

Exploring Informational Privacy Perceptions in the Context of Online Social Networks: A Phenomenology Perspective

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Abstract. The paper presents a conceptual framework of informational privacy dimensions and its elements in the context of social networks that derived from the understanding of the user's perceptions based on a focus group interview. Phenomenology approach is adopted as it enables us to discover the lived experiences of the people involved rather using a survey or a self reported attitude studies for online social networks investigation where users tend to depart from their usual practices which is proven to be biased. It is found that the main dimensions of the informational privacy within the context of online social networks are (1) limited communication dimension that has the element of sharing of personal information with trusted others (2) release of personal information dimension that has the element of content control and the amount of personal information being released; and (3) control dimension that has the element of the ability to control over information about oneself.

Keywords: informational privacy, online social networks, phenomenology method.

1 Introduction

For the past several years, technology particularly the advent of Internet has played major role in changing the lifestyles of Internet users worldwide where it is proven to be the most vital online communication medium for the distribution, retrieval and sharing of information since the mid 90's [1]. Many activities can be done at home, workplace or anywhere in the world including communicating through online social networks. Nevertheless, the Internet was invented as an "insecure communications" media that lead to several issues including informational privacy [2]. Thus, this research will look into the new phenomenon of explosive growth of online social networks as it has gain interests from researchers and businesses worldwide [3] regarding the possibilities and the risks. Furthermore, the most controversial issues arise within online social networks pertaining to their implications and impacts on

informational privacy issues as research has proven that users are more willing to disclose their personal information to public without much concern towards their informational privacy states [4]. In addition, due to the informational privacy issues such as media-driven user informational privacy concerns, the continuous informational privacy-related public scandals and media reporting the questionable information handling practices has began to boost user awareness regarding the informational privacy threats they encounters [5]. However, there is yet systematic research on informational privacy that can cater the needs of the users on the protection of informational privacy specific to online social networks context This problem may arise due to the lack of suitable measurement instrument of informational privacy confining the context of online social networks solely [6]. Thus, the research attempts to look into the user's understanding of informational privacy from the phenomenology perspective based on their real experience communicating through the online social networks in order to find possible dimensions and elements of informational privacy.

2 Research Background

2.1 Concept of Privacy

Privacy is a common term that is used widely in every day's life which is perceived in different meaning due to its multifaceted concepts and dimensions that depend on the value and scope in various domains such as ecommerce, businesses, Internet banking and society [6] [7] [8] [9] [10]. However in the literature there are several dimensions that have been discussed. For example, Burgoon et. al [8] identified four dimensions of privacy which they defined privacy as "the ability to control and limit physical, interactional psychological and informational access to the self or one's group". Meanwhile, Fischer- Hübner [9] have outlined three dimensions of privacy consisting personal physical privacy, territorial privacy and informational privacy which is much similar to DeCew [10] that classified privacy into three dimensions namely informational, accessibility, and expressive privacy [6] [10]. However, these dimensions are overlap with each other (see Table 1).

Definition of Informational Privacy. The term informational privacy, is frequently used whilst referring to individuals' online privacy. Westin [11] had described informational privacy as the claim of individuals, groups or institutions to determine for themselves when, how and to what extent information about them is communicated to others. This definition has been used as a guideline for the formulation of fair information practices (FIP), which is a set of policy guidelines that is used worldwide [12]. Meanwhile, Internet Society [13] defined informational privacy as "the right of an entity (normally a person), acting in its own behalf, to determine the degree to which it will interact with its environment, including the degree to which the entity is willing to share information about itself with others".

Table 1. Summary of Privacy Dimensions from the Literature

Dimensions	Definitions
Informational Privacy	-Personal information that includes finances and medical details in which how much an individual's are willing to share this personal information to another person or company and to what extent the information will be disclosed [9] [11].
Bodily Privacy	-Also known as 'accessibility' or physical privacy [8] [9] [10]. The physical access of an individual to others whereby an individual will determine who can have body contact and share their sense of perception and observation with them.
Privacy of Communications	-The security and privacy of mail, telephone calls, email and other forms of communication [8].
Territorial Privacy	-Also known as 'expressive' or interactional privacy [10]. It relates to protection of autonomy for an individual to express their self-identity throughout speech or activity without being violated from interference, pressure and coercion from government or from other persons. Therefore, territorial privacy improved individuals self expression and capability to build interpersonal relationships but restricted the social control over lifestyle choices [9].

2.2 Online Social Networks

Online social networks can be described as online environment where people generate public or semi-public self-descriptive profiles as well as building connections to other people [14]. Individuals can produce impression on others as online social networks stress on the oral and linguistic signs [15]. This feature allows users to expose their identity fully plus their hidden identities [16] as they can reports their experiences and achievements, upload photos, and display their list of connections, that shows their pleasing connections and intuitions. In addition, online social networks help developing user's identity through the application usage, board discussions, blogging, or posting commentaries in public areas [5]. Thus, online social networks give the users opportunities to pre-decide the information they want to publish to public that portray their identity closer to their "ideal self" as proven by the study of Boyd [14], he claimed that users of online social networks are more likely to show their prominent identity to impress significant others by exposing their true identity but this is limited to connection with real-life friends differ from anonymous online forums, dating platforms, and chats where users tend to exaggerate their true identity and self achievement [17].

2.3 Informational Privacy in the Online Social Networks Environment

In the context of online behavior, informational privacy is at risk. Studies noted that even though protecting individuals personal information still remain questionable, most individuals spend time online based on both social and non-social activities whilst submitting personal information online for instance, building social networking

on social networking sites. To maximize the benefits of online social networks users have to bring up the best impression about themselves to public as it is part of online social networks activities. Nevertheless, online social networks bring informational privacy concern to users as users are more cautious to do online social networks activities [5] due to informational privacy threats [14]. As a result, users begun to change the way they disclose their personal information in online social networks as they have lack of control on the information. This is a concerned situation as this changing might harm the sustainability of online social networks since users are incapable to construct their identity in the preferred way in which they might diminish their participation in online social networks or even worst leaving the network. This may cause the loss of commercial and public value of the online social networks platforms [5]. Thus, there is a need to understand the potential of online social networks where user's informational privacy concern should be taken into account. Even though, several researches in the past has studied informational privacy within the online social networks [18] [19] [20] but the results are insufficient and often of debatable in nature [5]. There are still few systematic research has arrived with a conceptual framework on the dimensions and elements of informational privacy from the user's understanding. This is significant as individual's understanding of informational privacy might be different from others based on their own personal characteristics and past experiences that have cultural influences [21]. Furthermore, individuals might have different opinions on what is fair and what is not fair regarding the collection and use of their information by the online social networks.

3 Problem Background

The area of informational privacy in online social networks is being strictly under researched [22] as most literature on online social networks mainly focuses on the issues of information disclosure, management of informational privacy settings and informational privacy awareness [19] [22] [23]. Besides, various studies on the impact of informational privacy concerns on behavior [18] [19] [20] are insufficient and often of debatable in nature as the studies are inconsistent in terms of the results due to the lack of suitable instrument that measure informational privacy concerns within the online social networks solely [5]. Thus, this research focuses on the right as individuals which is the users' of online social networks as there is limited number of studies that focus on user informational privacy concerns within the online social networks. In addition, much of the published literature on informational privacy in the past only concentrates on protecting some types of data regardless concerning the perception of users on what considered as private data. However, these expert opinion on the issues of informational privacy might not be sufficient in determining a good communication technology or any effective policies to use in which it do not reflect the needs of users making it vital to explore the understandings of users on what will be considered invasive to them and the reasons. Meanwhile, in terms of methodology, the methods used in exploring informational privacy will usually used surveys [24]. Moreover, Harper and Singleton [25] claimed that in a review of 23 privacy surveys, "surveys may suffer from manipulative questioning on one hand, and that unprompted surveys may reveal very little privacy concern on the other hand" making it researcher-biased because sometimes it is hard for researcher to recognize certain informational privacy issues [24].

4 Research Design and Approach

4.1 Phenomenology Method

Phenomenology method is used in exploring the understanding on the notion of informational privacy among online social networks users that focuses on personal consciousness where it study on the real 'phenomena' aiming at the root of the thing itself [26] [27]. The research aim is to describe the phenomenon as accurate as possible, abstaining from any pre-given framework, but consistent to the facts. In addition, the study deals with the lived experiences, the user's experiences as the first person point of view of the people involved, or who were involved, with the issue that is being researched. The researcher listened to the recording and take notes to explicit participants key words, phrases and statements. Field note can be consider as part of data analysis since it involve interpretation thus the researcher must remember not to be bias while doing field note as the root of phenomenology that deals with the lived experiences of the participants in the research. However, there is no specific guideline to conduct phenomenology research [28]. It is pointed out that researchers who use phenomenology is hesitant to set techniques corresponded with. Thus the research design is adapted from Moustakas [27].

4.2 Focus Group Interview

Due to the exploratory nature of the research, the empirical study is conducted via a semi structured interview session with six participants [29] who have at least 2 years experiences in conducting online transactions and engaging in other social networking sites such as Twitter, MySpace, Friendster, Facebook actively on their understandings of the informational privacy within the online social networks environment. These participants are more likely to have view on offline and online risks where they commonly participating with the Internet activities [30]. Furthermore, the participants chosen are having at least bachelor degree qualification as individuals from educated background will usually have some experiences using technology [31]. In addition, the preparation for the interview questionnaire are designed and discussed from synthesizing privacy and informational privacy literature including theories and its dimensions based on the work of [4] [5] [11] [31] [32] [33]. However, these literatures are only to form the body of arguments to assist the researcher in structuring the interview questionnaire and not the pre-determined set of framework. Nevertheless, the researcher remains unbiased and letting the participants elaborate their perceptions and experiences in their own terms.

5 Results and Discussions

The general and unique themes from the entire interview is extorted to make a merged summary in order to identify the most concerned dimensions and elements of informational privacy based on the user's understanding in the context of online social networks as shown in Table 2 below.

Table 2. Summary of the results on the informational privacy dimensions

Themes	Meanings
Solitude Seclusion /Isolation	Control of the “interactional borders “or privacy boundary
Intimacy	Control over one’s intimate relationships
Reserve	Limit knowledge of one Control one’s personal information Limitation of disclosure to others Boundary of exposure of individuals’ personal information to others
Limited Communication Secrecy	Sharing of personal information with trusted others Disguise of certain issues from others
Control/ Personhood	Humiliation Manipulation of personal information that involve one’s personality Manipulation of personal information that can cause humiliation and discrimination Ability to control over information about oneself
Control over Personal Information about Oneself Release of Personal Information Distribution of Personal Information	Control the content and amount of personal information being released Right to distribute own personal information
Emotional Release	Relieve, shared emotions
Self-evaluation	Individuals personal experiences that help them to make decision
Usage of information/Use of Personal Information	Purposeful usage of information
Information Compensation	Information trade-off for benefits
Identity Theft	Manipulation of personal information that can lead to fraud
Security	Security in disclosing of personal information
Inappropriate/Unrelated	Inappropriate/Unrelated association with oneself
Options	Options on what kind of information revelation is needed
Misuse of information	Misuse of information to other unknown party

From the results of the interview, it is found that there are some new themes derived from the user’s perceptions which are *security*, *inappropriate/ unrelated association with oneself*, *options and misuse of information*. However, the other nine themes that is significant to the users are similar with the existing themes from the literature that are *solitude*, *intimacy*, *reserve*, also known in the literature as limited communication and secrecy; *control* which is also known as personhood, control over personal information about oneself, *release of personal information and distribution of personal information*;; *emotional release*, *self-evaluation*, *usage of information/use of personal information*, *information compensation and identity theft*.

Nevertheless it can be summarized that informational privacy in the context of online social networks is reflected by some significant dimensions that is, *limited communication* in which it is defined as the sharing of information to certain people. Users only shared their personal information with certain people, the one that they

trusted. This is because according to the participants, they value the informational privacy and do wished that their informational privacy is protected from unauthorized access by third parties. Furthermore, informational privacy has also been viewed as the *release of personal information dimension* which is the control of the content and amount of personal information being released to others. Participants argued that the online social networks are a medium of information sharing, where they believed that if someone wants to make information private they do not have to share and put the information on their online social network account. This is due to the fact that the main intention of joining online social networks itself is to build connections to other people that may lead to the disclosed of personal information.

In addition, *control* has been reflected as informational privacy in which control is defined as the ability to control over information about oneself. Participants believed that informational privacy allows users to choose whether they want to share or not to share their personal information as it lets users to control their own private information and the access of the information to certain people. Thus, users of online social networks may think that they lose their privacy if they cannot decide who can collect, use, share their personal information in other word, the control of the personal information collected.

Furthermore, the duality of the phenomenon of informational privacy in the context of online social networks occurs whereby the more the users are exposed their networking to the social medium, the limited the personal information that the users are willing to disclose. This can be explained by the proposed framework of informational privacy within the online social networks as shown in Figure 1 below whereby it can be seen that the interplay of release of personal information, limited communication, and control construct. This can be reflected in a situation in which even though it seems that users of online social networks is disclosing their personal information to public in order to build connections to other people the fact is, these users are actually control of the content and amount of personal information being released to others which they only shared the personal information with the trusted others. In addition, both of release of personal information constructs and limited communication construct is influence by the control construct in the sense that controlling over information about oneself is needed as users of online social networks feel that their privacy is invaded if they have no control on their own personal information.

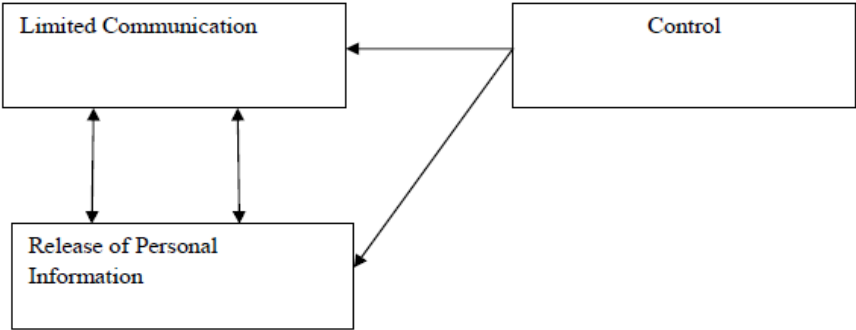


Fig. 1. The conceptual framework of informational privacy in the online social networks

6 Conclusion and Future Directions

The study have found four new emerging themes informational privacy in the context of online social networks that is *security, inappropriate/unrelated association with oneself, option and misuse of information* which is not significantly addressed previously in the existing literature. These themes will contribute to the existing dimensions in the informational privacy literature and need further investigation. However, the findings of the research are based on a small sample group made up of only six participants as this research is an exploratory in nature that only tends to find the possible constructs of informational privacy dimensions and its elements. Thus, it is recommended to carry out a similar research in a quantitative manner involving larger respondents to examine the relationship between the proposed constructs of the conceptual framework.

References

1. Boncle., Good privacy. Networking that embraces privacy (2008), <http://www.boncle.com/index.html> (retrieved February 3, 2010)
2. Givens., Online Privacy and Technology. Privacy Rights Clearing House (2009), <http://www.privacyrights.org/Online-Privacyand-Technology> (retrieved February 3, 2010)
3. Caudill, E.M., Murphey, P.E.: Consumer Online Privacy: Legal and Ethical Issues. *Journal of Public Policy and Marketing* 19(1), 7–19 (2000)
4. Sheehan, K.B., Hoy, M.G.: Dimensions of privacy concern among online consumers. *Journal of Public Policy & Marketing* 19(1), 62–73 (2000)
5. Krasnova, H., Günther, O., Spiekermann, S., Koroleva, K.: Privacy concerns and identity in online social networks. *Identity Journal Limited* 2009 (2009)
6. Schofield, C., Joinson, A.D.: Privacy, Trust, and Disclosure Online (2008)
7. Stern, T.: Internet Privacy from the Individual and Business Perspectives – Introduction: privacy, Trust: privacy from the business perspective, Individual vs. business = privacy vs. personalization, Cookies, Google, Solutions. Baruch College, CUNY, USA online encyclopaedia 2009 (2009)
8. Burgoon, J.: Privacy and communication. In: Burgoon, M. (ed.) *Comms Yearbook* 6, pp. 206–249. Sage, Forrester Research, CA, Cambridge, MA (1982)
9. Fischer-Hübner, S.: IT-Security and Privacy-Design and Use of Privacy-Enhancing Security Mechanisms. LNCS, vol. 1958. Springer, Heidelberg (2001)
10. DeCew, J.: In pursuit of privacy: Law, ethics, and the rise of technology. Cornell University Press, Ithaca (1997)
11. Westin, A.: Privacy and freedom. Atheneum, New York (1967)
12. Lederer, S., Hong, J.I., Dey, A.K., Landay, J.A.: Personal privacy through understanding and action: five pitfalls for designers. *Personal Ubiquitous Computing* 8(6), 440–454 (2004)
13. Internet Society (2007), <http://www.faqs.org/rfcs/rfc2828.html> (retrieved February 3, 2010)
14. Boyd, D., Ellison, N.: Social Network Sites: Definition, History, and Scholarship. *Journal of Computer-Mediated Communication* 13(1), 11 (2007)
15. Ellison, N., Heino, R., Gibbs, J.: Managing impressions online: Self-presentation processes in the online dating environment. *Journal of Computer-Mediated Communication* 11, 2 (2006), article 2

16. Schau, H.J., Gilly, M.C.: We are what we post? Self-presentation in personal web space. *Journal of Consumer Research* 30(3), 385–404 (2003)
17. Brym, R.J., Lenton, R.L.: Love Online: A Report on Digital Dating in Canada (2001), <http://www.nelson.com/nelson/harcourt/sociology/newsociety3e/loveonline.pdf> (2008) (retrieved March 10, 2010)
18. Dwyer, C., Hiltz, S.R., Passerini, K.: Trust and Privacy Concern within Social Networking Sites: A Comparison of Facebook and MySpace. In: *Thirteenth American Conference on Information Systems, USA* (2007)
19. Tufekci, Z.: Can you see me now? Audience and disclosure regulation in Online Social Network Sites. *Bulletin of Science, Technology & Society* 28(1), 20–36 (2008)
20. Stutzman, F.: An Evaluation of Identity-Sharing Behavior in Social Network Communities. *International Digital and Media Arts Journal* 3(1), 10–13 (2006)
21. Moor, J.: Towards a theory of privacy in the information age. *Computers and Society* 27(3), 27–32 (1997)
22. Preibusch, S., Hoser, B., Gürses, S., Berendt, B.: Ubiquitous social networks opportunities and challenges for privacy-aware user modelling. In: *Proceedings of the Data Mining for User Modelling Workshop (DM.UM 2007)* at UM 2007, Corfu (June 2007)
23. Krishnamurthy, B., Wills, C.E.: Characterizing privacy in online social networks. In: *Proceedings of the First Workshop on online Social Networks, WOSP 2008, Seattle, WA, USA, August 18*, pp. 37–42. ACM, New York (2008)
24. Patil, S., Romero, N., Karat, J.: Privacy and HCI: Methodologies for Studying Privacy Issues. In: *CHI 2006, Montréal, Québec, Canada, April 22–27* (2006)
25. Harper, J., Singleton, S.: With a Grain of Salt: What Consumer Privacy Surveys Don't Tell Us (2001), <http://ssrn.com/abstract=299930> (retrieved February 3, 2010)
26. Kruger, D.: *An introduction to phenomenological psychology*, 2nd edn., Cape Town (1988)
27. Moustakas, C.: *Phenomenological research methods*. Sage, Thousand Oaks (1994)
28. Groenewald, T.: A phenomenological research design illustrated. *International Journal of Qualitative Methods* 3(1) (2004), Article 4
29. Cairns, P., Cox, A.L.: *Research Methods for Human Computer Interaction*, Cambridge (2009)
30. Nyshadham, E.A., Ugbaja, M.: A study of Ecommerce Risk Perceptions Among B2C Consumers: A Two Country Study. In: *Proceedings of the 19th Bled eConference, Bled, Slovenia, June 5–7* (2006)
31. Malhotra, N.K., Kim, S.S., Agarwal, J.: Internet users' information privacy concerns (IUIPC): The construct, the scale and a causal model. *Information Systems Research* 15, 336–355 (2004)
32. Taylor, D.G., Davis, D.F., Jillapalli, R.: Privacy concern and online personalization: the moderating effects of information control and compensation. *Electron Commer. Res.* 9, 203–223 (2009)
33. Carew, P.J., Stapleton, L.: Towards a Privacy Framework for Information Systems Development. *Information Systems Development: Advances in Theory, Practice and Education* (2005)