The Paradox of Privacy:

Facebook Use, Knowledge,

Attitude, and Behavior

May 6, 2014

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Abstract

A large number of studies of privacy place focus on the *concept* of privacy while people's *perception* and the societal norms become increasingly marginalized. This study attempts to fill this void by assessing individuals' use of Facebook, their knowledge and attitude toward Facebook's privacy policy, as well as their subsequent adjustment (or not) of their own privacy settings. A content analysis was performed on Facebook's privacy policy document, subsequently leading to a categorization of seven different types of information available on the social network site: basic info, device info, activity, metadata, about info, friends list, and visual media. A cross-sectional survey was created using SurveyGizmo for Syracuse University faculty, students, and staff to complete after being sent the link via e-mail. The data was analyzed with three theoretical lenses including Uses and Gratifications, Westin and Altman's theory of privacy. The findings of this study are that Facebook use and adjustment of privacy settings have a positive relationship, as do Facebook use and attitude toward Facebook's privacy policy.

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Facebook has become the social media giant of the modern world. According to Nielsen's Social Media Report, Facebook has held the title of most searched term on the Internet every year for the past three years (Nielsen, 2011). The social media platform accounted for 9% of all web page visits in 2012, making it the most visited site of the year (Price, 2012). Not only is it the most frequented site, but the total time Americans spend on Facebook averages to 53.5 billion minutes per month, roughly eight hours per month per user (Pring, 2012) as compared with Blogger who comes in at a mere 723 million minutes per month (Nielsen, 2011). In addition, the summer of 2012 marked one billion registered users worldwide, furthering its reign as the most popular website in existence. In a single year, Facebook reached 200 million users, compared with television accumulating 50 million users over its first decade (Butler, McCann, Thomas, 2009, p. 41). In addition to international growth, the United States is number one in the world with almost two thirds of the population with at least one registered Facebook account, some with multiple (United States Facebook, 2012).

A multitude of scholars have published articles documenting this evolution of the concept of privacy based on the now prominent theory originally advocated by Alan Westin (1967). This theory has been utilized for its convenient definition of privacy and lauded for its ability to transcend disciplines, among those being political science, sociology, anthropology, psychology, and communication (Westin, 1967, p. 11). Numerous studies have employed Westin's definition within the field of communication (Petronio, 2002; Yao, Rice, & Wallis, 2006). Unfortunately, the four functions of privacy Westin proposes seldom arise in contemporary literature (Trepte & Reinecke, 2011.) In addition, a large number of studies which incorporate Westin's theory place focus on the concept of privacy while people's perception and norms become increasingly marginalized. This study will attempt to fill this void.

The rise of social media in the past decade has fundamentally altered human interaction. The Internet is the first medium that allows the average person to rapidly produce content that achieves the role

of a medium for mass and interpersonal communication. Subsequently, the changes in communication can affect the changes in the perception of privacy, as people will alter their methods for gathering and storing information (Kisselburgh, 2008, p. 4). In sum, three facets continue to evolve: the *concept* of privacy itself, individual *perceptions* of it, as well as privacy *norms*. Altman (1976) attributes these changes to reconstruction of external factors, which, as we apply it here, involves the digital media landscape contextually situated within the Western culture of the United States (Trepte & Reinecke, 2011, p. 11). This study will place particular focus on people's use, knowledge, attitude, and subsequent adjustment of their privacy settings (i.e. perceptions) of privacy.

The data from people with low knowledge of Facebook's privacy policies will be juxtaposed with those who are more knowledgeable. Westin's theory of privacy is used to draw inferences regarding the effects of Facebook use and knowledge of privacy policies on user attitudes and the number of settings changed from default. This paper seeks to answer the following questions: Does frequency of use with Facebook affect people's knowledge of its privacy policies? Does frequency of use influence whether they adjust their privacy settings? Does frequency of use impact their attitude toward the concept of privacy?

Theory

Employing communication theory allows us to understand and evaluate how privacy policies result in the conception of attitudes and consequently adjustment of privacy settings. It proposes a new framework by which we can formulate original mass communication theories. We position our research within a mixture of three media theories: Uses and Gratification theory, Westin's privacy theory and Altman's theory of privacy.

Uses and Gratification Theory

Katz, Blumler and Gurevitch (1973) say that there has been a shift in the psychological and social needs which are expected to be gratified by various components of mass media (p. 510). The theory states that gratification result in modification of needs. They also write that the user is the one whose needs are being gratified; therefore, the behaviors and attitudes are entirely their own and are subject to change based on the gratification they receive (Katz, Blumlet & Gurevitch, 1973, p. 511). We aim to view this theory in a backwards manner – from gratifications to needs. Facebook's users register themselves on the website to gratify the need for communication and forego privacy, but frequent use of the website and knowledge of privacy policies causes changes in their privacy settings.

Westin's Theory of Privacy

The various states of privacy that run through Facebook's privacy policies and the manner in which they affect user's attitudes tie closely with Westin's theory of privacy. Westin outlines four main states of privacy that individuals adhere to - *personal autonomy, emotional release, self-evaluation,* and *limited and protected communication* (Westin, 1967, p. 10). *Personal autonomy* highlights the link between the user's sense of individuality and the level of privacy they perceive as the least threatening to their inner core of information (Westin, 1967, p. 10). Registered users on Facebook hold a distinctive notion of this individuality that cause them to change their privacy settings in accordance with their perception of threat to their inner "core" (Westin, 1967, p. 10). The connotation is that the self is the one who decides when information is released to the public forum; the user has absolute control over the privacy controls.

Westin uses the function of *emotional release* to say that the pressures of daily life itself cause the need for privacy; individuals thrive on the occasional respite from social norms. This helps us to gather a sense of solitude which leads to renewed interest in social interactions (Westin, 1967, p. 10). Facebook

May 6, 2014

users incorporate this aspect in regard to their preferences in privacy control ensuring that it leaves them with a sense of seclusion from the public; it allows the deviation from social etiquette.

The third function of *self-evaluation* indicates the significance of the relationship between the individual's needs to incorporate his experiences into a cohesive and wholesome form where he can further identity formation. This is done by self-evaluation for which the need for privacy is of vital importance (Westin, 1967, p. 10). The lack of Facebook's privacy settings result in the user being subjected to an overwhelming amount of information; this is rectified by enabling the privacy features to allow them to simultaneously achieve privacy as well as establish their identity in social networking websites.

Westin states the last function as the need for *limited and protected communication*. This function defines the basic need to feel comfortable sharing intimate information with trustworthy people. Limited communication has become a part of daily urban social interaction as we are continuously exposed to psychological and physical stimulants between individuals that we haven't met before (Westin, 1967, p. 10). This leads us to identify people we deem as trustworthy and share personal information because a bond of trust develops after multiple interactions. This function can be seen in registered users on Facebook as online habits are altered to meet the need for a sense of comfort while sharing private information.

Altman's Theory of Privacy

Altman has explicated the concept of privacy. His theory states that individuals alter the level of privacy based on attitudes that may be of internal or external nature (Altman, 1976, p. 19). He emphasizes that the environment plays a key role in the sense of privacy that the individual desires. He draws attention to the social and psychological factors that result in the regulation of privacy; he discusses the shift in the attitudes toward privacy that result from the exposure to the social and physical environment (Altman, 1976, p. 20). This theory assumes that Facebook's users become part of the social network with the base desire to communicate; but upon learning that there are privacy risks associated with its use, they change their default settings from public to more private.

May 6, 2014

Altman specifies five properties of privacy. However, we will be analyzing only two of them in this theoretical framework – the differentiation between actual levels of privacy and desired levels of privacy; and, the bi-directional nature of privacy, which involves a certain degree of input as well as output. (Altman, 1976, p. 20). We can assume that the registered users on Facebook give up an element of privacy when they join the social network, but expect a certain degree of "privacy" to surround their online profile which is one reason they may seek to modify their privacy settings.

Westin's function of self-evaluation ties in with Altman's theory of the self in a broad manner. They stress the importance of knowledge of privacy that lead to changes in certain behaviors and attitudes. Facebook and its privacy settings becomes a part of this phenomenon in that users change privacy settings based on the way they identify themselves in relation to their friends on Facebook.

Uses and Gratification Theory

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Hypotheses

Privacy, knowledge, and attitudes warrant theoretical definitions. Privacy has been defined by Westin as the ability an individual has to manage information about themselves and control the communicative process, including the medium it is transmitted through and who is on the receiving end (Westin, 1967, p.

May 6, 2014

10). It can also be conceptually defined as being unbound from surveillance, observation, supervision, and free from control. Knowledge, as used here, pertains to the familiarity or recall of factual information. Attitudes relate to the positive or negative proclivity of thoughts and feelings an individual has toward something.

The Uses and Gratification theory can be applied to understand the positive relationship between Facebook use and knowledge of Facebook's privacy policy. The conception of needs pertaining to communication leads to an increase in Facebook use; however, gratification of this need also results in the need to communicate effectively and *privately,* which leads to an increase in the knowledge of Facebook's privacy policies. As such,

H1: There is a positive relationship between Facebook use and the knowledge of Facebook's privacy policy.

Westin's ideas about privacy functions, specifically self-evaluation, cause users to change the number of privacy settings from the default settings as they gradually become aware of their identity in the public domain. The following hypotheses logically follow.

H2: There will be a positive relationship between Facebook use and the user's adjustment of privacy setting.

The Uses and Gratification theory can be used to assume that the use of Facebook can have a positive or negative impact on the user's attitude towards the privacy policy. But, Westin's theory of privacy states the direction in this change in attitude as users become hyper-aware of their own identity when they see other user's information published online. In essence, the more conscious the user is about their identity the more it affects their attitude towards the privacy that surrounds it.

H3: There is a positive relationship between Facebook use and attitude toward Facebook's privacy

policy.

Westin's mention of emotional release as a primary function of privacy plays a role in the conception of a

negative attitude toward information published online as users feel their identity and level of comfort

threatened by unfamiliar sources; these sources are not welcomed to penetrate the core of the user's

privacy. In addition, Altman's theory says we can assume that registered users on Facebook give up their

element of privacy when they join the social network, but they expect a certain degree of "privacy" to

surround their online profile that causes them to modify their privacy settings. Given these two theories,

then, it can be inferred that

H4: There is a positive relationship between knowledge of Facebook's privacy policies and the

number of settings changed from the default setting.

Westin notes the change in behavior and attitudes as individuals become aware of their identity in relation

to others. This makes Facebook users hyper aware of their privacy in relation to others thereby becoming

more aware of policies pertaining to private information, those more closely associated with identity, as

opposed to public information.

Methods

Survey

This research employed primarily a survey method, in addition to a content analysis. The variables

that form the core of this study are Facebook use, knowledge of Facebook's privacy, attitudes and, the

number of privacy settings changed from the default setting. A thorough investigation into Facebook's

privacy policy has led to the categorization of information into seven major segments; they are chosen

primarily because of their significance in relation to the user's concept of privacy. They are as follows:

May 6, 2014

i) Personal information collected by Facebook, which includes the name, e-mail address, age, gender of the user.

ii) Device information of the user that includes the operating system used to access Facebook, the IP address of the user, cookies and the Internet service provider associated with the IP address.

iii) The user's activity on his/her page; this consists of comments posted on public pages, status updates on public pages, joining an event and utilizing the 'Like' button.

iv) The time, date and location that Facebook records from the user's activity.

v) The user's personal relationship status along with their interest in books, music, television, interests, education, political and religious affiliation; Facebook has labeled it collectively as 'About.'

vi) The list of 'friends' that a user has on their page.

vii) The photos and videos uploaded by the user on their page.

The social artifact utilized in this research is Facebook's privacy policies that allow the study to code information. The content units are the seven major categories of information listed in Facebook's privacy policy.

Participants

The study surveyed approximately 200 participants. The unit of analysis was limited to the individuals who make up Syracuse University's population – the faculty, students and staff. Systematic sampling was used via the University's data registry. E-mails on the listserv was compiled and then assigned a random number using random.org. A skip interval was then calculated, making this an inherently random method. We employed this type of random sampling to make the data more generalizable to the wider population of Facebook users. However, taking this approach runs the risk of periodicity, meaning there exists potential for bias.

May 6, 2014

Design

This study utilizes a cross-sectional survey containing measures of Facebook use, knowledge of Facebook's privacy policy, adjustment of privacy settings from the default setting and attitude toward Facebook's privacy policy. When a cross-sectional survey is used, a significant risk to internal validity is that the results are influenced by the current circumstances each participant is in at that particular time. It is impossible, then, to determine a *causal* relationship between the independent and dependent variables. It is thus the goal of this study to examine the *correlation* between variables.

Measures and Variables

"Eighty-nine percent admitted that they had never read the privacy policy and 91 percent were not familiar with the terms of service. This neglect to understand Facebook's privacy policies and terms of service is widespread" (Acquisti & Gross, 2006, p.86). Reading the privacy policy is not necessarily a valid assessment of user's knowledge of it, as assumed by Acquisti and Gross (2006). Knowledge of Facebook's privacy policies can be derived from other sources, for example, news media coverage or interpersonal communication with other Facebook users. As a result, in this study, the question of whether or not participants have actually read the policy is not included in the questionnaire. The questionnaire includes a knowledge scale where the correct answers are tallied for each participant and then assigned a calculated mean; this applies for all seven categories of information.

This study identifies and differentiates the concept of private information and public information that is measured using a bipolar scale. Polarity rotation was used to encourage people to read and increase accuracy of the results. The attitudes of the participants are measured using a five-point Likert scale ranging from 'Strongly Agree' to 'Strongly Disagree.' The behavior (adjustment of privacy settings) of the participants is measured from their responses to questions as 'No,' 'Yes, I adjusted the settings to make the info more private,' or 'Yes, I adjusted the settings to make the info more public;' the questions relate to the user's changes in their privacy settings from the default setting along with the direction of the change i.e.

more public or more private. Facebook use is measured with the aid of time; the number of minutes per day

is multiplied by the number of days per week, forming one Facebook use variable.

Procedures

1000 individuals affiliated with Syracuse University have been e-mailed an introduction to the

study and an explication of the potential benefits of this research. There is one negative aspect in mailing

electronic questionnaires: there is a high mortality rate because people can easily delete e-mails, therefore

lowering the response rate. To minimize this threat, two follow up e-mails were sent after three days of

sending the initial e-mail. In addition, emphasis was placed on both the importance of the research being

conducted and that confidentiality is provided, increasing the likelihood of participation. An allotment of

two weeks was given to complete the survey, allowing adequate time for everyone to finish.

Data Analysis

Means and standard deviations were calculated for the following continuous variables: Facebook

use, attitude, what I consider public/private, and what others consider public/private.

Percentages were found for the seven items that made up each of our two categorical variables, behavior

and knowledge. Pearson's correlation coefficients were computed separately for the variables 'what I

consider public/private' and 'what others consider public/private' in order to find the strength and direction

in which they are related. Next, these two variables were tested for inter-correlation. Pearson's correlation

coefficients were also found for attitude. Facebook use, what I consider public/private, and what others

consider public/private were indexed, with each respective combined variable analyzed for Pearson's

correlation. Lastly, binary logistic regression was used for Facebook use, knowledge, and attitude to

measure the probability of users adjusting (or not) their privacy settings.

May 6, 2014

Results

Five of the six variables in this study are indexed variables because each contains a question

pertaining to the seven categories of information discovered during the content analysis. Upon running the

Cronbach's Alpha it was revealed that the attitude, behavior, 'what I consider private' and 'what I consider

public' were reliable as they all met the 0.7 threshold. However, knowledge came up as approximately 0.2.

Three items were removed, causing an increase resulting in the maximum achieved reliability of .616.

Because this is below .7, each knowledge item is individually listed on the logistic regression table.

Table 6 analyzes the percentage of respondents who gave a response for each of the seven knowledge

questions about Facebook's privacy policy. Over half of all 77 participants correctly answered five of the

seven questions. Question one (*When you hide your name, e-mail, birthday, gender, cover photo, and*

profile picture on your Facebook page, nobody can see it) and question five (*If I select 'Only Me' for the*

audience of my friend list, but my friend has his/hers set to 'Public,' my connection to him/her is not visible

to the public) are the two exceptions. It should be noted that even though less than half of respondents

answered question one, more people gave a correct response than not (this is possible because there are

three possible responses). It is noteworthy to point out only one fifth of respondents chose the correct

answer to question five, while almost half disclose that they do not know the answer.

Table 12 shows the strength and direction that each of the six variables contributes to each other

variable. The relationship between each variable is shown while controlling for other variables, thus

Pearson's correlation coefficient here is not cumulative. This table indicates that Pearson's correlation

coefficient between Facebook use and knowledge of Facebook's privacy policy is statistically significant

with a 99% confidence interval. There is a negative relationship between the two variables, therefore

hypothesis one is incorrect as it predicts a positive relationship. The results also show that Pearson's

correlation coefficient between Facebook use and the adjustment of privacy settings changed from the

default setting is statistically significant with a 99% confidence interval. There is a positive relationship

between these two variables. Hypothesis two is therefore correct as it confirms a positive relationship.

May 6, 2014

Furthermore, table 12 reveals that there is a statistically significant relationship between Facebook use and attitude toward Facebook's privacy policy. Hypothesis three is therefore correct. This table also indicates a negative relationship between knowledge of Facebook's privacy policy and the number of privacy settings changed from the default setting. This is also statistically significant with a 99% confidence interval. Hypothesis four is therefore incorrect as it predicts a positive relationship.

Discussion

77 participants who comprise Syracuse University's faculty, staff and student body were surveyed about their Facebook use, their knowledge of the privacy policy, attitude toward it, and potential impact on the user to adjust their privacy settings. Our expectations for this study included showing a positive relationship between Facebook use and knowledge of Facebook's privacy policy. We backed this assumption on Westin's theory of privacy pertaining to *limited and protected communication* (Westin, 1967, p.10), which would imply that users on social networking sites want to be more cautious and restrictive of the content they choose to share. This would also lead to a positive relationship between Facebook use and the number of settings changed from the default setting. The user utilizes social networking sites with the premise that his/her social needs are met and this allows them to consider that their attitudes are entirely their own (Katz, Blumlet, & Gurevitch, 1973, p. 511). This leads us to believe that the gratifications from using Facebook outweigh apparent threats to their privacy, which in turn help us realize that it is vital to assess the attitudes of the user in relation to Facebook use.

We analyzed our data using Pearson's correlation coefficient and found that our hypothesis aiming to show that there is a positive relationship between Facebook use and knowledge of Facebook's privacy policy was not proved. The numerous controversies surrounding Facebook's ever changing privacy policies may have a large part to do with this as users are already aware of the elements that constitute the privacy policy document. We noticed that the majority of the respondents who participated in our survey correctly answered the seven item knowledge index and were well aware of Facebook's privacy settings, so it could

imply that users do not come across new knowledge related to Facebook's privacy policies as they continue to use the site itself.

The study received a response rate of approximately 7% (77 completed surveys returned after 1000 were sent). It can be noted that future research with a larger sample may have varied implications. It should also be noted that toward the end of our closing the online survey, Facebook informed its users with a mass e-mail that it made multiple modifications to its privacy policy, one of which is significant to our study: "Reminders about what's visible to other people on Facebook" (Facebook, personal communication, November 21, 2012). When this change was made, there were 70 completed surveys. This allows for the possibility that the seven remaining people may have been influenced by this email. If these respondents read these new reminders, it may have increased their knowledge of the policy, perhaps making them aware of previously unknown information and moving them to adjust their settings, and thus skew the results.

A noteworthy statistic Pearson's correlation coefficient statistic (table 4) is the statistically significant relationship (with a 95% confidence interval) between attitude and what others consider public/private. People that care less about their own privacy settings protecting their information are inclined to thinking that most other people view their information as public. The reason for this relationship could possibly be connected with the rising *societal* norm of publishing life events online (and therefore making available to the public) and the desire for individuals to identify with others (Rottenberg, 2003, p. 437). This would be an interesting topic to investigate further.

We aim to increase the current sample size by sending out more e-mails and attaining at least a ten percent response rate. We believe that this will strengthen the study further and help us analyze the knowledge variable more efficiently. In addition, there will be a distinction made between the data collected prior to the e-mail from Facebook announcing changes in the privacy policy and the data collected afterwards. In addition to the above study, we plan on extending this research topic to incorporate the third-person effect using the data in tables 8, 9, 11, and 12.

May 6, 2014

Notes

1. Attitude: a high attitude rating means the participant cares about the information they publish online.
2. Adjustment of privacy settings: the default Facebook setting for each of the seven categories of information is always public. Therefore, any changes made indicates a change to more privacy.

Table 1

Means and Standard Deviations for Facebook use, days per week, N = 77.

Variables	*M*	*95% CI*	*SD*	*n*
Facebook Use				
Minutes per day	83.49	55.27-111.72	124.35	77
Days per week	5.77	5.22-6.32	2.42	77

Table 2

Means and Standard Deviations for Facebook use, days per week, N = 77.

Variables	M	95% CI	SD	n
Facebook Use				
Minutes per week	591.99	355.06 - 828.91	1043.86	77

Table 3

Means and Standard Deviations for Attitude, N = 77.

Variables	M	95% CI	SD	n
I really don't care about Facebook's privacy settings that have to do with my name, e-mail, birthday, gender, cover photo, and profile picture [a]	2.19	1.92-2.47	1.22	77
I really don't care about Facebook's privacy settings that have to do with my operating system, IP address, cookies, and internet service provider [a]	1.77	1.54-2.00	1.01	77
I really don't care about Facebook's privacy settings that have to do with my 'Likes,' events, and comments on public pages/statuses [a]	2.80	2.52-3.09	1.27	77
I really don't care about Facebook's privacy settings that have to do with my GPS location, date, and time of my Facebook activity [a]	1.58	1.38-1.77	0.865	77
I really don't care about Facebook's privacy settings that have to do with my relationship status, movies, books, music, television, interests, political/religious affiliations, and education [a]	2.40	2.11-2.69	1.27	77
I really don't care about Facebook's privacy settings that have to do with my friend list [a]	2.64	2.37-2.92	1.21	77
I really don't care about Facebook's privacy settings that have to do with my videos and photo albums [a]	1.77	1.53-2.01	1.06	77

Note: a. Responses are coded 5 = *strongly agree*, 4 = *agree*, 3 = *neutral*, 2 = *disagree*, 1 =*strongly disagree.*

Table 4

Means and Standard Deviations for What I consider public/private , N = 77.

Variables	M	95% CI	SD	n
I consider name, e-mail, address, age, gender, cover photo, and profile picture to be [a]	3.00	2.69-3.31	1.37	77
I consider information about my operating system, IP address, cookies, and internet service provider to be [a]	1.73	1.48-1.98	1.11	77
I consider my 'Likes,' events, and comments on public pages/statuses to be [a]	3.62	3.30-3.95	1.44	77
I consider my GPS location and date/time of my Facebook activity to be [a]	1.95	1.70-2.20	1.11	77
I consider my relationship status, movies, books, music, television, interests, political/religious affiliations, and education to be [a]	2.82	2.50-3.14	1.40	77
I consider my friend's list to be [a]	3.25	2.94-3.56	1.37	77
I consider my videos and photo albums to be [a]	2.14	1.85-2.44	1.29	77

Note: a. Responses were coded on a five-point bipolar scale with 1=Public, 2=Somewhat Public, 3=Neutral, 4=Somewhat Private, 5=Private.

May 6, 2014

Table 5

Means and Standard Deviations for What others consider public/private , N = 77.

Variables	M	95% CI	SD	n
Most *others* consider name, e-mail, address, age, gender, cover photo, and profile picture to be [a]	3.57	3.32-3.82	1.10	77
Most *others* consider information about my operating system, IP address, cookies, and internet service provider to be [a]	2.14	1.88-2.41	1.17	77
Most *others* consider my 'Likes,' events, and comments on public pages/statuses to be [a]	3.82	3.55-4.09	1.17	77
Most *others* consider my GPS location and date/time of my Facebook activity to be [a]	2.99	2.70-3.28	1.28	77
Most *others* consider my relationship status, movies, books, music, television, interests, political/religious affiliations, and education to be [a]	3.53	3.27-3.80	1.16	77
Most *others* consider my friend's list to be [a]	3.58	3.32-3.82	1.10	77
Most *others* consider my videos and photo albums to be [a]	3.09	2.84-3.34	1.11	77

Note: a. Responses were coded on a five-point bipolar scale with 1=Public, 2=Somewhat Public, 3=Neutral, 4=Somewhat Private, 5=Private.

May 6, 2014

Table 6

Percentages for Knowledge of Facebook's Privacy Policy, N=77.

Variable	%

Knowledge

1. When you hide your name, e-mail, birthday, gender, cover photo, and profile picture on your Facebook page, nobody can see it.

Incorrect	36.4
Correct	46.8
Total	83.2

2. Advertisers have access to my IP address, cookies, and can tell which operating system and internet service provider I am using.

Incorrect	2.6
Correct	97.4
Total	100

3. When you post content on a page you 'like,' it is *only* available to the people who also like that page.

Incorrect	22.1
Correct	63.6
Total	85.7

4. Facebook has my current location, but the company does not use it for anything.

Incorrect	10.4
Correct	53.2
Total	63.6

May 6, 2014

Table 6 continued

5. Information I list in my 'About' section can be used by advertisers to create personalized advertisements.

Incorrect	5.2
Correct	76.6
Total	81.8

6. If I select "Only Me" for the audience of my friend list, but my friend has his/hers set to "Public," my connection to him/her is *not* visible to the public.

Incorrect	19.5
Correct	35.1
Total	54.6

7. Facebook uses facial recognition software to scan photographs uploaded by users .

Incorrect	6.5
Correct	61
Total	67.5

Table 7

Percentages for Behavior, N=77.

Variable	%
Behavior	

1. Have you ever modified privacy settings that have to do with your basic name, e-mail address, age, gender, profile picture, and cover photo?

No	22.1
Yes	72.7
Total	94.8

2. Have you ever modified privacy settings that have to do with your operating system, IP address, cookies, and internet service provider?

No	66.2
Yes	32.5
Total	98.7

3. Have you ever modified privacy settings that have to do with your 'Likes,' events, or comments on public pages/statuses?

No	51.9
Yes	44.2
Total	96.1

4. Have you ever modified privacy settings that have to do with the GPS location, time, and date of your activity?

No	40.3
Yes	58.4
Total	98.7

May 6, 2014

Table 7 continued

5. Have you ever modified privacy settings that have to do with your relationship status, movies, books, music, television, interests, political/religious affiliations, and education?

No	36.4
Yes	59.7
Total	96.1

6. Have you ever modified privacy settings that have to do with your friend list?

No	57.1
Yes	40.3
Total	97.4

7. Have you ever modified privacy settings that have to do with your photo albums and/or videos?

No	15.6
Yes	81.8
Total	97.4

Table 8

Pearson Correlation Coefficients for What I consider to be public/private, N = 77.

Variables	2 r (p) (n)	3 r (p) (n)	4 r (p) (n)	5 r (p) (n)	6 r (p) (n)	7 r (p) (n)
1. *I consider name, e-mail, address, age, gender, cover photo, and profile picture to be*	.174 .131 77	.394** .000 77	.381** .001 77	.281* .013 77	.204 .075 77	.193 .092 77
2. *I consider information about my operating system, IP address, cookies, and internet service provider to be*	–	.256* .025 77	.363** .001 77	.103 .372 77	.201 .079 77	.138 .233 77
3. *I consider my 'Likes,' events, and comments on public pages/statuses to be*		–	.316** .005 77	.324** .004 77	.248* .030 77	.381** .001 77
4. *I consider my GPS location and date/time of my Facebook activity to be*			–	.365** .001 77	.268* .018 77	.161 .163 77
5. *I consider my relationship status, movies, books, music, television, interests, political/religious affiliations, and education to be*				–	.579** .000 77	.370** .001 77

Table 8 continued

6. *I* consider my friend list to be	–	.329** .003 77
7. *I* consider my videos and photo albums to be		–

*Correlation is significant at the .05 level

**Correlation is significant at the .01 level

Table 9

Pearson Correlation Coefficients for What others consider to be public/private. N = 77.

Variables	2 r (p) (n)	3 r (p) (n)	4 r (p) (n)	5 r (p) (n)	6 r (p) (n)	7 r (p) (n)
1. *Most others* consider name, e-mail, address, age, gender, cover photo, and profile picture to be	.159 .168 77	.182 .113 77	.256* .025 77	.241* .035 77	.106 .358 77	.107 .355 77
2. *Most others* consider information about my operating system, IP address, cookies, and internet service provider to be	–	.133 .250 77	.184 .109 77	.126 .275 77	.240* .036 77	.241* .035 77
3. *Most others* consider my 'Likes,' events, and comments on public pages/statuses to be		–	.112 .334 77	.407** .000 77	.435** .000 77	.514** .000 77
4. *Most others* consider my GPS location and date/time of my Facebook activity to be			–	.489** .000 77	.182 .114 77	.277* .015 77
5. *Most others* consider my relationship status, movies, books, music, television, interests, political/religious affiliations, and education to be				–	.394** .000 77	.469** .000 77

May 6, 2014

Table 9 continued

6. *Most others* consider my friend list to be	–	.342** .002 77
7. *Most others* consider my videos and photo albums to be		–

*Correlation is significant at the .05 level

**Correlation is significant at the .01 level

Table 10

Pearson Correlation Coefficients for Attitude. N = 77.

Variables	2 r (p) (n)	3 r (p) (n)	4 r (p) (n)	5 r (p) (n)	6 r (p) (n)	7 r (p) (n)
1. I really don't care about Facebook's privacy settings that have to do with my name, e-mail, birthday, gender, cover photo, and profile picture	.589** .000 77	.448** .000 77	.440** .000 77	.570** .00 77	.712** .000 77	.511** .000 77
2. I really don't care about Facebook's privacy settings that have to do with my operating system, IP address, cookies, and internet service provider	–	.323** .004 77	.561** .000 77	.392** .000 77	.458** .000 77	.561** .000 77
3. I really don't care about Facebook's privacy settings that have to do with my 'Likes,' events, and comments on public pages/statuses		–	.391** .000 77	.753** .000 77	.683** .000 77	.532** .000 77
4. I really don't care about Facebook's privacy settings that have to do with my GPS location, date, and time of my Facebook activity			–	.327** .004 77	.382** .001 77	.548** .000 77

May 6, 2014

Table 10 continued

5. I really don't care about
Facebook's privacy settings that
have to do with my relationship
status, movies, books, music,
television, interests,
political/religious affiliations,
and education   –   .735**   .568**
                                                                 .000   .000
                                                                  77   77

6. I really don't care about
Facebook's privacy settings that
have to do with my friend list   .549**
                                                                 –   .000
                                                                              77

7. I really don't care about
Facebook's privacy settings that
have to do with my videos and
photo albums   –

**Correlation is significant at the .01 level

Table 11

Pearson Correlation Coefficients for What I consider public/private and What others consider to be public/private. N = 77.

Variables	Most others 1 r (p) (n)	Most others 2 r (p) (n)	Most others 3 r (p) (n)	Most others 4 r (p) (n)	Most others 5 r (p) (n)	Most others 6 r (p) (n)	Most others 7 r (p) (n)
1. *I* consider name, e-mail, address, age, gender, cover photo, and profile picture to be	.374** .001 77	-.098 .396 77	-.139 .228 77	-.038 .746 77	-.223 .051 77	-.226* .048 77	-.147 .202 77
2. *I* consider information about my operating system, IP address, cookies, and internet service provider to be	.226* .048 77	.373** .001 77	.048 .716 77	.053 .647 77	-.008 .943 77	.150 .192 77	-.097 .402 77
3. *I* consider my 'Likes,' events, and comments on public pages/statuses to be	.079 .495 77	-.030 .796 77	.284* .012 77	.054 .639 77	.097 .399 77	.046 .691 77	.013 .908 77
4. *I* consider my GPS location and date/time of my Facebook activity to be	.035 .761 77	.086 .456 77	.013 .912 77	.212 .064 77	.123 .285 77	.089 .443 77	-.102 .375 77
5. *I* consider my relationship status, movies, books, music, television, interests, political/religious affiliations, and education to be	.059 .608 77	.032 .783 77	.004 .975 77	-.016 .890 77	.334** .003 77	.076 .509 77	.087 .454 77
6. *I* consider my friend list to be	-.016 .889 77	-.104 .369 77	.110 .342 77	-.096 .408 77	.098 .396 77	.367** .001 77	-.006 .957 77
7. *I* consider my videos and photo albums to be	-.058 .618 77	.047 .686 77	.147 .203 77	.128 .268 77	.193 .092 77	.080 .489 77	.419** .000 77

*Correlation is significant at the .05 level

**Correlation is significant at the .01 level

Table 12

Pearson Correlation Coefficients for Facebook Use, Knowledge, Attitude, Behavior, What I consider to be public/private, What others consider to be public/private. N = 77.

Variables	1	2	3	4	5	6
	r	*r*	*r*	*r*	*r*	*r*
	(p)	*(p)*	*(p)*	*(p)*	*(p)*	*(p)*
	(n)	*(n)*	*(n)*	*(n)*	*(n)*	*(n)*
1. Facebook Use	1	-.410**	.333**	.405**	.296**	.110
		0.00	.003	0.000	0.009	0.339
	77	77	77	76	77	77
2. Knowledge		1	-.126	-.346**	-.079	-.142
		–	.274	.002	.493	.219
		77	77	76	77	77
3. Attitude			1	.079	.665**	.248*
			–	.500	.000	.030
			77	76	77	77
4. Behavior				1	.224	.200
				–	.052	.083
				76	76	76
5. What I consider public/private					1	.161
					–	.162
					77	77
6. What others consider public/private						1
						–
						77

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May 6, 2014