter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Intimacy

Online friends: electronic correspondence without meeting face to face

Online fans: follow your work and posts but you don't know them

How close do you feel to the following people?

		Very Close	Close	Somewhat Close	Somewhat Distant	Distant	Very Distant	Does not apply
Colleagues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Online friends	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sons & Daughters	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Grandparents	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cousins	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Girlfriend or Boyfriend	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Parents	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Siblings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Online fans	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

		Very Close	Close	Somewhat Close	Somewhat Distant	Distant	Very Distant	Does not apply
Friends	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Coworkers	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Acquaintances	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Spouse / Partner	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Scenario 1: You're having a very bad day.

How intimate is this information to you?

Not Intimate ☐ ☐ ☐ ☐ ☐ ☐ ☒ Very Intimate

Scenario 2: You've just had a conflict with someone in your close family.

How intimate is this information to you?

Not Intimate ☐ ☐ ☐ ☐ ☐ ☐ ☒ Very Intimate

Scenario 3: You have just heard some political news that make you upset.

How intimate is this information to you?

Not Intimate ☐ ☐ ☐ ☐ ☐ ☐ ☒ Very Intimate

Scenario 4: You just got very bad news from your doctor.

How intimate is this information to you?

Not Intimate ☐ ☐ ☐ ☐ ☐ ☐ ☒ Very Intimate

Psychometrics

Please indicate your level of agreement with the following statements about yourself:

		Disagree strongly	Disagree moderately	Disagree a little	Neither agree nor disagree	Agree a little	Agree moderately	Agree strongly
My statements about my own feelings, emotions, and experiences are always accurate self-perceptions.	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

		Disagree strongly	Disagree moderately	Disagree a little	Neither agree nor disagree	Agree a little	Agree moderately	Agree strongly
I feel that I sometimes do not control my self-disclosure of personal or intimate things I tell about myself.		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I'm concerned about the way I present myself.		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I reflect about myself a lot.		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Only infrequently do I express my personal beliefs and opinions.		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
		Disagree strongly	Disagree moderately	Disagree a little	Neither agree nor disagree	Agree a little	Agree moderately	Agree strongly
My conversation lasts the least time when I am discussing myself.		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I do not always feel completely sincere when I reveal my own feelings, emotion, behaviors or experiences.		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Once I get started, I intimately and fully reveal myself in my self-disclosures.		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am often not confident that my expressions of my own feelings, emotions, and experiences are true reflections of myself.		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I'm self-conscious about the way I look.		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
		Disagree strongly	Disagree moderately	Disagree a little	Neither agree nor disagree	Agree a little	Agree moderately	Agree strongly
I'm concerned about my style of doing things.		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I'm constantly examining my motives.		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Once I get started, my self-disclosures last a long time.		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Generally, I'm not very aware of myself.		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

		Disagree strongly	Disagree moderately	Disagree a little	Neither agree nor disagree	Agree a little	Agree moderately	Agree strongly
I often discuss my feelings about myself.		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
		Disagree strongly	Disagree moderately	Disagree a little	Neither agree nor disagree	Agree a little	Agree moderately	Agree strongly

Demographics

What is your gender?

- ☐ Male
- ☐ Female

How many years old are you?

In numbers

What country do you live in?

What is your country of origin?

How many years of education have you completed?

In numbers

How many years of professional experience do you have?

In numbers

Does your work involve the study or design of information systems?

☐ Yes

☐ No

Have you been concerned about the recent discussions about issues of Privacy on Facebook?

☐ Yes

☐ No

You have completed the survey. Thank you very much for your participation!

If you would like to participate in the Amazon Gift card drawing, please leave your name email below. Names and Email addresses are managed separately of survey responses and will not be associated with your data, your answers are anonymous.

Enter your name and email for a chance to win one of two \$100 Amazon Gift cards.

Name

Email

Appendix V – IRB approval for Study 1



THE UNIVERSITY
of NORTH CAROLINA
at CHAPEL HILL

OFFICE OF HUMAN RESEARCH ETHICS

Medical School Building 52
Mason Farm Road
CB #7097
Chapel Hill, NC 27599-7097
(919) 966-3113
Web site: ohre.unc.edu
Federalwide Assurance (FWA) #4801

To: Javier Velasco-Martin
School of Information and Library Science
CB: 3360

From: Behavioral IRB

Authorized signature on behalf of IRB

Approval Date: 8/26/2010

Expiration Date of Approval: 8/25/2011

RE: Notice of IRB Approval by Expedited Review (under 45 CFR 46.110)

Submission Type: Initial

Expedited Category: 7.Surveys/interviews/focus groups

Study #: 10-1498

Study Title: Mapping Disclosure over Social Media

Sponsors: Information Architecture Institute

This submission has been approved by the above IRB for the period indicated. It has been determined that the risk involved in this research is no more than minimal.

Study Description:

Purpose: To measure if people communicate with different levels of self-disclosure on different Computer Mediated Communication (CMC) tools, to determine who the intended audience for these tools is, and what individual characteristics may influence this behavior.

Participants: 400 people who are familiar with these CMC services.

Procedures: Administer online survey that includes questions about CMC usage, psychometric and demographic measures.

Regulatory and other findings:

This research meets criteria for a waiver of written (signed) consent according to 45 CFR 46.117(c)(2).

Investigator's Responsibilities:

Federal regulations require that all research be reviewed at least annually. It is the Principal Investigator's responsibility to submit for renewal and obtain approval before the expiration date. You may not continue any research activity beyond the expiration date without IRB approval.

Failure to receive approval for continuation before the expiration date will result in automatic termination of the approval for this study on the expiration date.

When applicable, enclosed are stamped copies of approved consent documents and other recruitment materials. You must copy the stamped consent forms for use with subjects unless you have approval to do otherwise.

You are required to obtain IRB approval for any changes to any aspect of this study before they can be implemented (use the modification form at ohre.unc.edu/forms). Any unanticipated problem involving risks to subjects or others (including adverse events reportable under UNC-Chapel Hill policy) should be reported to the IRB using the web portal at <https://irbis.unc.edu/irb>.

Researchers are reminded that additional approvals may be needed from relevant "gatekeepers" to access subjects (e.g., principals, facility directors, healthcare system).

This study was reviewed in accordance with federal regulations governing human subjects research, including those found at 45 CFR 46 (Common Rule), 45 CFR 164 (HIPAA), 21 CFR 50 & 56 (FDA), and 40 CFR 26 (EPA), where applicable.

Good luck with your interesting research, Javier!

Lawrence B. Rosenfeld, Ph.D.
Office of Human Research Ethics
Co-Chair, Behavioral Institutional Review Board
aa-irb-chair@unc.edu

CC: Gary Marchionini, SILS
Tammy Cox (School of Information and Library Science), Non-IRB Review Contact

Appendix VI – IRB exemption for Study 2



THE UNIVERSITY
of NORTH CAROLINA
at CHAPEL HILL

OFFICE OF HUMAN RESEARCH ETHICS

Medical School Building 52
Mason Farm Road
CB #7097
Chapel Hill, NC 27599-7097
(919) 966-3113
Web site: ohre.unc.edu
Federalwide Assurance (FWA) #4801

To: Javier Velasco-martin
School of Information and Library Science

From: Office of Human Research Ethics

Date: 12/19/2012

RE: Notice of IRB Exemption

Exemption Category: 2.Survey, interview, public observation

Study #: 12-2480

Study Title: Unpacking Self-Disclosure in Online Social Networks

This submission has been reviewed by the Office of Human Research Ethics and was determined to be exempt from further review according to the regulatory category cited above under 45 CFR 46.101(b).

Study Description:

Purpose: This study will use qualitative interviews to further the understanding of the context around acts of self-disclosure on online social networks. We will have conversations with the subjects in order to understand their acts of sharing, and particular how this sharing relates to the imagined audiences they keep in mind around these communication channels.

Participants: Adults who are experienced users of social media will be recruited in the RTP area. The population will be between 30 to 40 years old, and daily users of Facebook and Twitter for at least one year.

Procedures (methods): 45 minute, face to face interviews will be conducted in a location of the subject's choosing. Conversations will be recorded. Based on the Critical Incident Technique, participants will be asked to review their OSN accounts and find or recall two moments in which they have decided to share "important matters" with their networks. The conversation will focus on describing the context for such acts of sharing and whom they had in mind at the moment of sharing.

Investigator's Responsibilities:

If your study protocol changes in such a way that exempt status would no longer apply, you should contact the above IRB before making the changes. The IRB will maintain records for this study for 3 years, at which time you will be contacted about the status of the study.

Researchers are reminded that additional approvals may be needed from relevant "gatekeepers" to access subjects (e.g., principals, facility directors, healthcare system).

CC:
Gary Marchionini, School of Information and Library Science

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