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Protecting Children Online: Exploring the Impact of an Online Identifier for Registered Sex Offenders on Adult Internet Users' Online Information Sharing Behaviors

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ABSTRACT

Currently registered sex offenders share in the anonymity afforded by the Internet. With over 500,000 convicted sex offenders on the National Sex Offender Registry, this anonymity is potentially problematic. The potential problem exists in that adult Internet users are unable to identify where their online communications intersect with a registered sex offender. This inability for identification can increase risks to children through the online social networking behaviors of adults. The current study examines how protection of children online could be increased through the impact of an online identifier for registered sex offenders on the online social networking site behaviors of adult Internet users.

Keywords

Protecting children online, registered sex offender, anonymity, online privacy

INTRODUCTION

The ability of an individual to remain anonymous or unidentifiable on the Internet has been integral to the surfing experience for most Internet users since its inception. Although this anonymity has its benefits the ability to be unidentifiable on the Internet has created a new public threat: a virtual world in which registered sex offenders (RSOs) can hide and prey on children and other vulnerable populations. In a national survey of 2,500 law enforcement agencies, it was found that in sex offenses that originated online and were specifically against juveniles, 75% of the victims “were primarily 13-through 15-year-old teenage girls...who met adult offenders (76% older than 25) in Internet chat rooms” (Wolak Finkelhor, and Mitchell, 2004, pg. 424e15). In 2006, the social networking site MySpace came under fire when the profiles of two girls, 14 and 16 years old, were used by predators to find their physical location for the purpose of perpetrating sexual assault (Williams, 2006). These statistics point to the existence of a threat to the nation’s children and youth, rooted in the ability of individuals to utilize the Internet to hide the reality of who they are in an attempt to solicit children for illegal sexual purposes. A societal fear of sex offenders and their presence online has received much attention in sociology research over the past ten years. There is significant concern that the information divulged on social networking sites is being used by sex offenders to identify potential victims (Quayle, 2002; Quayle and Taylor, 2003; Wolak, et. al., 2004).

The headline of a February 21, 2012 article at ArkansasOnline.com read “Body of teenager identified, apparently strangled”. The rest of the article shares that Angela Allen, a sixteen year old Arkansas teen, disappeared on February 10, 2012 after telling her family she was going for a walk. In actuality she met up with an individual whom she had met online and who was actually a convicted sex offender. Sadly, Angela was killed by this individual and people in the community as well as readers commented following the news “Is there not some way to keep convicted sex offenders from using the internet?”. While banning RSOs from the Internet may not be possible, identification techniques can potentially help adults (parents or guardians) in protecting children from these individuals. The focus of our research is to develop a theoretical model, using grounded theory research method, to understand adult online social networking site behaviors when such RSOs are identified online and potential implications for protecting children from such registered sex offenders.

Currently, the use of the Internet by RSOs differs from state to state. As of August 2011, Massachusetts was considering releasing registered sex offenders’ online information to the general public. Louisiana, North Carolina and Illinois prohibit

the use of social networking sites by registered sex offenders (Bowker, 2011). California is working on a similar law (Gardner, 2010). New York mandated that sex offenders included their screen names and e-mail addresses when they register (Bowker, 2011). In the majority of states, however, registered sex offenders are allowed by law to utilize the Internet and social networking sites. Their identities on those sites remain *anonymous* posing potential risks to children when adults and children unknowingly socialize online with these individuals. This potential risk can turn into a dreadful and deadly reality for parents, guardians and innocent victims like Angela Allen.

Research in sociology and psychiatry has addressed this issue through study of the vulnerabilities of children and youth to the threat of online sexual solicitation (Mitchell, et. al., 2007; Mitchell et al., 2008; Wolak, et. al., 2004), characteristics of online predators (Elliott, Beech, Mandeville-Norden, and Hayes, 2009; Quayle 2002; Quayle and Taylor 2003), and the pervasiveness of sexual solicitations on particular types of websites (Mitchell, et. al., 2008; Ybarra and Mitchell, 2008). As Dombrowski, LeMasney, Ahia, and Dickson, 2004 stated “[t]he cost to children and society of sexual perpetration is too great to overlook the hazards of online solicitation” (pg. 71). Information systems (IS) literature, however, has remained largely silent on this critical area of research which has significant implications for the well-being of children and the larger society. Largely, IS research has focused on cybercrimes. Attention has been given to how governments can improve their handling of cybercrimes and/or cyber-attacks. (Geers, 2009; Kim, Wang, & Ullrich, 2012). Choo (2011) recommended the use of Routine Activity Theory to mitigate risks of cyber threats. An alternate view is the importance of forensic technology to address cybercrimes (Bassett, Bass, & Brien, 2006) and the challenges cybercrimes present to forensic technology (Panda, Giordano, & Kalil, 2006). Also, Verma (2012) evaluated the liability of cyber café owners with regard to cyber pornography. These examples of IS literature demonstrate an attention to cybercrimes, but the silence with regard to registered sex offenders roaming the Internet anonymously.

To address this gap in the extant IS literature we are interested in examining how an online identifier for RSOs can aid in protecting children online. The proposed mechanism for that protection is through the online social networking site (SNS) behaviors of adult Internet users. Online SNS behaviors includes such activities as posting comments, uploading pictures of family or children, uploading videos of family etc. A security company named AVG conducted a study in 2010 which revealed that in the United States “92 percent of children have a digital presence by age two” (Bertolucci, 2010; *Digital Birth: Welcome to the Online World*, 2010). This is due to parents posting pictures as early as a child’s ultrasound. Additionally, some people may post their address and location information on social networking sites. All of these sharing of information by adults and children are what we term as information sharing behaviors – all of which have the potential to be exploited by RSOs. Also, because “some of the most vulnerable youths may be alienated from their parents, victims of familial abuse, or dealing with sensitive issues such as inner conflicts about sexual orientation that they feel their parents will not understand” (Wolak, Finkelhor, Mitchell, & Ybarra, 2008) a mechanism by which other individuals such as peers and chat room bystanders can aid in calling out inappropriate behavior could be helpful. Therefore, the question we address is: *how might an online identifier for registered sex offenders improve the protection of children online by influencing online information sharing behaviors?* This is the first study (according to authors’ best knowledge) to investigate this phenomena using Grounded Theory and interpretive approach. In the following sections, we provide a brief literature review, limitations of the existing models, methodology, a presentation of the proposed theoretical model and discussion and future research.

LIMITATIONS OF EXISTING THEORETICAL MODELS

The predominant focus of online information sharing behaviors has been from the consumer aspect. However, the advent and success of online social networks has emphasized the use of the Internet for social purposes. A variety of theories have been used to explain online information sharing behaviors including Technology Acceptance Model (TAM) (Chung, 2005; Gefen & Karahanna, 2003; Koufaris, 2002), Theory of Planned Behavior (TPB) and Theory of Reasoned Action (TRA) (Yousafzai, Foxall, & Pallister, 2010). Specific to online social behaviors, theories of explanation have included the Theory of Virtual Social Interaction (Harris, Bailenson, Nielsen, & Yee, 2009; Mahfouz, Philaretou, & Theocharous, 2008; Wieser, Pauli, Grosseibl, Molzow, & Mühlberger, 2010), Social Networking Analysis (Hulst, 2009; Churchill & Halverson, 2005; Borgatti & Molina, 2003) and the idea of Social Capital (Granovetter, 1983; Garg, Telang, Krackhardt, & Krishnan, 2009; Lin, 1999). We contend that increasing the transparency of registered sex offenders online can impact online SNS behaviors of adults and therefore the ability of the general public to assist in protecting children online. In order to understand how this could take place and its potential implication, we need to embrace the concept that threats to children exist online and as a society we must have the ability and the tools (such as RSO identification online) to play an active role in securing the virtual and physical environment for our children. In the next section, we present the research method used in this paper.

RESEARCH METHODOLOGY

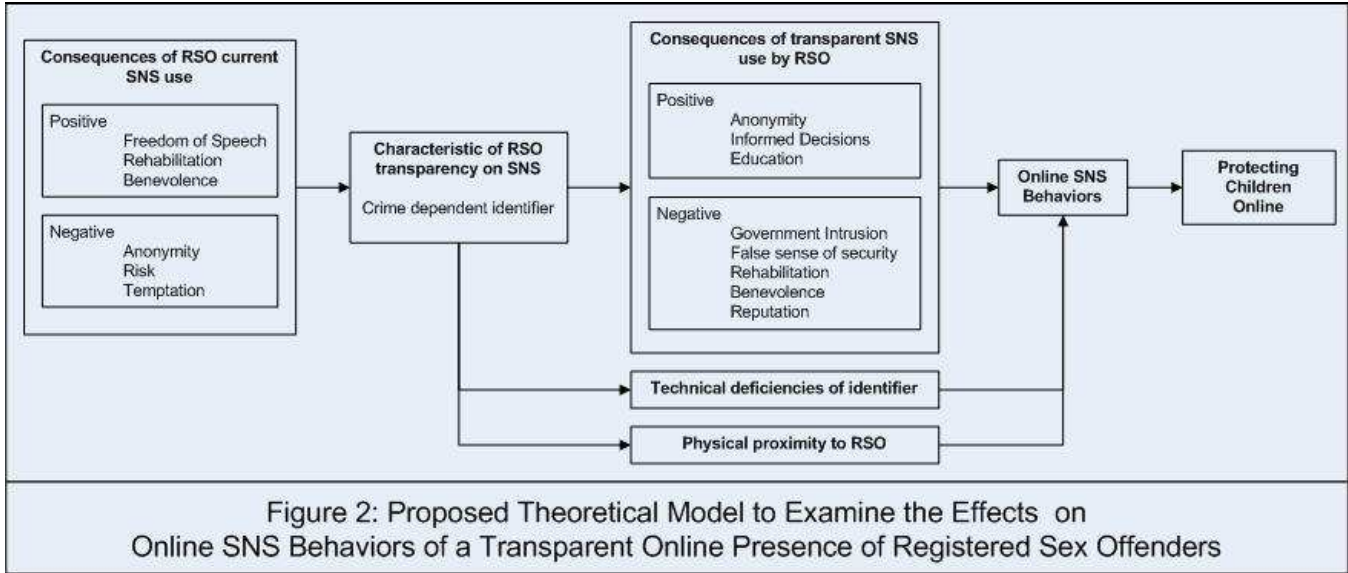
This research utilizes Grounded Theory (Glaser and Strauss, 1967; Strauss and Corbin, 1990; 2008) research method primarily because it is a theory generation as opposed to theory testing method and that it allows one to assess the interpretation of the phenomenon as viewed by those who care in different ways for children and minors. The aim of grounded theory research is to derive theory from actual data rather than force-fitting data to *a priori* theory and hypotheses (Strauss and Corbin, 1990; 2008). By formulating theory within this approach, the theory is so intimately tied to the data, the resultant theory is likely consistent with empirical observation (Eisenhardt, 1989). Following, Glaser and Strauss' (1967) and Strauss and Corbin's, (1990; 2008) recommendations that attention must be paid to theoretical relevance, purpose, similarities and differences across data sources with regard to appropriateness of the data sources for this study, we carefully selected parents and/or guardians (adults) from a variety of socioeconomic backgrounds. As part of this study, we interviewed adult Internet users (parents and/or guardians or persons who have younger siblings or care for children or minors) to include undergraduate students, graduate students, and professionals from both genders. The number of individuals interviewed is 23. In grounded theory research, it is more appropriate to focus on the in-depth exploration of the phenomenon under consideration rather than sample size (Strauss and Corbin, 1990; 2008). Each interview consisted of open-ended questions to investigate various aspects deemed important to these users in terms of Online Social Networking Site Behaviors in Response to the Registered Sex Offenders Online Identifier. Transcription of each interview was further analyzed, using the prescribed Grounded Theory approach (Strauss and Corbin, 1990; 2008; Locke, 2001). Following Strauss and Corbin (1990, 2008), we identified first level emergent concepts using theoretical sampling until we could find no new emerging concepts thus arriving at theoretical saturation. Then we analyzed the first level concepts to arrive at second level constructs. Then we combined second level constructs to arrive at the conceptual categories and relationship across these conceptual categories (Strauss and Corbin, 1990; 2008) to build our proposed theoretical model (see Figure 2).

PROPOSED GROUNDED THEORY BASED RESEARCH MODEL

Based on our grounded theory analysis, we developed a theoretical model of the influence of RSO identifier on online SNS behaviors of adults and consequent protection of children online. We summarize our model in Figure 1 below. In this proposed theoretical model, we found that adults strongly felt that RSO online identifier impacts their information sharing behavior and that such behavior has implications for protecting children online. So our overall analysis provides initial explanation of how the identification of RSOs online may provide a mechanism to begin to protect children online. However, we found adults differed on the impact that RSO identification may have on their online information sharing behavior and potential for protecting children online. We further elaborate on our findings below.



Twenty three open-ended questions were presented to adult Internet and online SNS users via online survey software. The theoretical model proposed in Figure 2 was developed from the data gathered from their responses. Further explanations of the constructs follow the model.



Consequence of Registered Sex Offenders’ Anonymous Presence Online

This construct represents how adult Internet and online SNS users view positive and negative consequences of RSOs using SNS in the current online environment.

Negative consequences: The current status of the Internet and the ability to create multiple online identifiers present problems within the current online environment. With regard to registered sex offenders, the anonymity afforded by the Internet is an issue.

“As with any party with potentially hostile (in my opinion) intentions, not being able to identify them in advance makes negating the threat more difficult.”

Additionally, RSO’s use of SNS sites in the current online environment presents risks to other individuals utilizing those sites.

“People have the opportunity to hide behind a screen name allowing them to do things they may not do in person.”

Lastly, adult Internet and online SNS users think that RSO’s use of SNS presents them with too much temptation. The access they have to other individuals is viewed as a negative consequence for both RSOs and general Internet users.

“It would be too easy for them to contact children and perhaps get personal information from them that could put those children in danger.”

Positive consequences are those which some adult Internet and online social network users see as advantageous outcomes of RSOs being on the social networking sites. A group of respondents viewed RSO usage of SNS as support of their freedom of speech. Such comments as:

“They still have rights, and not all crimes under the “registered sex offender banner are the same.”

are examples of the by those who believe RSOs should have access. Individuals feel that the Internet and SNS contain information that could be helpful for the rehabilitation of RSOs.

“There are some offenders who are reformed and will still have to register and carry that stigma.”

Lastly, some individuals feel that RSOs use of SNS provides a mechanism through which benevolent behaviors can occur.

“If no one interacts with them, how will they be able to be helped? Barring them from normal social interaction may save me from some harm, but prevents me or others from helping them to a healthier lifestyle.”

Characteristics of Registered Sex Offenders' Transparency On Social Networking Sites

Interestingly, several individuals noted the variation in the degree of crimes of registered sex offenders. According to the *Adam Walsh Child Protection and Safety Act of 2006* there are three tiers of sex offender crimes: 1) punishable with less than one year of imprisonment and who are considered less likely to repeat their offenses, 2) greater than one year imprisonment and have a potential for recidivism, 3) punishable by imprisonment for more than 1 year and have a high potential for repeating their crimes. Respondents' perspectives on the characteristics of how RSOs' presence could be made transparent felt that these differences in crimes should be taken into consideration.

"I think some registered offenders might have just been an 18 year old having sex with their 17 year old girlfriend and no they are considered a criminal because it's considered a sex crime. Not all offenders have the same circumstance [s]o I wouldn't want to ban everyone from the internet. That 18 year old boy is not a predator in my opinion."

Consequence Of Identifying Registered Sex Offenders Online

When presented with the idea of being able to identify registered sex offenders online, individuals responded with a differing set of consequences.

Positive consequences: First, the addition of a crime specific marker to identify registered sex offenders would remove the anonymity which was listed as a strong negative in the current virtual environment.

"I'm not sure how it would be implementable, but it removes the primary issue, that of anonymity"

Secondly, the ability to identify registered sex offenders online would equip Internet users with the knowledge to make informed decisions regarding whom they and their children communicate online.

"I probably have registered sex offenders on my friend list on Facebook. If I knew I were able to identify them as such, I would probably un-friend them, although this would depend on the circumstances. If I had children in my house who might access my account, I would be more likely to react more proactively."

Lastly, the ability to identify registered sex offenders online would equip Internet users with the knowledge to educate their children and other users.

"It might be helpful in self-policing the community, much like a "neighborhood watch."

Negative consequences: A surprising response from some surveys included the idea of the potential for government intrusion into other areas of the lives of U.S. citizens if they were allowed to identify registered sex offenders in this manner online.

"[I]n order to secure MY OWN freedoms, I cannot allow the freedoms others have to be taken away. There is that old saying about when they came for the Jews, I wasn't a Jew, so I did nothing."

There is also concern that this type of identifier would promote a false sense of security in the Internet and online social networking sites. These individuals would not be identified by this kind of mechanism.

"I believe that there are many more unregistered sex offenders than registered. Blocking or identifying those registered gives a false sense of security to potential victims."

The rehabilitation and benevolence noted as a consequence of the current virtual environment would be removed with the addition of a crime dependent identifier. In fact, there is concern that the opposite of rehabilitation assistance and benevolence would occur if RSOs were identifiable online.

This concept of identifying sex offenders in this kind of a situation is a little like telling the blacks years ago they were to have no interaction with the white folks.

Lastly, individuals expressed concerns about how others would react if it was discovered they were interacting with a registered sex offender online. It could potentially be damaging to the individual's reputation.

"They may disown me, call me names, talk behind my back - maybe even end our friendship."

Technical Deficiencies Of Identifier

As with all great technological advancements on the Internet, the idea of a crime specific marker for registered sex offenders was met with skepticism.

“Loopholes exist and there always seem to be ways to get around tools, laws and regulations. However, something is better than nothing.”

Stories of hackers and websites tracking information unbeknownst to the users have left a large number of Internet users unable to have blind faith in the tools provided them. This skepticism identifies an area in need of research.

Physical Proximity The Registered Sex Offender

Currently, in the physical world, individuals are able to go online to the National Sex Offender Registry and map a neighborhood to see where the RSOs are physically located in proximity to their children and themselves. The idea of a crime specific marker would allow a similar connection in the virtual environment. However, the missing piece after identifying a RSO online is being able to determine if that individual is also physically close to your child. Potentially, a child could be talking online with a registered sex offender who lives 12 blocks away and there is no mechanism by which a parent can determine the physical proximity of that individual to the child. This was brought up by respondents when considering if being able to identify registered sex offenders online would provide individuals with a tool to protect themselves.

“This is a big maybe, assuming that a sex offender lived close enough to me to physically encounter me and the will to do so.”

Online Social Networking Site Behavioral Changes and Protecting Children Online

The responses to the survey and the constructs which emerged suggest a great deal of deviation amongst values and norms regarding RSOs use of the Internet and online SNS as well as implementing a mechanism by which to make their presence online transparent. Even with the diversity in perspectives, respondents indicated they would change the behaviors on online social networking sites if they were able to identify registered sex offenders.

“I would pay more attention and lessen a great deal of information I have online (I.e. Place of work, school, etc). sexual predators would be less likely to pursue me or my family... They wouldn't have any information to go on.”

The ability to protect children online based on the transparency of registered sex offenders online resides in adult Internet users' decisions to alter their online social behaviors. If adults could see where their social interactions online crossed paths with RSOs, they could make decisions about whether or not to engage in information sharing with those individuals and if so, how much information to share. More specifically, they could monitor their children's online social behaviors to ensure they are not interacting with registered sex offenders, not putting information online that would make them vulnerable to those individuals. It would create a platform on which parents and adults who interact with children would not only be able to alter their online social behaviors to protect the children, but also educate the children regarding their online social behaviors as well.

DISCUSSION, CONCLUSION AND FUTURE RESEARCH

Creating an online identifier for registered sex offenders would alter the current online environment. This alteration could impact the online information sharing behaviors of adults. In turn, the change in those behaviors could affect how children are protected online. The accessibility of the Internet and the ability for an individual to set up multiple accounts online is a limitation to this study. However, it is that anonymity which creates the phenomenon of focus and which identifies the importance of an online identifier for RSOs. As of right now, there are over half a million RSOs who can hide behind the veil of anonymity as they frequent social networking sites, chat rooms, etc.

Our inability to identify RSOs online creates an online threat similar to the real world public threat posed by sexual predators which prompted the passing of Megan's Law in 1996 (Welchans, 2005). This law requires that law enforcement agencies provide information collected in their sex offender registries to communities when sex offenders are released from prison. The motivation behind its enactment was the abuse and murder of a seven year old girl by a twice-convicted sex offender who's family had no idea that he lived in their neighborhood. A similar scenario is developing on the Internet, as evidenced in the aforementioned death of Angela Allen. The interaction between RSOs and children is not readily identifiable by children, parents or those responsible for the care of children.

As part of future research, one may address questions such as if the individuals within an online SNS could be linked to the NSOR, how would adults use the feature to monitor their online information sharing behaviors? The utility of this type of

feature on one's online social behaviors is unknown, leaving unanswered the question of how the degree to which its use would aid in the protection of children online. The virtual implications of identifying known threats of individuals online are not clear. Therefore, more research is needed to understand how these types of features would impact online social behaviors, which could in turn affect the degree to which children are protected online.

Within information technology, the most effective mechanism for the deployment of an online identifier for RSOs would need to be determined. Experimental design techniques could be employed to study adult Internet users' information sharing behaviors as dependent upon the type of identifier provided and the functionalities included with the identifier. Numerous public policy/law research opportunities regarding the Internet and registered sex offenders exist. Given the ability to identify registered sex offenders online: how would changes in the information sharing behaviors of adults affect the degree of protection provided to children online? These questions remain unaddressed in the extant IS literature and are critical for IS discipline to consider for the benefit of our children and for the society at large.

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