

**Effects of Perceived Privacy  
on Expressed Determinants of Happiness**  
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## Effects of Perceived Privacy on Expressed Determinants of Happiness

### **Abstract**

Privacy often changes expressed behaviors as many behaviors are regarded as unsuitable or inappropriate for public settings. Due to changing societal labels about what is deemed socially normative, some individuals may choose not to express many private values and opinions which would not fit a social context. People tend to attribute happiness to both social as well as non-social factors, their attributions depending on personal, temporal and environmental context. Thus, we set out to examine whether differences exist between private and public disclosure about determinants of happiness. Using pre-designed cardboard cubes marked with the question “What makes you happy?”, we asked voluntary participants to either decorate the cardboard box with their response or to privately write on a note and insert it into a confidential slot within the box. Collected responses were categorized into either social or non-social determinants of happiness. Disclosure of non-social determinants of happiness was found to be significantly correlated with the confidential condition, whilst disclosure of social determinants of happiness was significantly correlated with the public inscription condition.

### **Introduction**

Happiness is often seen as a result of good health, lack of problems, and general wellbeing. Thus, it is important to realize what individuals associate with happiness so that we can promote happiness-inducing determinants and therefore help contribute to an increase in community happiness. The University of British Columbia (UBC) has a socially vibrant community which constantly promotes events and activities aimed at enhancing a student’s university experience. These promoted events are often public in nature and promote interaction between friends and peers. Such interaction has been noted as having a strong positive effect on the associated happiness between the individual and personal affect (Kahneman et al., 2004). However, such promoted activities may not always be equally attractive to all individuals; particularly, individuals who may be deriving positive affect from non-social means. As a result, frequently promoted social events may not affect happiness for these individuals, resulting in a lower state of wellbeing. Therefore, we set out to study the less publicly expressed determinants of happiness in hopes of uncovering the privately held determinants of happiness not openly expressed to the public. Our goal was to determine whether private or public conditions of privacy affect the proportion of social and non-social responses regarding determinants of happiness. We also analyzed the types and frequencies of responses in individual categories of determinants.

Societal norms alter a person’s behavior in group and community contexts. Individuals can derive mental representations of normative behavior based upon associations to the physical and social environment they are within (Aarts & Dijksterhuis, 2003). However, societal norms in appropriate public disclosure differ across individuals and cultures, and many individuals possess different forms of self-construal and social appropriateness (Boucher & Maslach, 2009). Furthermore, differing subject matter may be easier to disclose in a private context. For example, sexual themes and erotic relationships alter nonverbal behavior differently while alone or in the presence of others (Costa et al., 2001). Non-social activities which are done intimately or alone are not as normatively disclose-able as social activities; hence, we hypothesize that those preferring a public setting would attribute happiness to determinants which are socially connected, and those preferring a perceived private setting would attribute happiness to determinants which are more personal and individualized.

## **Methods**

### **Design**

This study uses a two condition experimental design based on convenience sampling of individuals at the University of British Columbia. Participation was voluntary and unmonitored and the quality of responses was regulated by social policing.

### **Measures**

Responses collected were categorized with inter-rater coding of the responses. Responses were coded into relevant categories. Individual responses with multiple comments were also counted on their respective categories. Most categories were procured from “A Survey Method for Characterizing Daily Life Experience: The Day Reconstruction Method”(Kahneman *et al.*, 2004) and categories of: substance use, relationships, environment, leisure activities, personal achievement, academics, wealth, animals, and celebrities were added as a result of the lack of relevant categories presented by Kahneman. These categories were divided into social and non-social determinants of happiness. Social categories are publicly available and involve external factors such as environment, people and social interaction. Non-social categories are more personalized, consisting of internal contributors to happiness as well as private or isolated activities not involving human interactions, but also includes intimate sexual relations and erotic themes.

### **Procedure**

Seven cardboard boxes of dimensions 3ft by 3ft by 4ft were assembled for the purpose of collecting responses (Figure 2.1). The boxes had a removable lid with two 2.5 inch by 6 inch slots to allow for note responses (Figure 2.2). Two identical posters with the question “What makes you happy” and simple instructions (Figure 2.3) were attached opposing faces of the boxes. The aforementioned instructions instructed participants to either write directly on the cube or to write on provided cue cards to be placed into the slot. Two markers were attached to the two remaining blank faces to allow for participants to provide responses. The question “What makes you happy?” was chosen as we deemed the question to be open ended and an elicitor of a variety of responses, furthermore, an open ended positive question was chosen to eliminate negative and/or off topic responses. Two boxes were placed in both the Student Union Building (SUB) and the Koerner library; the Kaiser building, Woodward library, and the Centre of Interactive Research on Sustainability (CIRS) each received one box. The boxes were situated in an open space near seating areas; this setting was chosen as these areas tended to be undisruptive of traffic despite being a higher traffic area. It allowed the boxes to both be a social piece of discussion while serving the purpose of eliciting responses. The cubes were displayed during March 16-27th with the exclusion of weekends, in order to restrict the prevalence of negative or profane off-topic responses, the cubes were assembled and disassembled at times of 10am and 4pm respectively. We placed the boxes out at this time as we believed that due to the high traffic of the setting and the social nature of the study, social policing would play a big role in controlling the quality of responses as we did not have the resources required to monitor cubes during the times of display.

### **Participants and Conditions**

Responses were provided by students, faculty and staff at the University of British Columbia by voluntary means and were by no means incentivized. Due to the nature of this study, the demographics of the participants were not recorded.

Participants who opted to write about their determinants of happiness on a confidential card and depositing it into the slot were designated as the private disclosure condition. While individuals who wrote or drew directly on the cardboard cube was designated as the public disclosure condition, since their responses would be publically available.

**Results**

A total of 1202 responses were collected at the conclusion of the study. 123 responses were discarded due to being off-topic and unrelated to the scope of the study, leaving a final sample size of 1079 responses. A significant relationship was found between choice of perceived privacy and disclosure of social determinants of happiness. The privacy condition was associated with higher disclosure of non-social determinants of happiness,  $\chi^2 (1, N = 1079) = 803.00, p < 0.05$ .

Chi-Square Tests					
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	803 <sup>a</sup>	1	1.0×10 <sup>-176</sup>		
Continuity Correction <sup>b</sup>	799	1	0.8×10 <sup>-177</sup>		
Likelihood Ratio	862	1	0.2×10 <sup>-190</sup>		
Fisher's Exact Test				1.0×10 <sup>-188</sup>	1.0×10 <sup>-188</sup>
N of Valid Cases	1079				
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 101.85.					
b. Computed only for a 2x2 table					

The frequencies for individual categories (Table 1.1) show in detail the major differences between the public and private disclosure options. In the private disclosure condition, personal achievement (7.85%) and academics (6.04%) are proportionately more represented than in the public inscription condition, where the two categories make up 2.94% and 4.28% of the aggregated total of public responses representatively. Similarly, the category of intimate relations, consists of sexual activities as well as erotic themes, is more represented in the perceived private condition (9.97%) compared to the public condition (6.02%).

In contrast, the public disclosure condition showed much higher representation for media (8.29%), animals (6.95%), and eating (14.04%) than the private disclosure condition (4.23%, 1.81% and 11.18% respectively).

**Discussion and Implications**

The results support our hypothesis, showing a relationship between choice of perceived privacy and disclosure of either social or non-social determinants of wellbeing. The participants who chose the private, individualized disclosure method attributed their happiness to more non-social factors which

are either individualized, sexually intimate, or do not involve human relations. Likewise, those who chose to write on a publicly visible surface attributed their happiness to factors which involve interactions with people or other publicly accessible determinants.

The literature surrounding the social determinants of happiness is well debated. Hills and Argyle (2001) have reported that happiness is most correlated with fulfillment and satisfaction in life rather than extraversion and social activity. Similarly, work by Herringer (1998) suggests that those who withdraw from social activity are less satisfied by gregarious environments rather than dismissive or incapable of social settings. Perhaps, non-social factors which are more personal are more important to the happiness and overall wellbeing of this group. Since societal wellbeing depends on the aggregate whole of the populace, it is important to attend to the ambient happiness of all members of a community. While social activity and traditionally extraverted activities have been well demonstrated to be correlated with happiness (Diener et al., 1992), there are out-groups which may not be as dependent upon social interactions to attain happiness. This study shows that using alternative methods which are less publicly accessible and provide a degree of perceived privacy, such as the note disclosure method we used, can reach a broader audience which contains these out-groups.

The categories used in this study, derived from Kahneman's study on daily life experiences (2004), did not have predetermined social and non-social designation. As a result, we had to key each individual category as either social or non-social. Utilization of these categories are a major limitation in our study - a determinant of happiness which is designated in the Exercise and Sport category could include both an individual activity such as jogging but also team sports. Going forward, future studies should aim at reducing the number of categories and building a more refined system, such as the four predictors of happiness derived from items on the Happiness-Enhancing Activities and Positive Practices Inventory (HAPPI) developed by Henricksen and Stephens (2013).

It is plausible that the much higher response rate in the public disclosure condition was due to issues with ease of access. Stepwise, writing directly upon a box presented in front of the participant requires far less time than retrieving, writing, and submitting a cue card into the confidential slot. Convenience may play as much a factor as privacy preference in this study; a related study conducted (Rosenbaum et al., 2006) found no significant differences in disclosure rates between data collection techniques for a number of socially sensitive topics, but convenience of the sampling medium played a major factor in participation rates.

### **Limitations**

This study was met with a number of limitations. Due to the necessity to procure, build, and assemble the cardboard cubes, the materials needed to run the experiment, in particular the cubes, needed to be purchased from an external provider. Until the cubes were shipped, there was no knowledge of the dimensions or the specific build of the cubes, making the formulation of a proper procedure rudimentary at best. Delays in the procurement of the cubes as well as time for assembly restricted the amount of time the experiment could be run, at a much later date than originally planned for. The study, originally planned to start on the opening week of March, was delayed until March 16. Furthermore, the cube assembled in Woodward library was lost during the second week of the study. Public responses for this lost cube is unavailable, however, the majority of private responses were retained. Also, because demographics of participants were unable to be monitored, no claims towards demographic specific groups could be made. Lastly, because monitoring of the cubes was not possible, the participant intent of each message was not interpreted any further than the face value of the responses provided.

Future studies can address some of these limitations. Firstly, setting up a monitoring system during the assembled times may help increase not only the quality of responses but also the quantity of responses, with incentives, participants may be more willing to provide a response, therefore increasing the quantity of responses. Furthermore, participants should be surveyed and asked both their demographics as well as which categories they perceive to be leaning towards a

more social categorization or towards a more non-social categorization. This will aid in identifying the intent of many responses in a way that would be more significant for the study. Ultimately, due to the vast amount of possible happiness determinants, future studies should be conducted on a wider sample, not just that of UBC inhabitants as different communities have different values and elicitors of happiness.

### **Conclusion**

As sustainable behavior and awareness to wellbeing become more widespread, communities dictate greater resources towards attaining a sustainable ideal of wellbeing amongst its members. The university campus is one such community - as an institution UBC is making strides towards initiating not only environmentally sustainable behaviors but also improving happiness and wellbeing.

However, many of UBC's initiatives are inherently social in nature, aimed at enhancing and promoting social interactions. Of these initiatives, many forms exist - whether in the form of intramural sport, parties, clubs, or discussion. Our study demonstrates that a less publicly-oriented category of individuals exist whom relate their happiness to determinants which are not social or environmental in nature, but rather personal or intimate. The University can further study and build upon some of the non-social determinants of happiness which was exhibited within our study, providing opportunities to stimulate happiness through non-social groups. For example, our study determined that the categories for personal achievement, as well as academics, are correlated with private disclosure. While study groups and personal study workshops exist on campus, we may wish to explore how the personal recognition and acknowledgement of their achievements in a personalized setting may facilitate happiness. Similarly, the less publicly explicit category of intimate sexual activity can also be improved further from campus initiatives on safe sex and sexual wellness. Couples therapy and relationship advice are two avenues which the campus community may wish to consider in improving happiness in socially non-normative topics.

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Cube Dimensions

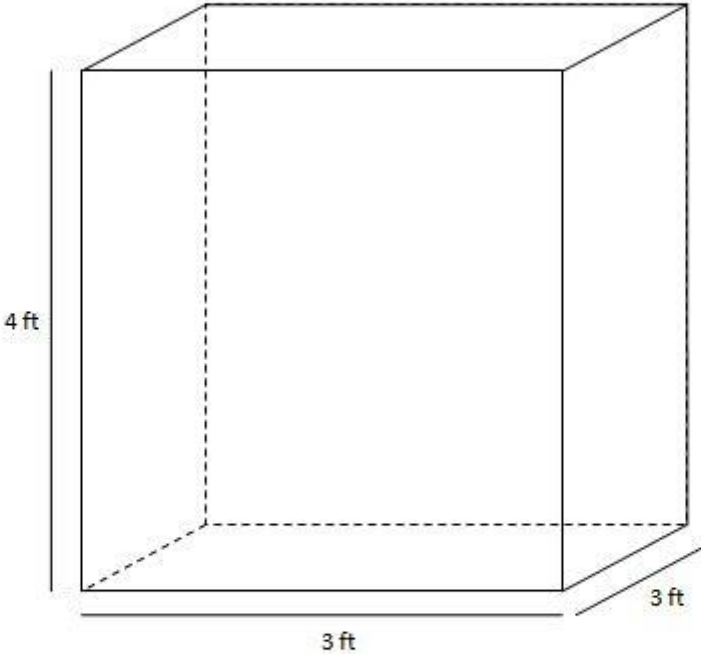


Figure 2.1 – Basic cube dimensions for the cubes used in the study

Lid Dimensions

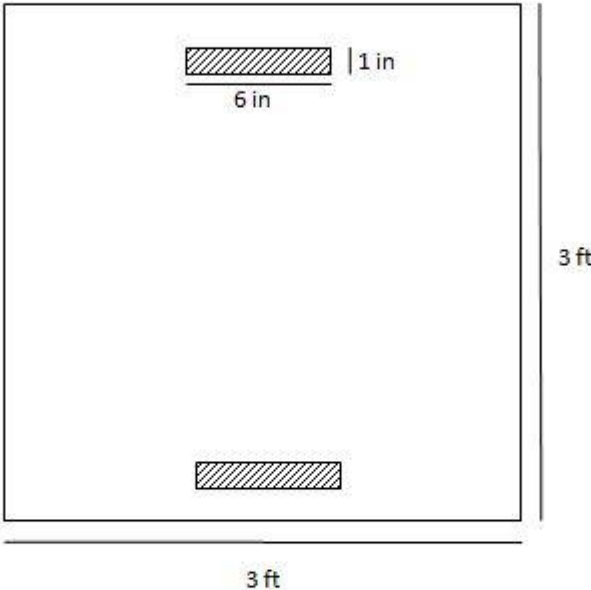


Figure 2.2 – Dimensions of the lid with slot dimensions for written note responses

Poster Image

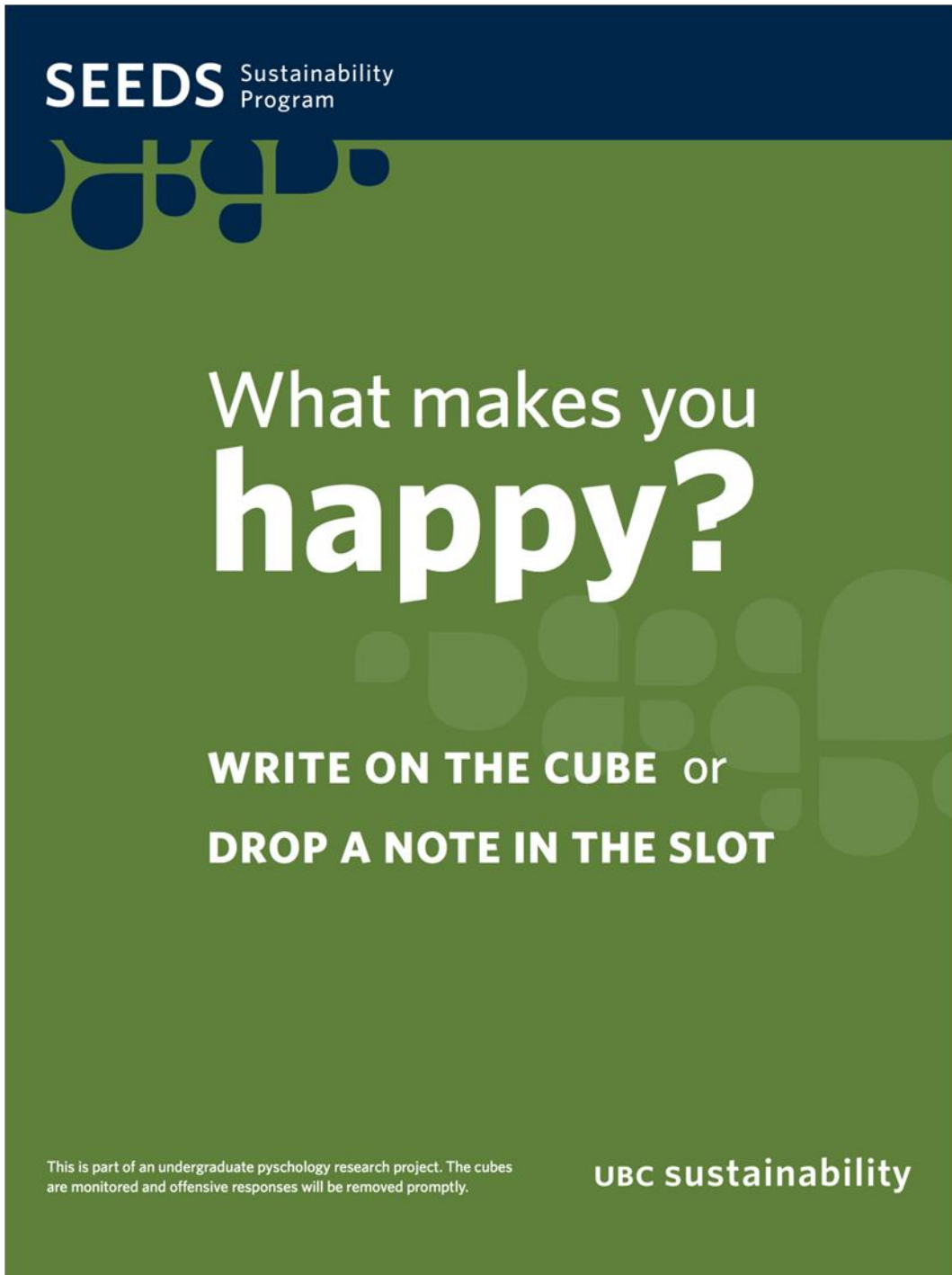


Figure 2.3 - Poster displayed on two blank sides of the box

**Bar Graph as a percentage of total conditional responses**

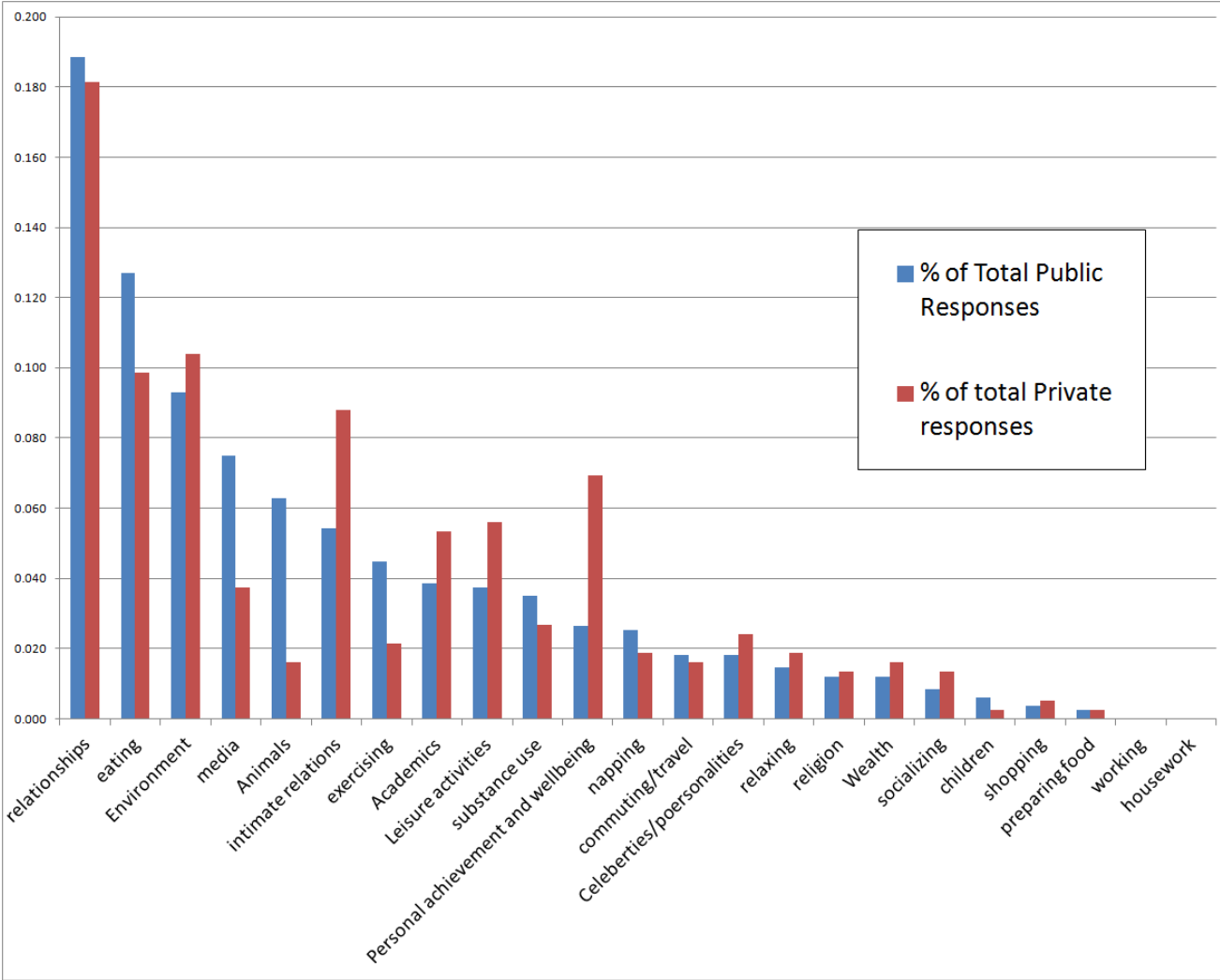


Figure 3.1 - Compared percentage of total responses between private and public conditions in descending order according to public condition

**Frequency Counts**

Social Categories	Private	% of total Private Responses	Public	% of total Public Responses
Socializing	5	0.013	7	0.008
Eating	37	0.099	105	0.127
Exercising	8	0.021	37	0.045
Media	14	0.037	62	0.075
Shopping	2	0.005	3	0.004
Relationships	68	0.181	156	0.189
Children	1	0.003	5	0.006
Environment	39	0.104	77	0.093
Substance Use	10	0.027	29	0.035
Animals	6	0.016	52	0.063
Celebrities	9	0.024	15	0.018
<b>Total Social Responses</b>	<b>199</b>	<b>0.531</b>	<b>548</b>	<b>0.663</b>

Non-social Categories	Private	% of total Private Responses	Public	% of total Public Responses
Intimate Relations	33	0.088	45	0.054
Relaxing	7	0.019	12	0.015
Religion	5	0.013	10	0.012
Preparing food	1	0.003	2	0.002
Napping	7	0.019	21	0.025
Housework	0	0.000	0	0.000
Working	0	0.000	0	0.000
Commute and Travel	6	0.016	15	0.018
Leisure Activities	21	0.056	31	0.037
Personal Achievement	26	0.069	22	0.027
Academics	20	0.053	32	0.039
Wealth	6	0.016	10	0.012
<b>Total Non-Social Responses</b>	<b>132</b>	<b>0.352</b>	<b>200</b>	<b>0.242</b>
<b>Off Topic</b>	<b>44</b>	<b>0.117</b>	<b>79</b>	<b>0.096</b>
<b>Grand Total of Responses</b>	<b>375</b>	<b>1.000</b>	<b>827</b>	<b>1.000</b>

Table 1.1 - Frequency count of social and non-social categories and the proportion of total responses of each privacy condition

**Total Response Count**

ACTIVITIES	PRIVATE		PUBLIC							
	RESPONSE NUMBER	DOUBLE COUNTS	STUDENT UNION BUILDING		KOERNER		KAISER		CIRS	
			RESPONSE NUMBER	DOUBLE COUNTS	RESPONSE NUMBER	DOUBLE COUNTS	RESPONSE NUMBER	DOUBLE COUNTS	RESPONSE NUMBER	DOUBLE COUNTS
Intimate relations	32	1	25	2	4	4	1	3	9	1
Socializing	1	4	1	2	1	1				3
Relaxing	4	3	1		5			2		4
Religion	3	2	3						3	1
Eating	22	15	44	1	31	2	2	2	1	22
Exercising	8	8	14	1	11		1		9	1
Media	10	4	38	2			3	5	11	2
Shopping	2		2				1			
Preparing Food		1		1		1				
Napping	5	2	7	2	3			4		2
Children		1	1					1		3
Housework										
Working										
Commute / Travel	4	2	3		4		1	1		5
Substance Use	10		16		9		1		1	1
Relationship	57	11	63	3	44	5	5	13	22	6
Environment	30	9	25	1	23	4	4	5	18	1
Leisure activities	19	2	14		11		1	1	3	1
Personal achievement	23	3	5	1	3			4	8	1
Academics	17	3	9		7			7	1	8
Wealth	5	1	5					1		4
Animals	6		18	1	17		1	4	1	10
Celebrities/personalities	8	1	6		7					2
Off topic	44		37		32			5		5

Table 1.2 – Total response count of study. All public responses according to the building they were situated, less the lost box in Woodward library. Private responses were totalled and counted without building/box discrimination.