

An ecological approach to privacy:

“Doing” online privacy at midlife

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Though a complex behavior, online privacy regulation has been considered by social media researchers to be a function of making information available or in the enactment privacy controls, resulting in a perceived contradiction between concern for privacy and actual behaviors. Using data from interviews of 23 midlife adults, this study explores privacy management within social media use by examining privacy behaviors and strategies through an ecological lens, which considers how an individual's behavior intersects with the technological, social and discursive dimensions of the social media environment. This perspective highlights that social strategies such as connection selectivity and discursive treatments related to the quality of communicated information factor significantly into privacy management, behaviors which may be overlooked because they leave scant evidence. These findings provide further insight in the reconciliation of the privacy paradox, and offer more nuance to the understanding of how privacy is perceived and accomplished by individuals as they use social media platforms.

On a practical level, individuals attempt to achieve privacy in everyday life by using selective concealment and disclosure, or by denying and granting varying levels of access to ourselves in our interactions with others (Nippert-Eng, 2010, p. 2). This entails such behaviors as

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pulling shades, latching doors and gates, securing papers and diaries in locked drawers, or even using of code names and phrases to disguise identity. When using social media, however, these privacy regulation processes are clearly challenged, as established mechanisms of granting varying access to the self, such as discriminatory communication with defined groups of others or the selective disclosure of information, are not easily performed or replicated.

Studies have shown that individuals have strong concerns about their privacy online (Buchanan, Paine & Joinson, 2007; Young & Quan-Hasse, 2009); yet, additional studies have evidenced that users do not understand and/or do not engage privacy controls to contain disclosure (Debatin, Lovejoy, Horn & Hughes, 2009; Tufekci, 2008), do not read privacy policies when registering on a website (Milne & Culnan, 2004), and disclose sensitive or detailed geo-location information (Strater & Lipford, 2008; Zafeiropoulou, Millard, Webber & O'Hara, 2013). This apparent contradiction between privacy preferences and privacy behaviors has puzzled researchers, and some have deemed this a "privacy paradox" (Barnes, 2006).

The results of recent research may seem to suggest that experience with social media platforms and demonstrated shifts in user behaviors have diminished the significance of the privacy paradox. Studies have noted an increase in the proportion of individuals enacting privacy controls (Pew Internet, 2009; Madden, 2012), the practice of restricting status updates to select others (Vitak & Ellison, 2013), and the creation of multiple profiles to maintain social boundaries (Stutzman & Hartzog, 2012); findings of these studies may be interpreted as signals that the privacy paradox is shrinking. Other studies have found, however, that the relevance of the paradox continues: users underestimate the size of their network resulting in continue differences between privacy concerns and privacy protecting behaviors with respect to ephemeral information such as status updates (Reynolds, Venkatanathan, Gonçalves & Kostakos,

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2011) and users permit broad access to certain types of information, such as location data and photos, despite concerns that it might result in privacy violations (Taddicken, 2014; Zafeiropoulou, et al., 2013). Moreover, the behaviors of those highly concerned about privacy exhibit significantly different privacy protecting behaviors in their social network site use than average users (Staddon, Acquisti & LeFevre, 2013). Of note, studies continue to focus on certain type of explicit behaviors, such as the engagement of privacy controls with respect to specific posts or deleting tags on photos or comments, instead of examining how strategies might be used in tandem to produce privacy.

This study attempts to further explore the apparent contradiction between social media users' concern for privacy and privacy management by using an ecological perspective. An ecological approach emphasizes the interdependency between individuals and environment, and focuses on behavioral adaptations as a means to surface how valued outcomes, such as privacy, are accomplished . Using data from 23 in-depth interviews with adults aged 45 to 65 years, this study demonstrates how users respond at various levels to the social media environment to enact privacy. In doing so, privacy regulation at midlife is revealed to include a set of complex mechanisms comprised of specific actions and social strategies, both explicit and inexplicit, which operate in tandem with the social, technological and content dimensions of the communicative environment. Viewing privacy management through this ecological lens, we arrive at a more nuanced understanding of the processes by which online privacy is regulated and maintained, and gain insight into how privacy might be understood and performed at a specific stage in the life course.

Privacy – Regulated, Coordinated, and Contextual

Privacy is an elastic concept that encompasses a range of theoretical conceptions from a right to be let alone, to controlling access to the self, to the control of proprietary information about oneself (Allen, 1988; Nippert-Eng, 2010; Solove, 2008). Three privacy theories have emerged as important to the understanding of privacy in communicative processes, each building on its predecessor: Westin's (1967) assessment of the functions of privacy, Altman's (1975) examination of how privacy is enacted socially between groups and individuals, and Petronio's (2002) explication of information privacy management as a rules-based process that operates at individual, dyadic and group levels.¹ Westin (1967) defines privacy as a protective measure through which individuals deny access to themselves physically or psychologically and identifies four functions or states through which privacy is experienced: solitude, intimacy, anonymity and reserve. His posturing of privacy as the denial of access laid the foundation for Altman's (1975) view of how privacy is enacted in everyday life, as a process of boundary-control in which openness and closedness are optimized in a dialectical tension and actual and desired levels are distinct states. Communication privacy management theory (Petronio, 2002) extends Altman's boundary control process with respect to the privacy of information, and recognizes privacy and disclosure as dialectics and that attainment of privacy necessarily involves coordination with others, and therefore often follows a rules-based system to coordinate privacy/disclosure boundaries and assign responsibility for their maintenance.

These theoretical perspectives, all of which were developed prior to the emergence of communicative platforms such as Twitter and Facebook, have provided some insight on how individuals might regard and enact privacy in today's hypervisible, sharing-oriented, social media environment. Privacy controls available through social media platforms, information availability on profiles and the ability to affirm or deny connection requests are mechanisms that

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conform to these earlier conceptions of privacy management. Their applicability to social media communication becomes more limited once the permeability and interoperability of these platforms are considered, however, as the potential for information to “leak” to unintended audiences is much higher.

Along these lines, Nissenbaum (2010) more recently has argued that attainment of privacy is inherently contextual, especially with respect to personal information, as our expectations for privacy are governed by social norms, the individuals involved in the information exchange, attributes of the information being exchanged, and the technical architecture of information transmission. Her perspective incorporates new communication platforms as additional elements of the communicative process, and specifically acknowledges that information shared in one context is accepted and expected, yet when shared in another context is considered a privacy violation. Her framework is quite valuable to understanding privacy in the social media milieu as it provides the mechanism to understand how privacy violations result. But it does not attempt to provide perspective on how privacy might actually be negotiated and achieved by individuals in their everyday social media use.

When considering that privacy is negotiated and accomplished, it is perhaps somewhat surprising to see that while many individuals cite privacy as an ongoing concern with social media use, online actions, disclosures, or a willingness to share data often do not correspond to the level of concern for privacy violations (Acquisti & Gross, 2006; Fogel & Nehmad, 2008; Debatin, et al., 2009; Tufekci, 2008; Zafeiropoulou, et al., 2013); there are apparent disconnects between users' stated preferences and actual behaviors (Ahern, et al., 2007; Reynolds, et al., 2011; Stutzman, Capra & Thompson, 2011²).

Approaches to examine this phenomenon tend to envision privacy regulation online as a uni-dimensional construct (Buchanan, et al., 2007), with privacy behaviors conceptualized as an explicit activities such as the activation and/or customization of technological privacy controls (Stutzman & Kramer-Duffield, 2010), a lack of personally identifying information on SNS profiles (Acquisti & Gross, 2006), or a lack of restriction on the visibility of profile information to the public (Hinduja & Patchin, 2008). Approaching the study of privacy management at this behavioral level does not present a complete picture, however, as privacy-producing strategies may be carried out at multiple levels at once. There is limited recognition that discursive and social strategies, such as altering the quality of the information posted or by making or refusing relationship connections, might be employed to further accomplish privacy (a notable exception is Vitak, 2012). Studies often acknowledge that environmental factors such as context collapse are significant to the enactment of privacy, yet they do not examine how the environment shapes the privacy behaviors that are observed or recorded.

An Ecological Approach

The term “ecology” implies a biological origin, and evokes a symbiosis between individual and environment. It is an approach which has been useful to understanding how environments are intertwined with behavioral processes; it presumes that individuals are continually in a state of adjustment to their environment (Hawley, 1950; Moos, 1976) and, as a result, behaviors evolve and adapt to accomplish certain outcomes, such as survival and reproduction (Krebs & Davies, 1993). Humans, in particular, adapt their behaviors based on the costs, benefits, and constraints associated with the strategy and the given environment (Boyd, Silk, Myers, et al., 2003). In everyday terms, this means that humans solve problems and accomplish goals by making trade-offs and compromises and through the use of innovation and

behavioral improvements and enhancements (Bennett, 1993). Adaptive behaviors are important to examine as they point to the specific costs incurred within an environment or, in other words, the hurdles which must be overcome.

Similar to how physical environments influence behavior, human communication evidences complexity and adaptive behaviors in response to the mediated nature of contemporary communication technologies (Altheide, 1995). Significantly, however, communicative processes also involve social environments established by the individuals involved. Altheide's (1995) concept of communicative ecology identifies an "effective environment" (p. 9) which refers to the social and physical environments as experienced and defined by individuals involved in a communication; it acknowledges that communication, or the transfer of meaning, takes place not only within a social environment, but also in a mediated environment, which brings an added dimension to the activity and often reshapes it (p. 11). Foth and Hearn (2007) extend this idea further and distinguish three ecological layers of the environment within which communicative processes take place: a technological layer, a social layer and a discursive layer. They define the technological layer as comprising "the devices and connecting media that enable communication and interaction"; the social layer as "people and social modes of organising those people"; and the discursive layer as "the content, that is, the ideas or themes that constitute the conversations" (p. 756).

This three-layer framework is useful for examining individuals' negotiation of privacy while using social media as it permits examination of adaptive behaviors within distinct environmental dimensions while also recognizing that these environments, and their related adaptive behaviors, overlap and intersect. Within the social media environment, we might define the technology layer as composed of the devices and applications that enable interaction: this

would include the platforms, such as Facebook and Twitter, and their embedded systemic mechanisms such as privacy controls. In addition, these media possess characteristics related to their digital nature, including, among others: (1) easy replicability, or an ability to be copied and pasted elsewhere; (2) scalability, or the ability to be readily transmitted and forwarded effortlessly to large(r) audiences; and (3) compactness, which allows information that is generated within these platforms to persist over time and be preserved (Samuelson, 1990; boyd & Marwick, 2011b). The social layer of the social media environment consists of the individual's social network, or the people and social organizations with which the individual is connected to via social media platform; these not only include specific individuals and networks one is connected to, such as a geographic or professional network, but encompasses role relationships such as teacher/student and adult/child. The discursive layer is the communicative content, or the information that is actually conveyed or not conveyed between interacting individuals; this might include the textual content placed in a profile or comment which can be viewed by others such as contact information, but also visual information such as photos and displays of connections. It is important to recognize that these three layers intersect and overlap, and examining how privacy is managed in each gives a more complete and nuanced view of how privacy is accomplished in everyday social media use.

Midlife as a Life Stage

Midlife is not only a conduit life phase between younger and older generations (Hunt, 2005; Neugarten, 1971) but also the midpoint of the life for most individuals. Though not well-defined from a calendar perspective, midlife is assumed by researchers to be comprised of adults between roughly the ages of 45 and 65 years of age, and represents a developmental vantage point at which individuals recognize that they are aging (Atchley, 1988) and have an increased

awareness of the finite nature of their own life (Carney & Cohler, 1993). From a cognitive development standpoint, midlife adults demonstrate peak levels of performance for such high order and complex functions as vocabulary, verbal memory, inductive reasoning, and spatial orientation (Willis & Schaie, 1999). Adults at this life stage offer strong contrasts with those at younger ages, where cognitive development is strongly influenced by education and training, and older ages, in which physiological declines play a major role. Identity processes at midlife show distinctive characteristics as well, and evidence an awareness of past identity and a remembered context to the development of present identity (Dittmann-Kohli, 2005). Midlife adults tend to be more secure about themselves and the paths they are following, unlike their young adult counterparts, and most have achieved balance between societal expectations, personal goals and environmental demands (Dörner, Mickler & Staudinger, 2005). For social researchers, adults at midlife hold significant value as a research population due to their developmental stability and varied social roles, though as a group they are less well-studied than children, adolescents and adults in old age (Lachman, 2004).

Because of their socio-historic position, midlife adults provide a unique opportunity to examine the subtle effects of technological mediation on communication processes. This group experienced pre-internet education³ and yet is largely comprised of individuals still active in the workforce, and thus is generally exposed to internet communication platforms. Unlike youth and young adults, who are more commonly studied in social media research, midlife adults have been able to observe the adaptation process to internet communication technologies. They are therefore able to articulate how privacy goals may have been met using more traditional communication forms and also how using social media might challenge these goals. In addition, because of a later position in the life course, their views on privacy management within the

social media environment may offer an alternative perspective to the more well-studied younger adult user groups because of a difference in lived experience.

In sum, examining the junctures between behaviors and environment provides a distinctive entry point from which to study privacy because they illuminate the strategic processes used by individuals to accomplish their objectives. Midlife adults offer a unique perspective to the negotiation of privacy in the social media environment due to experience with relational development and maintenance outside the influence of these mediated communication platforms. Taking an ecological approach to examine how privacy is negotiated in social media platforms provides a more holistic and nuanced understanding as to how privacy goals are accomplished in the social media environment; this approach to examining adaptive behaviors in the technological, social and discursive dimensions of the environment also provides a better grasp of both the environment's complexity and how it might be optimized to enhance privacy as a valued outcome.

Method

Because use of social network sites was a key characteristic of the desired sample, a dataset available from the Pew Internet & American Life Project (Pew Internet 2009) was used to derive dimensions of internet use through a principal component analysis. The items which comprised the resultant factors were then replicated in an online prescreening survey to discern a variety of internet uses by potential participants. The prescreening survey was promoted via discussion board postings such as those available within LinkedIn groups, social media wall postings on individual and group pages in LinkedIn and Facebook, and public and private email listservs. The prescreening survey was completed by 176 potential participants and, based on the responses, a sample of 31 internet-using adults, aged 45 to 65 years, was invited to participate in

45 to 75 minute interviews. This sample was purposive, using a strategy that aimed for maximal variation (Patton, 2002) to disclose a range of variation and differentiation in internet and social media use.

Twenty-three interviews were completed between May and October 2011 and used for this analysis. Fifteen females and eight males participated in the interviews, with ages ranging from 46 to 64 years; ten participants fell into the younger, 45 to 54 year old, age range and 13 participants fell into the older, 55 to 64 year old, age range. Seventeen of the participants used both Facebook and LinkedIn, while six individuals used one or the other exclusively.

Participants were interviewed in a large U.S. Midwestern metropolitan area at a location convenient to the participant, typically public libraries and coffee shops, and all interviews were conducted in face to face settings.

Interviews were recorded and transcribed. Using qualitative data analysis software, the dialogs were categorized by the researcher into themes using a concept-driven structure (Gibbs, 2007), which included attitudes regarding the internet, privacy and social media sites, and social strategies related to privacy protection and identity management. Themes were analyzed and clustered into an explanatory framework. The interviews were conducted as part of a larger study which explored internet use by midlife adults, and this article specifically highlights the analysis and findings related to privacy negotiation, strategies and perceptions related to internet and social media use.

Findings

Privacy, for midlife adults, is a vulnerable and dynamic process that results not only from the boundaries one places around personal information, but also from the context in which information is available. Participants acknowledged social network sites present new challenges

to the regulation of privacy in two fundamental ways. First, the characteristics of information generated via these digital communication media, such as persistence and replicability, contest their ability to maintain control of private or personal information. And second, the social aspects of social media technologies, such as the collapsed nature of social contexts and the presence of third party sponsorship, create opportunities for others to access communicative content in unanticipated ways. These result in adaptive behaviors that expose privacy management as a complex process, one that combines technological mechanisms, social strategies, and discretion in generating communicative content, to accomplish desired or acceptable levels of privacy. Participants in this study frequently address the challenges presented in one ecological layer of the social medium through practices in another, underscoring the significance and importance of a holistic view when examining how they manage privacy.

Following the lead of Foth and Hearn (2007), findings for this study are organized by ecological layers corresponding to the technology, social aspects and content. In describing the adaptive responses in this way, the complexity of privacy negotiation in the social media environment is emphasized and the interdependency between layers is highlighted.

The Technology Layer

The technology layer of the social media environment includes the specific platforms used, such as Facebook or LinkedIn, and their embedded and systemic features. One characteristic that distinguishes these media from more traditional communication forms is that they are frequently sponsored by for-profit commercial entities, such as Google+ and Facebook. To finance the cost of developing and providing the platform, sponsors mine or access the communicative content produced within the platform to generate targeted advertising revenues; because of these practices, the platform sponsors become additional, and largely invisible,

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participants in the communication processes between users of the platform. Their presence creates opportunities for privacy violations to occur, as interactions are intercepted, monitored, and redirected by and to unintended recipients, such as target marketers and app providers. On one hand, these practices are recognized by participants to be a consequence of the choice in medium; however, the participants also expressed concern about potential misuse of their information by such third parties. One participant summed up these concerns and implied that silence, a discursive strategy, might be one way to adapt to the presence of such third parties:

“But, you know, there’s people out there right now with the technology, the understanding. Like I said, knowledge is power. And there’s a lot of knowledge out there about every individual. And I wonder sometimes what do you do with all this information? You know, it’s, I don’t know, I guess the old saying, ‘Whatever you say can and will be used against you’” (Tim, Male, Age 54).

The platforms themselves often include privacy-producing elements such as the ability to limit communication to pre-defined groups or the ability to approve certain content such as a photo tag. Participants agreed that while privacy controls are a feature of the social media environment that aid in accomplishing more privacy, continual changes by social network site sponsors and difficulties in deployment led participants to lack confidence in their effectiveness. One participant described her concern about using social media as based on the complexity of privacy controls:

“But still I thought, do I trust that (Facebook) first of all? Because we’ve all heard about the breaches in privacy, and how difficult it is to try to determine what those levels are, and how to do it. And are they maintained once you put them

there? All that kind of stuff—it's way more time than I want to put into any of this" (Inge, Female, Age 50).

Social media platforms also have the characteristics of digital communication media, and these include in their ability to preserve, replicate and scale information. Consequently, these platforms present opportunities for communicative information to be misused and decontextualized, resulting in potential privacy breaches and violations, and also provide the opportunity for disclosures to be preserved, replicated and transmitted with ease beyond the intended recipient. Persistence of messages and their potential for scaling were frequently cited as factors in privacy management while using social media. One participant noted how she addresses this challenge of the technological layer through discursive means, by not creating content that will persist over time:

"If I'm having a bad day, and I want to complain there's no way that I would post a complaint, a personal complaint that's going to stay until the computer era is no longer around. You can't erase your thoughts. If you have a bad day, you just don't go near the computer, because it will be there 10 years from now. And I mean, my true friends know that I have a good side of bitch, a good slice of bitch. I don't need the world to know (she laughs)...." (Jayla, Female, Age 63).

Persistence of digital information and its potential for scalability also play into concerns about information "leaking" to unintended audiences. Social network sites present opportunities for information leakage through the availability of profile information, wall postings, and in commenting activity on the postings of others; because this posted information typically becomes available to an individual's full range of connections, details posted in a status update, for example, may be transmitted to an unintended audience. Another individual described how

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she attempted to use features of the technology layer, privacy controls, to counteract the potential for information leakage; in addition, she notes that she uses strategies executed within the discursive layer as an additional means to ensure privacy:

“I make sure that it’s not able to be seen by the entire world. And, you know, you never put anything out there that, even if it’s a private email from one person to another or even a private post on Facebook, that you wouldn’t want your—I mean, my mother has passed—but you wouldn’t want your mother to read, you know what I mean? ...I’m mindful that anybody can read this” (Clarice, Female, Age 60).

It is important to recognize that discursive measures to address the technological dimensions of the social media environment are examples of behavioral adaptation. These adaptive behaviors, such as limiting the content that is created or effectively not creating content, ensure success in accomplishing the valued outcome of privacy in much the same way that behavioral adaptation ensures survival. Examining these behaviors as adaptive provides a more clearly defined image of the costs of participating in a given environment, and also provides an indication of how individuals continue to use these media in the face of challenges to a valued outcome such as privacy.

The Social Layer

Social role transition and the simultaneous fulfillment of multiple roles are characteristic of midlife. Midlife adults can be both a parent and a child, a caregiver to children living at home and also for aging parents, and a volunteer and paid worker, to name a few. Social media forms such as Facebook and Twitter were often initially designed to collapse contexts into a single audience or forum (Marwick & boyd, 2011). While this characteristic enables users to address

multiple audiences as one, it alters the control an individual has over the intended audience for disclosure (Tufekci, 2008) and may lead to the communication of decontextualized content.

“Context collapse” (boyd, 2008) occurs when disparate social contexts converge into one space.

This blending of social contexts conflicts with the varied roles which midlife adults fulfill, and many of the participants noted that they looked to establish social boundaries as a privacy preserving strategy.

Boundaries are especially important to the regulation of privacy (Petronio, 2002), but are difficult to address in the social media environment (Vitak, Lampe, Gray & Ellison, 2012).

Recent studies have highlighted such boundary regulating strategies as the maintenance of multiple profiles (Stutzman & Hartzog, 2012) or by sharing content in closed-group spaces (Lampinen, Tamminen & Oulasvirta, 2009). Participants in this study also suggested that distinctions between personal/professional connections and adult/child connections are used as mechanisms to avoid potentially hazardous or uncomfortable situations. They described being selective in making connections, particularly within the context of individual social network sites, to maintain social boundaries; it was not uncommon for participants to report that they establish these boundaries by connecting with certain individuals on one site, for example, Facebook, but not another, such as LinkedIn.

Participants also reinforce boundaries by the connections that they make and don't make with others. One participant suggested that familiarity between connections, a key outcome of social media use, can be detrimental to maintaining social boundaries, and therefore privacy. She described how by *not* connecting with her teenage son's friends, she was able to maintain social distance:

“I didn’t accept [my] younger kid’s friends. I just thought it was kind of inappropriate to be friends with the kids....I wasn’t interested in reading what they had to say on my Facebook feed, and I didn’t think they’d be interested in me either.... When I tell them that they can’t drink in my [home]—you know these are 18-year olds, ‘You’re not drinking at a party at my house.’—I don’t want our relationship to be so casual that I comment on their silly things.... I think there needs to be that separation between being a parent and you know, being someone’s mom” (Sue, Female, Age 54).

Another participant made similar boundary distinctions when describing his differentiation between personal and professional connection in social media platforms. For him, prior life experiences emphasized the importance of keeping these spheres somewhat separate:

“I’m starting to see this come up more in the forefront of, you know, do you really want your coworker to know, be your friend on Facebook? Do you want them to know things going on in your personal life and things of that nature? I’ve seen what happens in the old way, when sometimes the wrong person or someone or something happens and then all of a sudden there’s a ‘hmm...’” (Tim, Male, Age 54).

Connecting with others via social media implies measure of trust, which enables privacy to be coordinated and negotiated within those connections. Consistent with this process, most participants reported “knowing” their social network site connections, and this helps them to regulate their privacy. One participant described knowing as, “someone that I have known at some point in my life. We’ve either been friends or been in a professional relationship at some point” (Barb, Female, Age 57). Participants reported that when they receive a request from

someone they did not know, they often “ignored” the request or placed it in a “wait and see” category to be reevaluated in the event that the relationship progresses to a more substantial level. This preference for known connections signifies an implicit understanding that privacy is a negotiated and coordinated process in the social media environment.

Trust in the connection ultimately leads participants to feel they have enacted some measure of privacy protection, and this leads participants to be comfortable with the level of disclosure in which they engage. This perspective was summarized and elaborated on by another participant:

“In other words, my attitude is that if I want you to know what I’m up to, first of all I’ve got to trust you, and secondly, if I do, then I’ll decide what I’m going to let you know and what I’m not going to let you know. I don’t want you looking at my stuff just out there, and then making your own assumptions or whatever. So it’s the whole privacy thing. You know, you go far enough to get on social media, and you know that some of your life is going to be public. But again, going back to those privacy settings, adjusting it to what you feel comfortable with so that when people do search on you, hopefully they just find the information you want them to find” (Joe, Male, Age 50).

Consistent with connection practices, disconnection from others is another strategy that is used to enhance privacy. One participant described how she disconnected with another because she was concerned that her privacy was not being protected by that individual:

“Yeah, I remember I canceled [the connection], and it’s because of the friends that they had and I didn’t want my postings to be open to them. When I have friends, I kind of know how their settings are. So if I know that this person has a

tendency for narcissism [which for this participant meant openly connecting with unknown others], I don't want her or him as my friend, because I'm afraid whatever I post is open" (Candace, Female, Age 50).

Thus, for the participants in this study, privacy in social media platforms is negotiated with others and is evidenced in the fundamental act of making connections. Connections requests are carefully considered by these participants in this forum, and the act of denying connection or ignoring a connection request is viewed as a means of maintaining boundaries and preserving privacy. For participants, the act of connection is deliberate and assumes a measure of trust, and provides a tangible mechanism through which privacy may be coordinated and negotiated; in contrast, acts of disconnection or ignoring a connection request are less visible social strategies employed to achieve the same objective. Beyond connection, however, a third layer of privacy management is invoked and includes careful control of the content that is created and made available to others.

The Content Layer

Examination of the third ecological layer, the content layer, reveals that participants also negotiate privacy by placing limits on the content they create when using these platforms, and certain types of content are seen as inappropriate for posting in the social media environment. Concern for the lack of informational control leads participants to limit the information they provide and several noted that they provided only basic information or information that was already widely available online. One participant described his defensive posture on content creation:

"That's how come I try to be relatively generic about my [profile], and I only put stuff out there that I'm reasonably sure that: a) people might care about it; and b)

there's really nothing that, hopefully there's nothing that someone can use against me" (Keith, Male, Age 60).

Another participant described how she carefully considered the information that she posted, conscious of her role in the community and the persistence of information once it is posted:

"I'm careful not to post anything that could be hurtful or damaging, you know. I'm working to be a teacher now, so that's double worry, because I'm supposed to be a role model. And so I don't want anything that could be misunderstood, misinterpreted, or anything. You know, that's why I also tell my kid that once you click that send, that's it. You lost power on that. You know, pictures, whatever, it's out there" (Candace, Female, Age 50).

Participants recognize the potential to lose control of information they provide through digital platforms. Another strategy they employ is to post content that is false or misleading. Participants using this strategy were quick to note that, typically, the fabricated nature of such content is known to friends and connections. One participant described her "fake" social network profile:

"I don't post anything about myself, hardly, only the minimum. And actually I have two profiles up there. I have one that's really me, and somebody else that's like just a made up name... I didn't want to take the time to find out all the ins and outs of how do you do the different privacy settings, and what all is available. So I decided, well, I'm just gonna be somebody else... for privacy reasons... I just use it to look. People know that it's me" (Harriet, Female, Age 50).

Other types of artificial content include the use of “junk email account” addresses and the use of generalized information, such as claiming a major metropolitan location instead of a suburban or smaller hometown. As one person described the information on her profile:

“I, when I started out on Facebook. And I mentioned that I do like to protect my privacy. There were a couple things I lied about (she laughs) just from a privacy perspective. And one was my birth date. Not the year, I didn't post the year at all (she laughs), but I lied about the date. ...Everybody who knows me, knows my age. I'm not shy about that. But I did lie about the birth date, and part of that is because I do use my birth date in a lot of ways they tell you not to use them”

(Fiona, Female, Age 59).

Conscious that information can circulate widely, several participants had strong reactions to posting information on current activities or location, such as “checking in” or geo-locating at a specific restaurant or event. Revealing that one is away from home is not only seen as a privacy threat, but one that has personal security implications. One participant explained this reasoning:

“I also go back to the privacy stuff. And I go, well, you know, when you tell them you're going to your kid's soccer game, if somebody knows where you live that's the perfect opportunity to go to your house, knowing that you're not going to be there, and you know, burglarizing it or whatever. So, again, back to the privacy thing, I think that's kind of foolish” (Joe, Male, Age 50).

Limiting information, making information “generic,” or the use of false or misleading information, then, are seen as additional mechanisms to accomplish an acceptable level of privacy for these participants, and are used in addition to the more traditionally recognized methods such as avoidance of posting personal information such as contact details or birthdates.

These strategies are perhaps relied on more heavily by these participants than technological implementations, such as the enactment of privacy controls or the creation of connection groupings to filter postings, due to their simplicity and ease of use. Significantly, it is a form of information substitution that is quite subtle and less easily detected by mere examination of the availability of certain information, yet it provides a form of privacy shield from unknown others such as target advertisers, strangers, and even the social media platform sponsors.

Discussion and Conclusions

An ecological perspective to examining privacy enactment in social media use offers strong contrasts to more prevalent approaches to the examination of specific privacy behaviors in adult social media users (e.g., Debatin, et al., 2009; Stutzman & Kramer-Duffield, 2010). It is a holistic approach that considers technological, social, and discursive dimensions of the effective environment in which communicative activities take place and it reveals that privacy concerns and privacy actions as may not be as contradictory as previously thought.

Communication via social media platforms is at once mediated *and* social, therefore the processes by which privacy is effectively managed necessarily contains elements of the technological platform, the social interaction and the revealed communicative content. The use of an ecological approach exposes privacy management in social media platforms to be a multi-dimensional process that occurs on simultaneous and multiple levels; it also reveals that concerns with one layer of the environment may be addressed through strategies executed in other layers. At the technological level, participants confirmed their use of technological measures to enact privacy, such as activation of privacy controls, yet found these to be sufficiently complex and so frequently reconfigured by platform sponsors that they resorted to social and discursive tactics to assure themselves of acceptable privacy levels. On the social level, the use of strategies such as

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ignoring connection requests from others who are not sufficiently well enough known or disconnecting from others who present privacy risks are also used as a means to attain privacy goals due to the propensity of these platforms to engender the collapse of contexts. Connection selectivity, which favors a shared relationship history, enables a degree of trust in the connections that are made in the social media environment; this permits greater context transparency and minimizes potential privacy harm in the event of a context failure. It also underscores a preference for coordination as an effective mechanism to enforce social boundaries and reduce information leakage. On a discursive level, participants indicated that by carefully managing the content they create, or placing limits on the accuracy or quality of the information that is produced about oneself, privacy is further enhanced. Consistent with a “lowest common denominator” approach to information disclosure (Hogan, 2010), these mechanisms again signal the high value placed by these participants on “knowing” connections, as there is some expectation that the artificial disclosures will be overcome or overlooked, and that privacy is viewed as a coordinated effort.

When viewed as *adaptive* behaviors to the social media environment, such discursive and social strategies underscore the importance of privacy as a valued outcome, and provide an indication of a true cost of these platforms; by definition, adaptive behaviors are compensatory and their presence signals the environmental cost that must be offset. Closer examination of these behaviors also lends insight toward how privacy is tangibly accomplished while using these platforms, providing a deeper understanding of privacy management behaviors and also suggesting the privacy paradox is not as puzzling as originally presented.

What is interesting about these social and discursive strategies, however, is that they can involve the absence of action (ignoring a friend request) or negative action (providing false or

misleading content), and are often not positive or explicit behaviors; rather, they effectively constitute omission of activity or give a “false positive” indication of behavior. Because much of today’s research relies on the digital traces that our online activity leaves behind, alternative strategies such as these are not readily observed. Conclusions regarding the privacy paradox have typically been based on an examination of overt behaviors, specific actions such as the activation of privacy controls or the availability of certain types of information such as addresses and phone numbers. It is perhaps unsurprising that the conclusions drawn from these studies evidence contradiction: that while individuals are concerned about privacy, they do not engage in behaviors that guard it. This study provides evidence that privacy processes are more complex and multi-layered than previous studies may have acknowledged, and highlights the limitations of examining overt privacy enhancing behaviors.

“Networked privacy” is a concept employed when describing privacy activity among teens (boyd & Marwick, 2011a, 2011b); it is a privacy management process which encompasses implicit social norms and social strategies such as social steganography which are designed to retain access and control of personal and private information in a digital networked environment. While, like teens, the privacy practices of the midlife adults in this study also incorporate social strategies to accomplish everyday privacy, the midlife adults in this study bring context collapse, a defining characteristic of social media environments, into sharp focus. Teens and young adults often have fewer relationship contexts than midlife adults. It is not that younger people do not have multiple relationship contexts; rather at midlife, there is an accumulated life experience of professional careers, multiple career paths, and role responsibilities that younger persons have not yet experienced. This study offers deeper insight into how privacy is tangibly negotiated and how social boundaries are established in light of the collapsed relational contexts, and

importantly highlights ways in which these media may be perceived and utilized differently at various points in life. It highlights strategies that are used to enhance social boundaries, such as the use of multiple social media platforms or adopting a “wait and see” approach toward connection, as employed by a less-well studied midlife user group; these strategies may not (yet) be widely deployed by younger users, or even considered acceptable in young adult user groups (McLaughlin & Vitak, 2012), perhaps due to an earlier position in the life trajectory. In highlighting the practices of midlife adults, this research adds to the emerging literature on boundary regulation processes in the social media environment (e.g, Lampinen, Tamminen & Oulasvirta, 2009; Stutzman & Hartzog, 2012; Vitak et al., 2012) at an alternative point in the life course.

An ecological approach to the study of privacy at midlife reveals a more complete and nuanced understanding of how privacy is carried out in social media environments. This study, of course, is limited in its generalizability due to the nature of qualitative inquiry; the small sample sizes and a lack of randomization in sample selection do not permit conclusions to be drawn about the privacy behaviors of the midlife adult population overall. Interviewing, as a method, is also open to issues of reliability in the self-reported behavior by respondents, and the lack of anonymity of participants leaves this form of research open to response bias. Because the researcher is considered an instrument of the study, this method is also open to interviewer bias in the form of subjectivity in interpretation of the data.

Despite these limitations, this approach to the study of privacy behaviors emphasizes that for these midlife participants, the adaptive response to the social media environment shifts emphasis away from information disclosure and the conditions under which information is provided and toward relationships between individuals, as this is how privacy can tangibly be

negotiated. It provides better insight into how privacy is perceived by social media users and can lead to better predictive capabilities for how changes in the social media landscape may be perceived and responded to by users. It also points to ways in which system design might be improved to provide meaningful privacy enhancements.

Notes

¹ Due to space limitations, the reader is referred to Margulis (2003, 2011) for a discussion of the conceptual and theoretical dimensions of Westin's, Altman's and Petronio's approaches to privacy and its management.

² Some interpretations of privacy behaviors include a constraint on the disclosure of personal information. Stutzman et al. (2011) examined privacy behaviors as distinct from disclosure of personal information and found that privacy attitudes had no predictive relationship on privacy *behaviors* such as changing privacy settings from the default or customizing the viewing of content; however they also found that *disclosures* of personal information on social network sites, i.e., providing information such as a campus address, phone number and email, are negatively predicted by privacy attitudes.

³ The internet's arrival into everyday use occurred approximately in the mid- to-late 1990s (Haythornthwaite & Wellman, 2002) and in 1998 it was reported in approximately 50% of US high school classrooms (Wells & Lewis, 2006).

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