User Online Anonymity Awareness among Students / Maor Weinberger

Abstract

Striving for privacy is a common ambition among humans, especially in the modern world. Therefore, the right to privacy is anchored in diverse rulings and judicial decisions, with the purpose of ensuring an individual's ability to keep and protect his identity, thoughts, emotions, deep secrets, way of life and intimate acts. In addition, the right to privacy makes it possible for a person to choose which parts and places in his own private world are accessible to external parties, and also to control the manner, scope and timing of such exposure (Schwartz-Altshuler, 2012).

However, the rapid development of technology, the Internet in particular, has created a blurring of boundaries between the public domain and the personal domain, which challenges the current concept of privacy. It seems that the Internet has created a conflict in regard to the concept of privacy. On the one hand, it is bound to the concept of anonymity, as part of the perception that anonymity - "the incapability of identifying the details of a Web user" - prevents surveillance and infiltration into the individual's autonomy. On the other hand, the individual's ability to exercise his wishes in the cyberspace, depends, in many cases, on shedding his privacy and the cloak of anonymity. Anonymity is one of the unique features the Internet provides, as it presents an exclusive platform, allowing the user to shape the setting in which he operates. Inside this uniquely-shaped setting, the user holds the privilege not to expose his personal details, choose an alias or a pseudonym. In fact, this distinctive feature generates the user an environment, perceived by him as a safe locality, protecting his privacy. Yet, the cloak of anonymity provided by the Internet is not

absolute to say the least. The same technology enables the user to exercise his online preferences to the fullest, but at the same time allows his personal information to be collected, and in many cases without his consent (Amichai-Hamburger & Perez, 2012). Our research deals with the user's awareness to the limited online anonymity.

Objective

The objective of this research was to investigate the user's awareness to the limited online anonymity, while weighing certain variables, such as gender, education level, field of study and online literacy level. In addition, we examined the user's online privacy literacy level and prediction factors. Namely, we investigated the user's awareness of the tools available to him to achieve a maximal level of privacy and anonymity on the Web. Furthermore, we measured the centrality of the desire to maintain online anonymity, among the various considerations in refraining from disclosing personal information or submitting falsified personal details, while surfing the Web. We also examined the user's level of concern for the protection of his personal information on the Web and the possible difference between his level of concern on social networks, vis-a-vis other Internet domains. Lastly, the research investigated the user's behavior in accordance with the privacy paradox and the prediction factors. Namely, an examination of the user's preference of utilizing online tools and interactivity, at the expense of protecting his privacy and anonymity.

Methods

The research was carried out among 169 students of the Israeli academia by means of a quantitative method, in which the participants were administered closed-ended questionnaires. The user's awareness of the limited anonymity was measured by five dependent variables: the sense of anonymity while visiting a website; the sense of exposure to other users; the sense of belief in one's ability to surf anonymously; the

level of acquaintance with the number of details that can be monitored while visiting a website; the level of acquaintance with the number of details that can be monitored by other users. In addition, we examined other dependent variables, for example: the level of concern for the protection of personal information on the Web, in general, and on social networks, in particular; online privacy literacy; behavior in accordance with the privacy paradox. The independent variables included various demographic factors - gender, education level, field of study and online literacy level. The correlation between these variables was also measured. These measurements were done by means of common statistical tools such as variance tests and the Pearson product-moment correlation coefficient. Furthermore, we examined the factors that predict the dependent variables: online privacy literacy level and behavior in accordance with the privacy paradox by means of linear regression models. For the purpose of comparison, the study population was divided into three groups of online literacy, i.e., high, moderate and low. The groups were divided according to the respondents' online literacy level, based on self-reports.

Results

We found only a moderate level of user's awareness of the limited online anonymity. Nevertheless, we revealed that previous knowledge, level of education and proximity of the respondent's field of study to the research subject, are positively associated with the level of awareness to the subject in question. In accordance, we also found low levels of online privacy literacy. Furthermore, similar to the previous finding, we revealed that previous knowledge, level of education and proximity of the respondent's field of study to the research subject, are positively associated with the online privacy literacy levels. As for the centrality of the desire to maintain online anonymity, of the various considerations in refraining from disclosing personal

information or submitting falsified personal details, while surfing the Web - we found that though the consideration of maintaining online anonymity was ranked high, it had no significant advantage over the other considerations. In addition, we found that users are concerned to some extent about the protection of their personal information on the Web, and in particular on social networks, but not as much as we had assumed. One unique notable finding concerning this issue was the gender difference in the level of concern for the protection of personal information on social networks, vis-a-vis other Internet domains. Women were found to be more concerned about the protection of their personal information on social networks, while men showed greater concern on other Internet domains. In reference to the issue of user's behavior according to the privacy paradox - we found that the users tend to prefer the protection of privacy and anonymity, even at the expense of online utilization and interactivity. Lastly, we conducted several linear regression analyses in order to investigate the way in which the examined independent variables predict the dependent ones. This was done with the aim to explore the way perceptual or demographic factors reflect actual behavior. Our findings show that the level of concern for the protection of personal information on the Web and the respondent's field of study have a unique and significant contribution in predicting user's behavior in accordance with the privacy paradox. Moreover, the level of concern for the protection of personal information on the Web; the field of study; the sense of belief in one's ability to surf anonymously, have a unique and significant contribution in predicting the preference to protect privacy and anonymity. In addition, online literacy level; gender; the level of concern for the protection of personal information on the Web; the level of acquaintance with the number of details that can be monitored by other users; the sense of belief in one's ability to surf anonymously; the field of study;

the sense of anonymity while visiting a website, have a unique and significant contribution in predicting the online privacy literacy level. Lastly, the online literacy level; gender; the level of concern for the protection of personal information on the Web; the field of study; the sense of belief in one's ability to surf anonymously; the level of acquaintance with the number of details that can be monitored by other users, have a unique and significant contribution in predicting the level of usage of privacy and anonymity enhancing mechanisms.

Conclusions

Although we found that there is only a moderate level of the user's awareness of the limited online anonymity, and a moderate level of the user's concern for the protection of his personal information on the Web - we also found that the respondents tend to prefer the protection of their information security, even at the expense of online utilization and interactivity. Thus, we deduced, that despite the relatively moderate levels of the user's awareness and concern for his anonymity and/or privacy and/or information security on the Web, he will prefer to protect his privacy just to be safe. In conclusion, we describe the contributions of this research, both methodological and analytical. Moreover, we suggest several recommendations for further research with the purpose of expanding this research on the subject of online privacy awareness, in general, and the limited online anonymity awareness, in particular.