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Connecting, Sharing and Empowering

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iDisclose: Applications of Privacy Management Theory to Children, Adolescents and Emerging Adults

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Abstract Protecting personal information in online environments is vital to most individuals, including those in the three distinct age groups of children, adolescents and emerging adults. As each group interacts online, they use different disclosure practices and protection mechanisms to manage and distribute their personal information. After describing self-disclosure and communication privacy management theory (CPM), this chapter examines how privacy management strategies and self-disclosure practices in online environments differ between children, adolescents and emerging adults. The chapter considers theoretical strengths and weaknesses of CPM and also explores the applicability of the tenets of CPM to online communication in self-disclosure. In concluding, the text argues that a greater understanding of the privacy protection mechanisms employed by children, adolescents and emerging adults will help to strengthen privacy regulation and protection of personal information for each of these specific groups. Implications for media literacy, privacy protection practices, online marketing and advertising are presented.

> "You already have zero privacy. Get over it." Scott McNealy, former CEO of Sun Microsystems Inc.

Every day, individuals around the world use the Internet for a multitude of reasons, including product research, trip planning, socialising, leisure activities and more. Each of these individuals will interact with various websites and online entities as they embark on finding solutions or information to fulfil their varying end goals. Through the navigation of websites, individuals may find themselves divulging information in exchange for product discounts, educational information, or, in the case of social networks, recommendations as to whom to connect and socialise with. Connecting with users on social networks requires users to disclose important personal information, with this self-disclosed information providing the foundation of the business model employed by social network sites (SNSs), including Facebook.

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Through the collection of users' personal data, social network sites are able to target products and services to these users. As users interact with these targeted ads, they are disclosing additional information, including which ads they interact with or choose to ignore, and this cyclical gathering and utilisation of personal information further solidifies the SNS business model. Currently, the collection of information and the resulting targeted advertisements provide 85 % of Facebook's revenue (Sengupta 2012).

As individuals exchange information with websites, these are wrought by the constant need to initiate, implement and negotiate rules dictating the use and dissemination of their private information. These rules for private information exchange help to regulate who accesses the information, how the information is accessed and for what reasons the requesting entity accesses this potentially lucrative, and sometimes potentially damaging personal information.

Adults are thought to negotiate these information exchanges in a more complex and sophisticated manner than would adolescents or children (Petronio 2002). It is important to investigate how children (under the age of 13), adolescents (between 13 and 17 years of age), and emerging adults (between 18 and 25 years of age) implement and negotiate the solicitation and divulging of their personal information online. How do these three distinct age groups create appropriate protection mechanisms for the dissemination and protection of their private information? Does a theoretical framework exist for understanding how online self-disclosure differs amongst these age groups occurs? Additionally, do these distinct age groups conceptualise "privacy" differently?

While self-disclosure, or the act of providing personal information to another, has been studied extensively in interpersonal communication (Cozby 1972, 1973; Jourard 1971a, b; Wheeless 1976, 1978; Wheeless and Grotz 1976), a theory explaining self-disclosure in the realm of online communication has yet to be developed (Nguyen et al. 2012). A review of the literature shows a significant theoretical gap. Further insights are necessary concerning online self-disclosure and its implications for online marketing and advertising that targets children, adolescents and emerging adults.

Communication privacy management (CPM) theory (Petronio 2002), provides a "first step toward building a theory of online privacy management" (Metzger 2007, p. 21). Previously applied in interpersonal relationships, CPM presents a robust theory which can account for some elements of the multifaceted process of self-disclosure, especially the concept of privacy and its relation to self- disclosure, as well as the creation of boundaries and rules for which personal information can be shared and utilised.

This chapter explores the differences between children's, adolescents' and emerging adults' motivations for utilising the Internet and social networks, how they disclose information online, and how CPM may or may not explain differences in how each group establishes and make use of privacy boundaries. It begins with a review of the literature to provide definitions of self-disclosure and privacy management, as well as an examination of how each age group discussed in this chapter relates to these topics.

1 Literature Review

1.1 Self-Disclosure Defined

Self-disclosure (also referred to in literature as "self disclosure") is the process of divulging personal information to another individual (Cozby 1973; Petronio and Durham 2008; Wheeless 1976). Self-disclosure is an important aspect of relationships and is both an act of intimacy and a relationship management strategy (Cozby 1973; Sprecher and Hendrick 2004). Disclosiveness (Wheeless 1978), interpersonal solidarity (Brown 1965) and reciprocity (Miller and Kenny 1986) are all elements of the process of self-disclosure. Further, three parameters can be identified in self-disclosure: (1) breadth is the quantity of information disclosed, (2) depth is the intimacy of information and (3) duration is the amount of time spent describing information (Cozby 1973).

The exploration of the self-disclosure process originates in the study of interpersonal communication, but self-disclosure has also been applied to online relationships (Joinson 2001; Krasnova et al. 2009; Nguyen et al. 2012). In the use of social networking sites, self-disclosure is "the amount of information shared on user's profile as well as in the process of the communication with others" (Krasnova and Veltri 2010, p. 2). Research has shown how both gender (Punyanunt-Carter 2006) and culture (Chen 1992; Durand 2010) can regulate online self-disclosure. Compared to self-disclosure in offline environments, online self-disclosure occurs quicker and at a deeper level (Barak and Bloch 2006; McCoyd and Kerson 2006). Currently, a unified theory explaining online self-disclosure is absent (Nguyen et al. 2012) and a framework for understanding online privacy management strategies is lacking as well (Child and Petronio 2011). CPM can provide a framework for explaining the process of self-disclosure online, as well as how individuals use protection strategies to manage the flow of personal information.

1.2 Privacy Management

Individuals hold the ownership of their information and therefore have a right to regulate access to that information (Petronio 2002). Because of this right of individuals to own and regulate access to their information, this author argues that a privacy or disclosure management approach is well suited to analysing and explaining the phenomenon of the sharing of personal information, not just in face-to-face communication, but in digital environments as well. Metzger (2007) concurs and argues that Petronio's CPM theory is applicable to relationships in digital environments, including ecommerce. While the CPM model is not complete in terms of fully explaining self-disclosure, it does provide a starting point for analysing self-disclosure and privacy protection in both interpersonal and online communication (Metzger 2007). In CPM, self-disclosure is a dialectical process where an individual

is constantly balancing both the disclosing and concealing of private information (Petronio and Durham 2008). To balance privacy and disclosure, CPM establishes a rules-based system for how individuals divulge or protect information (Petronio 2002). By following a rules-based system, individuals are able to minimise costs (i.e. embarrassment, privacy loss), while maximising rewards (i.e. entertainment, trust) (Metzger 2007).

Petronio's approach is grounded in six principles, three *assumption maxims*, and three *interaction maxims* (Petronio and Durham 2008). Assumption maxims define the managing of private disclosure, while the interaction maxims illustrate how interactions with others are managed during the revealing and concealing of information (Petronio and Durham 2008). *Public-private dialectical tension*, the first assumption maxim, is the previously mentioned push-pull of disclosure and privacy (Petronio and Durham 2008). *Conceptualisation of private information*, the second assumption maxim, asserts that individuals believe they have a right to own their information and are thus entitled to choose whether to keep it private or disclose it to others (Petronio and Durham 2008). The final assumption principle, p*rivacy rules*, are guidelines that create privacy boundaries that dictate the ebb-and-flow of private information; these are developed using the criteria of culture, gender, motivation, context and risk-benefit ratio (Petronio and Durham 2008).

As previously noted, interaction maxims illustrate how interactions with others are managed during the revealing and concealing of information. The first of three interaction maxims*, shared boundaries*, posits that when private information is shared, the recipient becomes a co-owner of that information. The discloser and recipient collaborate to create a "mutual boundary around the information" (Petronio and Durham 2008, p. 310), and different boundaries exist for sharing information (i.e. dyadic, group, family). *Boundary coordination*, the second interaction principle, refers to the co-managing and co-owning of information by individuals (Petronio and Durham 2008), whereby both parties become responsible for the co-managing of the information. *Boundary turbulence*, the final interaction maxim, is when information is co-owned (as in CPM) and must be collaboratively managed by the discloser and the recipient (Petronio and Durham 2008).

1.3 Children and Disclosure

Of the three groups explored in the chapter, children are the earliest in age, and, according to U.S. law, children are defined as individuals younger than age 13 (Federal Trade Commission 1998). The Internet provides a medium that is ripe for targeting and collecting personal information for marketing purposes; with 80 % of American children ages 0–8 utilising the Internet (at least) once each week (Gutnick et al. 2011), the Internet presents a concern that collecting personal information from children is an invasion of privacy (Kunkel et al. 2004). The number of children utilising the Internet increases year on year as more children join social networking sites. While the terms of usage for Facebook clearly state that no one under the age

of 13 can use the service (Facebook 2012), 38 % of American children using Facebook are younger than 12 (Protalinski 2012), and in Britain, one million users aged 9–12 use the social media site (Rushton 2013).

In using the Internet, children, adolescents and emerging adults engage for different reasons. While teenagers primarily use the Internet for socialisation, children use email and online forums for educational purposes (Blau 2011). In addition to educational activities, children visit entertainment and media sites online, as children can consume over 10 h of media in 1 day (Kaiser Family Foundation 2010). One form of entertainment that can lure children online to websites is advergames (i.e. online games featuring branding); a 2006 study showed that 73 % of children's websites employ it (Kaiser Family Foundation). Disturbingly, advergames have been found to persuade children on an emotional, subconscious level (Nairn and Hang 2012). An even bigger concern is that advergames may no longer constitute a clear marketing tool, as marketing messages are combined with other forms of online media (An and Stern 2011) that blur the line between marketing and other online content (Walrave and Heirman 2012). While previous research found children could not distinguish between online advertisements and content (Nairn and Hang 2012; Gilutz and Nielsen 2002), contradicting research (Young 2003) found that by age 8, most children could distinguish between programme content and advertising and also acknowledge the persuasive intent of the advertising content. Compared with adults, children are more willing to disclose personal information in online settings (Turow and Nir 2000). Additionally, research has shown that younger users have less social and technical understanding of the intricate nature of the Internet (Yan 2006). As children may or may not be able to distinguish between online content and advertising, and as they are more vulnerable to online disclosure, how is children's privacy protected online and what kind of information is being collected from websites?

In the online realm, privacy is a highly regulated issue concerning children. Since children do not perceive privacy in the manner that older users do (Petronio 2002), there is a need for legislation to protect children's privacy. In the United States and Europe, key legislation exists to protect children online: Child Online Privacy Protection Act (1998), or COPPA, in the United States, and in the EU, the more general Data Protection Directive (1995). Recently, the United States' Federal Trade Commission strengthened COPPA by increasing parental protection over the disclosure of their children's privacy (Federal Trade Commission 2012). Even with the recent updates that regulate and restrict how websites and online marketers can target children, individuals of young age are still able to peruse online content and, in the process, expose themselves to online data mining. For example, even though websites state children younger than 13 need parental consent to register, their content targets children and requests personal information from them (Miyazaki et al. 2009). Various types of websites request personal information from children, but these sites can be generally categorised into entertainment sites, online retailers, brick and mortar online stores, and, finally, food and toy manufacturers (Miyazaki et al. 2009). As a result of the breadth and depth of information disclosed online, as well as the ease with which this information can be obtained, targeting and theft of

an individual's profile (i.e. identify theft) has become commonplace. Identity theft is a major concern, even for children, as identity theft and credit report inconsistencies may not be discovered for years (Power 2011). Recently, it was discovered that 10 % of American children have experienced identity theft, while only 0.2 % of American adults have experienced identity theft (Power 2011).

Several studies have been conducted in an attempt to discover strategies for protecting children online. Miyazaki et al. (2009) demonstrated that the combination of a visual warning (i.e. content is not meant for children under 13) on a website and the threat of parental notification via email reduced the willingness of preteens to disclose information online. Surprisingly, a visual warning given to children visiting websites was shown to raise disclosure levels (Miyazaki et al. 2009). Parental mediation and education of children regarding online safety should be useful in reducing children's disclosure online (Miyazaki et al. 2009).

1.4 Adolescents and Disclosure

Second in chronological order of the three age groups addressed in this chapter, an adolescent is an individual in the adolescence stage of life, or "the transition stage between childhood and adulthood" (Kaplan 2004, p. 1). Youn (2005) defined teenagers as "children 13 and older" (p. 88). For practical reasons, this chapter defines adolescents as individuals between 13 and 17 years of age, as children are defined by American legislation, including COPPA, as 13 and under.

As 80 % of American adolescents use social networking (Purcell 2012), it is important to understand the functions of online self-disclosure and privacy management amongst this unique group. Self-disclosure amongst adolescents is an important developmental task (Steinberg and Morris 2001) and is used to form and maintain relationships (Buhrmester and Furman 1987); indeed, adolescents are better able to disclose online than offline (Schouten et al. 2007). Adolescents also disclose information differently than do adults, as adolescents disclose more information on social networking sites and are less likely than adults to use privacy settings (Christofides et al. 2011; Walrave et al. 2012).

Within the adolescent age bracket, it should be noted that differences exist in amount and type of disclosure. Older teenagers are more likely than younger teenagers to disclose addresses and telephone numbers (Livingstone et al. 2011) and older teens are more likely to reconsider posting content after considering the negative implications (Purcell 2012). Also, as adolescents grow older, their competence in managing online privacy settings increases (Walrave et al. 2012).

As 93 % of teenagers possess an account on an SNS (Purcell 2012), this age group is particularly desirable to marketers and online advertisers. Many websites function to sell products and services and many of these target teenagers and adolescents. Advertisers engage with adolescents through various practices, including the use of commercial incentives. The use of commercial incentives in exchange for information online is a common practice, and when adolescents are provided

commercial incentives in exchange for information disclosure, behavioural intention is the most important predictor for disclosure (Heirman et al. 2012).

With regard to social networking sites, teenagers define privacy as being in control of who knows what about them, as well as controlling the managing of the disclosure, rather than privacy being tied to divulging certain types of information (Livingstone 2008). Adolescents, regardless of contradicting reports and research, are cognisant of maintaining online privacy (Purcell 2012) but to varying extents, depending on the type of personal information involved in the disclosure and the medium in which the online interaction occurs. One reason for a misconception about lack of privacy by adolescents may lie in what groups perceive as private information: what is private information to adults is not necessarily private information to adolescents (Christofides et al. 2011). While a majority of Belgian teenagers aged 12–18 (69 %) expressed concern about data collection practices on the Internet, a majority of those sampled provided simple demographics, such as gender (75 %) and even more lucrative marketing information, including brand preferences (68 %, Walrave and Heirman 2012). Additionally, the Belgian teenagers were also less likely to provide contact data versus profile data (Walrave and Heirman 2012). Adolescents disclose information differently depending on the Internet channel (i.e. instant message versus email) and Schouten et al. (2007) found that adolescents have higher degrees of disclosure in instant messaging when they feel less disinhibited. When adolescents have a higher perception of potential benefits, they are more willing to provide personal information to a website (Youn 2005). Conversely, when a higher level of risk perception of information disclosure is present, adolescents are less willing to provide personal information to online marketers (Youn 2005).

Furthermore, the concept of privacy among adolescents is complicated by their relationship with parents. During adolescence, the relationship between parents and teenagers are constantly being redefined as the adolescent seeks more independence and the establishing of their identity. Privacy, secrecy and trust are constant tensions that exist in these relationships. As teenagers develop self-identity and independence from their parents, they are likely to disclose online through responding to online marketing (Youn 2005). As noted, adolescents struggle in establishing independence and adolescent rebellion can be noted in social networking profiles; they see their profile as a private space, which is meant to be public with friends only and not shared with parents (Livingstone 2008). An ever-present tension between parents and teenagers over online privacy seems to exist, as both parents and teenagers have suggested that some secrets are necessary (Gillies et al. 2001). Frequently, both parties avoid conversing about secrecy, surveillance and disclosure, as they both seek to balance the delicate relationship between trust and privacy (Gillies et al. 2001).

Despite teen-parent conflicts in privacy, parents do serve as a positive mediating factor in helping establish online privacy practices. Parents monitoring and mediating teenager internet and mobile use can be viewed as one method of limiting a teen's negative experiences online, as well as increasing safe privacy practices online. Among Americans, more than 50 % of parents use parental controls to manage their teens' internet access (Purcell 2012) and 77 % of American parents

monitor sites their teens visit, but conflicting data exist on the effectiveness of the mediating effect parents have on teens' disclosure levels (Walrave and Heirman 2012; Youn 2005). Parental influence on the value that adolescents place on privacy is of the utmost importance, as adolescents who value privacy in the face-to-face offline world are also less likely to disclose sensitive information online (De Souza and Dick 2009).

1.5 Emerging Adults and Disclosure

It should be noted that delimiting ages for adolescents and emerging adults is often difficult (Geiger and Castellino 2011), but for the purpose of this chapter, emerging adults are those defined as 18–25 years old, as used by Arnett (2000). Emerging adults are more likely than any other demographic to employ social media, with 83 % of American emerging adults owning a social media profile (Duggan and Brenner 2013). Emerging adults are also proficient at using multiple methods for using the Internet, as mobile app downloading is highest in emerging adults aged 18–29 within American demographics (Purcell 2012).

More than any other age group, emerging adults are interested in protecting their privacy. Compared to older users, emerging adults are more likely to delete unwanted comments from their social media profile, change privacy settings or take steps to limit the amount of their personal information online (Madden and Smith 2010). As Facebook has evolved over the years so too have trends in self-disclosure. In the public sphere, emerging adults have decreased public self-disclosures, while increasing both the scope and amount of private disclosures to connected friends (Stutzman et al. 2013). Among Americans, emerging adults are also more likely to not fully understand implications of privacy law, whereas older adults are more knowledgeable of existing privacy law (Hoofnagle et al. 2010).

More than any other age group, emerging adults also have a much broader interest in, and need for, going online. College students use Facebook for various reasons, including finding companionship or passing the time when bored (Sheldon 2008), but also to maintain relationships (Ellison et al. 2007; Sheldon 2008). In addition to social networking, emerging adults use the Internet to seek health information, obtain recent news, visit government sites, purchase products, bank online and make travel reservations (Zickuhr 2011).

Lastly, the literature shows that emerging adults have compelling reasons to practice a range of self-disclosure habits. For college students, self-disclosure is important in relationship quality, as those who disclosed more in CMC reported higher relationship quality (Yum and Hara 2005). However, emerging adults favour emotional self-disclosure through therapy in a face-to-face environment as opposed to online (Rogers et al. 2009).

2 Applicability of CPM Tenets to Child, Adolescent and Emerging Adult Disclosure

2.1 Public-Private Dialectical Tension

This dialectical push-pull of concealing or revealing privacy (Petronio and Durham 2008) seems to vary in amount between children, adolescents and emerging adults. Each of these groups, as they interact with websites or social environments online, must balance the desire to share personal information against the desire to also conceal it. While children do socialise on the Internet through social media (38 % under age 12) (MinorMonitor 2012), they do not socialise to the extent that adolescents or emerging adults do via social networking (Purcell 2012). As such, children do not experience the same dialectical tension of concealing/revealing that teenagers and emerging adults experience. The single greatest predictor of disclosure on SNSs by adolescents is the desire to communicate with peers outside of school hours (Walrave et al. 2012) and, with this, adolescents experience a significant desire to divulge information with peers, but also the pressure to conceal information as they interact with online marketers. Emerging adults, in contrast, balance dialectical tension in the same way that adolescents do, but as emerging adults are more developed in social identity compared to adolescents, they are less subjected to the strong social pressure to disclose compared to adolescents (Walrave et al. 2012).

2.2 Conceptualisation of Private Information

This privacy management tenet asserts that individuals believe they have a right to own their information and are thus entitled to keep it private or disclose it to others (Petronio and Durham 2008). Children, adolescents and emerging adults must cognitively process and understand this concept of ownership of their personal information. As children do not possess the complex cognitive capabilities of adolescents and emerging adults (Piaget 1964), children are not as aware of consequences and concerns related to information disclosure. Adolescents possess greater cognitive capabilities than do children, but adolescents do not always engage in self-protection of personal information. As previously mentioned, adolescents may therefore engage in risky activities online, as they may perceive marketing benefits as outweighing potential loss of privacy (Youn 2005). Emerging adults, possessing the greatest cognitive capacity of the three groups, are more likely to comprehend the notion of information ownership, as well as the consequences and concerns related to ownership.

2.3 Privacy Rules

Privacy rules are guidelines that create privacy boundaries that dictate the ebb-and-flow of private information and are developed using the criteria of culture, gender, motivation, context and risk-benefit ratio (Petronio and Durham 2008). Drawing on Piaget (1964) and cognitive development theory, this author believes that the implementation and complexity of privacy rules increase with age. For example, children will possess fewer strict and complex privacy rules than those of adolescents, while emerging adults will have more complex privacy rules than adolescents. This positive correlation of age with privacy rule complexity is present in many previous studies (Christofides et al. 2011; Fox et al. 2000; Walrave et al. 2012).

2.4 Shared Boundaries

Shared boundaries posit that when private information is shared, the recipient becomes a co-owner of that information. The discloser and recipient collaborate to create a "mutual boundary around the information" (Petronio and Durham 2008, p. 310) and different boundaries exist for sharing information (i.e. dyadic, group, family). The concept of sharing information may not be understood by children; while they definitely are targeted by online marketers and provide information, the concept that "information is no longer solely owned by the discloser" (Petronio and Durham 2008, p. 313) may be too technically complex for children. Adolescents use social media and the Internet to interact with peers and the sharing nature of websites like Twitter and YouTube encourage individuals to contribute to conversation or media creation. Identity formation, which is especially important during the adolescent years, encourages teenagers to engage in acts of sharing with their peers. Emerging adults, who have crafted more self-identity and are less prone to peer pressure than adolescents will share information with their peers but, unlike adolescents, are more likely to share with family members. In sharing with family members, emerging adults will create shared boundaries with these individuals, whereas adolescents are more likely to keep information private from family members, especially parents.

2.5 Boundary Coordination

Boundary coordination refers to the co-managing and co-owning of information by individuals (Petronio and Durham 2008), whereby both parties become responsible for the co-managing of the information. Metzger (2007) explains the processes involved in boundary coordination:

> As part of the coordination process, individuals enact rules to moderate boundary linkages (whether to link to others), boundary ownership rights (who should be included or excluded in the boundary), and boundary permeability (what information may be revealed to whom). (p. 336–337)

Children, as explored earlier, may not be able to cognitively process the concept of information ownership and may have their parents mediate boundary coordination on their behalf. Parents may mediate information solely on behalf of their children, whereas adolescents are more likely to mediate information by themselves, possibly without any parental involvement. As adolescents and emerging adults are more likely than children to institute privacy protection in their social network profiles, they directly engage in boundary permeability. Boundary linkages, or whether to link to others inside various social networking platforms, is a constant process inherent in social media profiles for all age groups. Complexity of those linkages seem to increase with age. In the process of creating groups in Google + or Facebook, individuals can allow information to be accessible to one group (i.e. friends), but not another group (i.e. co-workers). This complexity of sharing and defining individuals and placing them into appropriate groups for information dissemination is most likely not present in children's social media profiles.

2.6 Boundary Turbulence

Boundary turbulence can result when information is co-owned. To prevent it, both the discloser and the recipient can collaboratively manage the information (Petronio and Durham 2008). Turbulence can result from differences in privacy rules used by the discloser and recipient, or privacy rule violations by either party (Metzger 2007). Additionally, privacy violations and misconceptions about private information ownership are situations where boundary turbulence may occur (Petronio and Durham 2008). When boundary turbulence occurs, varying levels of breakdown occur and individuals may experience minor disruptions or complete collapse in managing their private information (Child and Westermann 2013). When a child's parent attempts to become a Facebook friend with their child, turbulence may occur as the child may see the friend request as an invasion of privacy (Petronio et al. 2003).

3 Limitations

While literature exists that compares each age group individually, there appears to be a lack of literature that compares online disclosure amongst all three age groups (i.e. children, adolescents and emerging adults). While a plethora of reports (Duggan and Brenner 2013; Evangelista 2012; Madden 2012; Madden and Smith 2010; Madden et al. 2012; Purcell 2012; Zickuhr 2011) document usage of various new media (apps, email, websites, etc.), there is a lack of reasoning about why and how

these individual groups disclose online. Another limitation exists in operationalising each age group (i.e. children, adolescents and emerging adults); there currently exists difficulty in clearly defining age parameters for each specific group (Geiger and Castellino 2011). Clarifying the age parameters between children and adolescents is important as "younger children may not understand the safety and privacy issues created by the online collection of personal information" (Federal Trade Commission 2008).

Privacy management addresses the communication aspect of online disclosure but does not address the technical side of digital communication – the server-side process of collecting and then storing information in databases. Information technology theory is more conducive to explaining the technical aspects of digital communication, but a combination of the two areas might be beneficial in addressing weaknesses that each theoretical approach has individually.

4 Implications

The author has identified several implications related to Internet use, protection and disclosure of personal information that result from using CPM as a framework for understanding the distinct differences in self-disclosure practices among children, adolescents and emerging adults

Foremost, clear communication between parent and child must be initiated to provide clear guidelines for what is appropriate and safe when disclosing personal information online. Parental guidance for children may help to lessen online disclosure and strengthen online privacy protection, while it may backfire with adolescents, actually providing an incentive to the teenager to disclose more (disclosing information online provides risk and thus establishes independence by rebutting guidance provided by parent).

Secondly, children and adolescents are not intellectually stagnant, nor do they navigate the Internet in the same manner year after year. Children and teenagers are becoming more intelligent about how they use and interact with websites (Budiu and Nielsen 2010); this lends a need for greater, more targeted education campaigns. Conversely, marketers may employ more sophisticated marketing campaigns online, possibly to even confuse individuals about the purpose of the advertisement (is it content or advertisement?).

Thirdly, all age groups must be exposed to up-to-date media literacy practices and how to properly use and interface with the various channels online. Child identity theft presents a sound reason for media literacy, especially those of younger ages. Children cannot cognitively process the immediate threats of predation and manipulation online, so parents and guardians should act as mediators between the children's information and websites requesting access for the information. Privacy boundaries are not just created by children but also by their parent/guardian and they must constantly revisit them and adapt them as needed. When a child is 5 years old, and is aware of his email address, the parent must provide him with rules as to when he can divulge or not divulge that information: for example, he can provide

that address for playing games online, but not provide it to strangers on social media.

In addition, at risk groups, including teens, should be made aware that advertisers and information collection schemes are not preferential to one group; every individual using the Internet is susceptible to data collection schemes. Teens do not initiate strict enough privacy boundaries, or provide enough clarification of the way they use personal information, as they do not consider themselves as vulnerable to identity theft as do emerging adults. As teens are strongly influenced by anticipated social pressure from peers and family (Heirman et al. 2012), public information campaigns regarding protection of online privacy should be directed not just at parents, but at all of the individual's peers (friends, instructors, etc.).

Lastly, users of the Internet are aware of the constant mechanisms used to collect and distribute personal information. With this knowledge, privacy and protection of personal information is a legitimate concern, regardless of age group. Caution needs to be exercised when assuming that adolescents are not concerned about privacy; their definition of private information is different than for those in other age groups. Further, adolescents do not always have the ability to assert control over privacy mechanisms, as parents may ultimately decide privacy decisions (which ironically, can counter the effort of adolescents to initiate privacy protections).

5 Conclusion

5.1 Theoretical Strengths

Privacy management is a robust theory for analysing online privacy and self-disclosure, as it is a practical theory that is "designed to provide an explanation for communicative issues about privacy that individuals face in the everyday world" (Petronio 2002, p. xvii). Further, dynamics of face-to-face communication are prevalent in online communication as well and therefore CPM is applicable in explaining online relationships (Metzger 2007).

Even though legislation continues to strengthen the protection of children's privacy online, children under the age of 13 are continuing to join and interact with websites, and, in the process, are illegally targeted by online marketers. No legislation can completely prevent children from interacting with marketers but CPM can highlight the need for marketers to adhere to the privacy boundaries created by COPPA and the European Union's Data Protection Directive.

5.2 Theoretical Weaknesses

Teens engage in various activities to establish independence (including disclosing private information online) and sometimes go against safe practices in attempts to establish independence. A rebellion effect can explain why teens have been found

to not obey media consumption options that are recommended by guardians and parents (Walrave and Heirman 2011). As teenagers possess tendencies towards risk and rebellion, they are likely to focus on potential benefits offered by online marketers rather than the risks posed by privacy loss (Youn 2005). Studies have shown that peer influences on risk, specifically risk-taking and risky-decision making, are greater among adolescents than younger adults (Gardner and Steinberg 2005). The element of risk, or consciously seeking out risk, is not addressed by CPM. Instead, CPM defines risk as the losing of control of how others use private information once disclosed (Metzger 2007). CPM does not address risk in the sense of purposefully exposing oneself to loss of control. Since engaging in risky behaviours online has become normative for young users (Blau 2011), further urgency is given to developing a theoretical framework for explaining online disclosure.

Privacy management holds private information as central to the disclosure process. Petronio (2002) states that "CPM makes private information, as the content of what is disclosed, a primary focal point" (p. 3). As Christofides et al. (2011) note, what is defined as "private information" by one individual or group may not necessarily be the definition agreed upon by another individual or group. If what defines private information is not agreed upon or understood by both parties involved in the disclosure process, turbulence is most likely present from the onset. At the beginning of the disclosure process, the parties involved need to come to agreement on what information is constituted as private information.

Another weakness of Petronio's model lies in the control of privacy boundaries. CPM states that individuals create privacy boundaries to establish control over the use of private information, or, in inclusive boundary coordination, one person gives control of privacy to another individual (i.e. a child giving control of privacy to their parent) (Petronio 2002). But what occurs when an entity other than a disclosing individual establishes the privacy boundaries or the rules for disclosure? In the instance of COPPA, or other legislation, boundaries for what kind of information can be disclosed and collected are implemented on behalf of children. In the context of Facebook and third party applications, Facebook can make decisions as to how an individual's information is handled and distributed by third party applications: sometimes users interact directly with Facebook, while at other times Facebook may interact with the application *on behalf* of the user.

CPM also does not consider how a lack of technical understanding plays a role in establishing privacy boundaries. For example, children cannot always discern between content and advertising. As a result, this lesser technical competency influences the complexity of the privacy boundaries implemented. Adolescents and emerging adults possess more technical knowledge than children and this is likely to influence the complexity of the privacy boundaries they implement. Adolescents are aware that the use of deception is one method for protecting personal information; websites cannot always authenticate information, so individuals can falsify information (i.e. name, age, phone number) in order to preserve privacy. Metzger (2007) posits that individuals with high privacy concern may utilise privacy protection practices, including deception. Studies have shown that as many as 40 % of individuals may falsify information when interacting with websites (Metzger 2007).

While this author concurs that deception may be employed as a privacy protection mechanism, this author believes technical proficiency (i.e. mastery of computer technology, including hardware and SNS usage) also plays a key role and is distinct from deception as a privacy protection mechanism.

5.3 Closing

As adolescent and emerging adults balance the risk-benefit ratio of self-disclosure they may recognise that they have an opportunity to create the appropriate privacy boundaries for protecting and disclosing their personal information. After all, within the framework of ecommerce, these Internet users are merely consumers. As such, marketers and other organisations must, in turn, be willing to respect and adhere to the consumer-established boundaries. "It is in the industry's best interest to address and remedy privacy concerns via self-regulation before the current state of activities leads to increases in government regulation" (Miyazaki et al. 2009, p. 79). As consumers divulge personal information in exchange for both economic and entertainment benefits online (Krasnova et al. 2009), further consumer privacy education initiatives are required so that consumers can achieve minimal costs (loss of privacy) while maximising rewards (i.e. online entertainment, socialisation, knowledge-acquisition). A greater understanding of the privacy protection mechanisms employed by children, adolescents and emerging adults will help to strengthen privacy regulation and the protection of personal information for each of these specific groups.

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