

# The World Privacy Survey: Information sharing habits across cultures and generations

**Jakob Rogstadius**  
University of Madeira  
jakob@m-iti.org

## ABSTRACT

The World Privacy Survey (<http://worldprivacy.info>) is a research project that measures global differences in attitude towards privacy and personal integrity. It identifies how people's nationality, age, income, community size, internet usage and other factors affect what personal information people are willing to share, as well as with whom they are willing to share it. This report describes the survey design and contains an exploratory analysis of data collected during the first month after launching the website.

## Keywords

Privacy, survey, culture

## INTRODUCTION

Much research has looked into the characteristics of privacy and how general levels of privacy concerns vary based on culture, legislation and to some extent demographics. However, little of this work can be directly applied to guide design and development of privacy features in software which extensively collects and shares personal information (e.g. online social networks), in particular when trying to address the concerns a specific target user group.

This study aims to support such development, by identifying how information sharing preferences in everyday life vary for different pieces of commonly shared information and across demographics and culture. People's views will be surveyed on a number of topics, such as location, activity, emotional reactions and political views, so that developers can be better informed about how to handle privacy in their systems according to user preferences.

The study is further motivated by the assumption that personal information sharing preferences of high granularity in online social networks are particularly important when the information is such that people have significantly different practices regarding its sharing. On the other hand, when users' preferences are in high agreement, features of the system can be designed to agree with this public view by default, without the need to burden users with customization.

The scope of this report is limited to describing the methodology used to develop and deploy the survey, as well as exploratory analysis of the dataset from the first

month of data collection. More in-depth statistical analysis is left as future work until more data has been collected.

## RELATED WORK

Online privacy is a topic which has been discussed with increasing interest ever since the Internet became an integrated part of society. The definition of privacy itself has seen much historical debate, but in general, the focus has shifted from broad definitions such as the legal right to be let alone [1]; to the right to prevent disclosure of personal information to others (e.g. [2]); to more recent multidimensional definitions (e.g. [3,4]). The latter definitions better capture variations within populations which may have similar overall levels of privacy concerns according to more simplified definitions.

Multiple standardized attitude tests have been developed for specific domains of privacy, e.g. Buchanan et al. [5] who developed a test for measuring how concerned people are with different types of risks online, such as identity fraud and credit card theft. Despite this, no test has been developed to directly target measurement of information sharing preferences in multiple domains with regard to privacy.

Privacy concerns have also been shown to have cultural aspects. Milberg et al. [6] observed significant differences in overall levels of personal information privacy concern based on nationality. The study also concluded that the hierarchy of information privacy concerns (the perceived rank of different privacy threats) appears consistent across nationalities; although they acknowledge that this may be due to that all participants in their study were members of the same international privacy organization. Palen and Dourish [7] have argued that "people's privacy management is a process of give and take between and among technical and social entities — from individuals to groups to institutions — in ever-present and natural tension with the simultaneous need for publicity." This indicates that people are likely to make different information sharing decisions based on the context in which they act.

## METHOD

### Pre-study

A pre-study consisting of interviews was run to gain a better general understanding of the topic of privacy in terms

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For each information type, please select if you would be willing to share this information if a person of that category in some way seeks it out. For instance, the person can ask you about the topic in a casual conversation on the street or online, or they can read it on your Facebook profile.

Click the icons in the table to switch between:

- In most cases I would feel ok with sharing this information.
- In most cases I would not want to share this information.

	A family member	A close friend	In a casual discussion with an acquaintance	In a casual discussion with a stranger you met in person	A potential employer before the first interview	A company collecting customer data	A stranger online, when both are using nicknames (pseudonyms)	In a public profile on an online social network (e.g. Facebook, QQ)
Your employment status (e.g. student, unemployed, employed as full-time, retired)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your date of birth (and then age)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your current location at any given time (as an address or a dot on a map)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your religious views and practices (or lack thereof)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The last ten apps you downloaded and the things you bought	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your mobile phone number	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your online browsing history for the past week (websites you have visited)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A list of activities you often did in the past month (e.g. went shopping, visited library, walked)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your political opinions, such as how you voted in the last election	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A recent event which made you feel angry or sad	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Continue

Figure 1. The online survey form, asking participants about their information sharing preferences for ten information types and eight groups of people.

of what information people choose to share or not share with others, as well as with whom. The participants were given instructions to rate the sensitivity of a number of information types (e.g. your mobile phone number) on a five point scale (from completely insensitive to extremely sensitive) when sharing this information with an acquaintance. Participants were also encouraged to reason about their answers, in particular when they gave answers very different from those of others. For information types where the participant gave very strong answers in either direction, they were also asked to think of scenarios where they would give the opposite answer. Finally, they were asked to describe a person who would have given answers completely different to those given by the participant.

In addition to the information types covered in the list of questions, all participants were asked to think of other types of information commonly shared in daily social interactions. Interviews were held until participants no longer came up with additional types of information and previous participants were asked to give answers for information types added after their original interviews were held.

In total, twelve interviews were held with participants from Portugal, Sweden, India, United Kingdom, Greece, Vietnam, Pakistan and Taiwan. As most of the participants were at the time members of the same research group, the participants were asked to picture themselves back in their country of origin, as it was expected that this would better bring out the differences in privacy concerns between

different cultures. They were also asked to guess the answers that one of their parents would have given to the same questions, to achieve a greater sample size. Two participants had no parents alive and were instead asked to estimate answers given by their children. In one case both the parent and child were interviewed, which enabled a rough evaluation of the accuracy of participants' estimations.

### Online survey

Based on the interview results, 20 types of information were selected due to their connection with culture (as indicated by participants' explanations), age (generation differences) or estimated high commercial value. Information types where answers appeared consistent across cultures but dependent on specific experiences (such as having had a stalker) were removed, as well as those completely lacking interest among participants. Some types were combined or rephrased due to redundancy or ambiguity.

In addition, eight groups of people were selected to be paired up with each information type (e.g. "How willing would you be to share information X with a person from group Y when they in some way seek it out?"). The exact wordings of these groups, as well as the information types, can be found in Appendix B. This yielded a total of 160 questions, which was assumed to be too much for most respondents of an online survey to respond to. Therefore, each participant was asked questions about a random subset of ten information types, limiting the questions to eight by ten, presented in a matrix layout (figure 1). For each question, participants could chose between two answers.

- In most cases I would feel ok with sharing this information.
- In most cases I would not want to share this information.

Although with this layout each information-group pair is only represented by a Boolean value, a participant's answers can be averaged across information types and groups to create higher-resolution scores by which participants can be compared. Participants were also asked to provide a more elaborate free text answer about one of their answers, chosen initially at random and later for a question where the participant's answer went against the average answer for that question.

The survey was published online at <http://worldprivacy.info> where visitors were presented with a map of current survey coverage as well as a snapshot of current average answers around the world (figure 2). From here, visitors were encouraged to take the survey, consisting of a five step form with instructions, the questionnaire, elaborate answer, demographics and survey feedback. Participants were asked to report their location as *City*, *Country* which most participants willingly did, but in the few cases where

participants provided nonsense locations the location was instead recorded based on IP.

The website was promoted through mailing lists, online social networks (mainly Facebook) and it was added to public listings online of ongoing psychology studies. In addition, a task was put up on Amazon's Mechanical Turk asking workers to share the URL to the survey with others. Workers were paid for sharing a URL to the survey and thereby bringing visitors to the site, but actual survey answers (from themselves or others) had no impact on their reward.

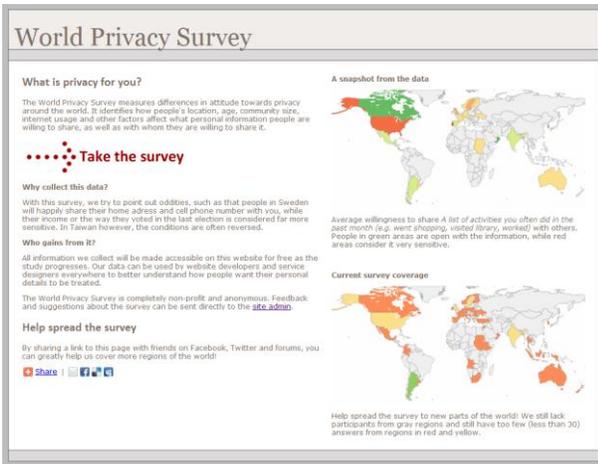


Figure 2. The website which hosts the online survey.

## RESULTS

This section will mainly focus on exploratory analysis of the collected dataset.

### Demographics

The survey has at the time of writing received answers from 467 participants from 54 countries. Three countries stand out, with India at 123 participants, United States at 78 participants and Argentina at 53 participants (together 54% of all participants). Other countries all have 20 or less respondents. Figure 3 shows the distribution of answers around the world.

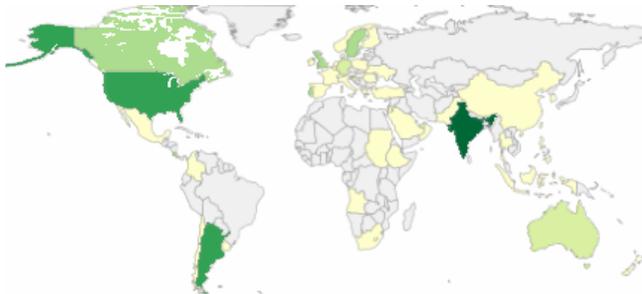


Figure 3. Distribution of answers by country. Darker regions have more participants and gray regions have no participants.

Respondents from India were recruited mostly through the HIT on Mechanical Turk, respondents from the US via all methods and respondents from Argentina via e-mails through personal contact networks.

39% of all respondents were female (35% in India, 51% in USA and 21% in Argentina). The average age was 30 years, with no notable differences between countries. Most participants (54%) indicated that they used two or three different social networks or services (e.g. Facebook, Twitter or blogs), suggesting that the sample has a bias towards people who actively communicate socially over the Internet.

### Noise removal

All participants were asked in total 80 questions to which they either answered that they would share or not share the information. Visually inspecting the distribution of participants' total number of questions with positive answers revealed a normal distribution centered on a mean of 29.3. A small peak at zero, well separated from the rest of the distribution, led to the conclusion that these were people who left all answers untouched (default negative) while clicking through the survey. Therefore, all participants with a positive answer sum of less than four were discarded as noise; in total 16 participants. The reported demographics are after noise removal.

### Answer means by question

Figure 4 shows a summary table of participants' average willingness to share each type of information with each requester group. In general, people reported being very willing to share almost all types of information with friends and family, as indicated by the consistently green rows for these two groups. Only two types of information, a memorable sexual experience and online browsing history, were considered highly private towards these groups. Online browsing history is the only information type covered by the survey for which the average willingness to share the information is below 50% for all requester groups.

Participants reported being less willing to share some types of information with potential employers than they are sharing the same information publicly through a social network profile; in particular pictures or emotions.

### Correlation and clusters

Pearson correlation between aggregate scores for information types and requester groups are generally low (but significant). Exceptions are sharing information with a close friend vs. a family member (0.81); sharing information with an acquaintance vs. total average (0.79); religious views and practices vs. total average (0.83); positive opinions about a person vs. total average (0.78); a list of frequently visited places vs. total average (0.77); a recent event that made you feel happy vs. total average (0.77). All other correlations between aggregate information type or requester group scores were below 0.75. Principal component analysis of the participant vectors containing all 160 distinct answers reduces the dimensionality to around 100 when retaining 95% of the variance in the dataset. The largest 25 eigenvectors after the transformation together capture only 50% of the variance.

88	91	87	93	85	85	92	86	81	83	74	87	89	86	74	72	59	74	41	54	79	A close friend
84	89	87	87	84	81	92	82	76	76	78	81	91	88	76	74	69	68	33	14	75	A family member
62	57	69	64	52	54	46	46	49	47	43	45	33	38	35	28	17	20	16	6	42	In a casual discussion with an acquaintance
45	39	36	45	34	27	10	23	28	25	17	35	9	29	17	13	3	3	6	2	22	In a public profile on an online social network (e.g. Facebook, QQ)
64	56	41	21	17	22	50	21	18	8	10	12	29	6	12	22	17	2	6	1	22	A potential employer before the first interview
42	38	39	36	33	26	14	23	26	19	24	14	6	13	16	9	7	6	8	6	20	In a casual discussion with a stranger you met in person
33	27	33	33	34	21	5	20	22	25	28	7	2	7	19	8	11	12	7	14	19	A stranger online, when both are using nicknames (pseudonyms)
43	42	25	17	24	22	15	17	15	12	16	4	14	4	21	16	14	3	9	2	17	A company collecting customer data
58	55	52	49	45	42	41	40	39	37	36	36	34	34	34	30	24	23	16	13	37	Mean
Your employment status (e.g. student, unemployed, employed as title, retired)	Your date of birth (and thus age)	Positive opinions about a person (in their absence)	A recent event which made you feel happy	Your religious views and practices (or lack thereof)	A list of places you visited frequently during the past month	Your mobile phone number	A list of activities you often did in the past month (e.g. went shopping, visited library, worked)	Your current activity at any given time (e.g. drinking coffee, waiting for the bus)	A recent event which made you feel angry or sad	Your political opinions, such as how you voted in the last election	A picture showing you and friends at a spare time social gathering	The location (address) of your home	A picture showing you and relatives at a social family gathering	The last ten shops you shopped in and the things you bought	Your current location at any given time (as an address or a dot on a map)	Your total income last year	Negative opinions about a person (in their absence)	Your online browsing history for the past week (websites you have visited)	A memorable sexual experience with a partner	Mean	Mean

Figure 4. Percent of survey participants who said they would in most cases be willing to share an information type with a requester group.

In addition, multiple approaches were taken to cluster participants based on their answers, as well as grouping together information types and requester groups. No clusters were found for information types and requester groups, while three clusters were identified by the EM algorithm for participants' answer vectors. However, these clusters could not be characterized (separated) based on demographics or on a few questions and therefore offered little descriptive value at an exploratory stage.

A slight positive correlation can be seen between being generally willing to share information, living in a big city and using many online social networks. In addition, people 19-34 are more willing to share information than are their peers outside of this age range. Women are slightly more willing to share information than are men, towards all requester groups except acquaintances. However, given the weakness of these correlations, demographics have proven to be very poor predictors of participants' aggregate scores. All attempts to construct predictor models using rule, tree and Bayesian classifiers therefore failed, with recall and precision rates scarcely above a majority classifier. No attempts have been made to develop predicting algorithms for the answers to individual questions.

### Comparison of countries

Pair wise similarity between the average scores for countries can be seen as a coarse approximation of cultural similarities in the willingness to share information. Such pair wise differences can be calculated by representing each country as a vector with 160 components (one for each question in the survey) and letting the value of each component be the mean for that question within that

country. The matrix in figure 5 shows the pair wise Euclidian distances between all countries having at least 15 respondents. Apart from some similarity with Great Britain (GB), Sweden (SE) stands out by being further separated from all other countries than all other countries are from each other. In contrast, Argentina (AR) is the most or second most similar country to each other country. India (IN) and the United States (US) have the least differences between them.

Further analysis shows that while the differences between the most distant countries, India and Sweden, can be summed up as that Sweden is more open than India, there are a few notable deviations from this trend. Figure 6 shows the difference between the average answers of the two countries, i.e. the difference in the percent of people

	AR	CA	GB	IN	PT	SE	SI	US
AR	0	22	21	20	17	29	19	16
CA	22	0	23	22	25	30	24	21
GB	21	23	0	28	24	24	24	23
IN	20	22	28	0	22	34	24	13
PT	17	25	24	22	0	31	21	20
SE	29	30	24	34	31	0	29	31
SI	19	24	24	24	21	29	0	21
US	16	21	23	13	20	31	21	0

Figure 5. Pair wise Euclidian distances between country averages.

54	54	38	52	55	57	52	45	33	11	19	25	20	44	28	14	11	25	-5	-20	31	In a casual discussion with an acquaintance
35	44	40	50	61	-8	2	22	27	22	19	21	36	8	-5	30	21	6	14	-10	22	A stranger online, when both are using nicknames (pseudonyms)
20	15	23	20	26	21	42	22	35	27	25	34	30	23	17	11	27	27	7	-34	21	A family member
69	68	44	53	41	31	31	12	8	17	24	17	5	13	20	1	-7	-14	-7	-10	21	In a casual discussion with a stranger you met in person
11	15	17	18	19	17	24	26	26	21	22	19	32	21	9	24	23	35	31	-29	19	A close friend
71	58	63	35	40	18	18	-4	19	17	0	-6	6	8	15	-4	-2	13	-6	-8	18	In a public profile on an online social network (e.g. Facebook, QQ)
38	19	40	21	18	53	10	24	12	20	13	22	-8	5	-4	-7	-9	-29	-4	-8	11	A potential employer before the first interview
12	18	1	12	-7	-6	-1	14	-8	5	2	-11	-1	-13	-5	-3	-14	-25	-10	-13	-3	A company collecting customer data
39	36	33	33	32	23	22	20	19	17	15	15	15	14	9	8	6	5	2	-17	17	Mean
Your date of birth (and thus age)	Your religious views and practices (or lack thereof)	Your employment status (e.g. student, unemployed, employed as title, retired)	Positive opinions about a person (in their absence)	A recent event which made you feel happy	Your mobile phone number	A picture showing you and friends at a spare time social gathering	Your total income last year	A recent event which made you feel angry or sad	A list of activities you often did in the past month (e.g. went shopping, visited library, worked)	A list of places you visited frequently during the past month	The last ten shops you shopped in and the things you bought	Your political opinions, such as how you voted in the last election	The location (address) of your home	A picture showing you and relatives at a social family gathering	A memorable sexual experience with a partner	Your current activity at any given time (e.g. drinking address or a dot on a map)	Your current location at any given time (as an address or a dot on a map)	Negative opinions about a person (in their absence)	Your online browsing history for the past week (what	Mean	

Figure 6. Differences in the average scores given by participants in the two most dissimilar countries; India and Sweden. Differences are positive where participants in Sweden reported being more willing to share information than participants in India.

who selected that they would normally be willing to share a type of information with a requester group. Values are positive where the more open Sweden has a higher score than the more restrictive India. Strong positive deviations in the reported values for Sweden can be seen for date of birth, religious views, employment status, positive opinions about others and a recent event that made the participant happy. Online browsing history is the only type of information that is considered more private across all requester groups among participants from Sweden than among those from India.

Finally, figure 7 shows the average scores across all eight countries for five types of information that are (arguably) particularly important in society.

### DISCUSSION AND FUTURE WORK

The distribution of answer averages for all 160 questions (figure 4) is bimodal with a skew towards not willing to share information. This bimodality indicates that survey

participants generally agree about the sensitivity of information. If answers to most questions had great disagreement, the distribution would be Gaussian rather than bimodal. The bimodality can be interpreted as that privacy preferences are largely governed by social norms rather than personal preferences, and that while differences in social norms regarding information sharing exist (figure 5), these differences are quite small.

It can be concluded from the lack of correlation in the dataset that the pre-study was successful in establishing high degrees of orthogonality between questions. The absence of well separated clusters further indicates that privacy preferences are better described as continuous variations around a common mean than belonging to a finite set of preference types.

It is possible that the differences observed between countries, in particular those between India and Sweden, are not due to cultural differences, but rather due to having

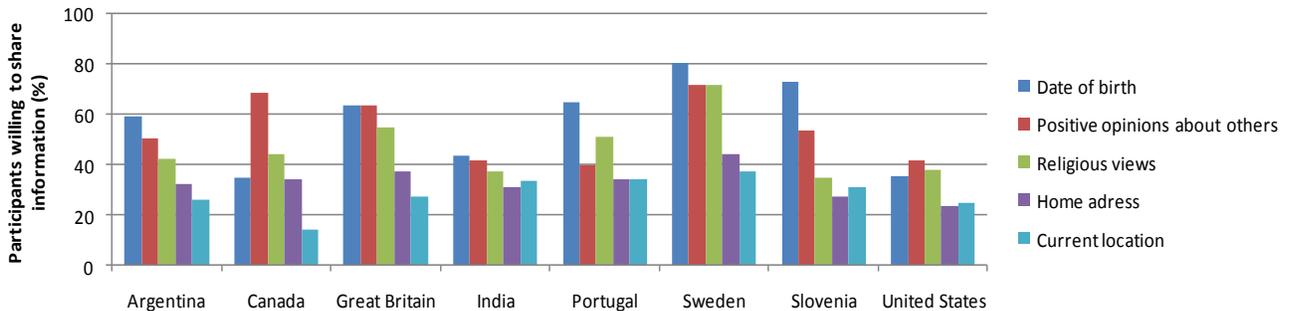


Figure 7. Percent of participants willing to share five important information types, for the eight countries having 15 or more participants. Scores are averages calculated across all requester groups.

unrepresentative samples in countries with few participants. As most participants from Sweden belong to a group of students from the same university, their privacy preferences may have low internal variance but still be highly different from the country's true average. The three countries with most participants are all very similar to each other, which could be due to having samples representing larger parts of society. Future analysis could limit the comparison of countries to include only certain demographic groups for which the sample size is large enough. This way, at least some demographic effects can be ruled out. However, the author (Swedish) has discussed the differences between the two countries (figure 6) with an Indian colleague and our joint conclusion is that the differences appear to make sense. Date of birth and phone numbers are insensitive in Sweden due to publicly accessible records. Further, religious views in Sweden are rather homogeneous, as opposed to India where religion is more of a hot topic. The apparent Swedish willingness to hide online activities may be due to recent debate in politics and media regarding a law related to surveillance of internet traffic by the military intelligence agency. The Swedish openness with employment status may be due to an overrepresentation of students in the Swedish sample. In addition, the general distances reported between countries are greater than the differences between age groups, genders, community sizes, income groups and levels of online social network usage, which indicates that it is more valid to separate the data in this way than on other demographic information.

In analysis of a future larger dataset, it may be useful to calculate clusters using the EM algorithm and then look at distances between cluster centroids, time distribution of cluster members and country distribution within clusters. This will most likely show that while the clusters are not well separated, they each have more samples than most countries do and the distances between cluster centroids are far greater than the distances between country centroids. Together with the poor prediction value of demographic data, this then shows that privacy preferences are to a great extent influenced by something else than demographics;

most likely personal experiences. High variance across demographics is a strong argument for having adjustable privacy settings for sharing of information in online systems that involve storing and sharing of extensive personal details. Initial attempts to look at cluster distribution over time show that distributions are time-localized in the dataset. When keeping in mind that the survey has been distributed mostly using social connections between people, this time distribution suggests that people to great extents give answers similar to those of their peers.

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# Appendix A - Feedback

Survey participants were given the option of providing free text feedback at the end of the survey. While the feedback was generally very positive, a selection of more constructive comments and criticism can be found below.

This is a very good survey to have to help people realize just how open all their information is.

You've completely avoided the issue of invasion of privacy by the state.

There's one issue: negative opinions about someone not in their presence, this could be qualified a bit better. Talking about how a server in a restaurant was rude when they're not around on Facebook or even to a potential employer before an interview is different from a person both of you know. That question could be fleshed out more.

This is a good survey and it really makes you think about if you would really do some of the questions asked or not.

It's interesting how you ask how comfortable someone is sharing certain information with certain groups of people, and then ask for information as a stranger for the sake of the survey. Nice.

I really think that it's a bit ironic that you ask people to share their city. Not something I particularly enjoyed.

Very interesting survey and very well-constructed. Other pieces of information for which a similar survey would be interesting for:

- Sharing own age and birth date
- Sharing names or photographs of own children
- Sharing name of school the children go to
- Sharing medical conditions
- Sharing name of current employer

It was interesting for me to find that I would share less with a potential employer, before and interview, than with anyone else.

The survey is more about personal view. Certain views depend upon the circumstance. So more options can be given (eg: May be, sometimes).

There should be more specific choices for every question.

1. One question is about the DATE OF BIRTH, but you also talk about AGE. This question was not very clear. I think people are more willing to talk about their age, but not about their date of birth. So you may want to rephrase that question or break it down to 2 different questions. One would be about the age (i.e I am 35 yo) and the other questions would be about the date of birth (i.e I was born on the 30th of November 1971).

2. I would also like to see an option where the participants of this survey could have the chance to view the general findings of the study/survey in the future.

The question about sharing your current location with someone you're speaking to in person is absurd. There's no need to ask since you're both at the same place and they therefore know already.

I believe too few people understand privacy issues online, and I hope your survey has an impact on education of this topic. Good luck with it!

Great survey. Very quick and precise, easy to browse. Will be great if the result is also shared to those who participated in the survey. I am curious to know the result.

you should be specific with what you exactly mean by the word share... what actions does sharing entail.

I think the survey should have asked some questions around what comprises of an actual breach of privacy. Instead of what we are comfortable with, what we are not comfortable with would have got people to think more and actually set some boundaries that could have substantially helped new media information design.

In reference to my location, I may be an outlier for Costa Rica as I grew up in the United States and only recently moved to this country.

Location privacy is causing somewhat of a dynamic re-evaluation of my views on privacy at the moment as I am experimenting with LBS apps where sharing location is the basis of the interaction. Normally I would choose not to share my location with others (in a telephone call with a stranger or acquaintance for instance)- i.e. I would consider this private. But these apps make location a useful social networking tool so I choose to actively share my location and also to view the location of others.

Nowadays I think that privacy is a very delicate matter. Moreover, security devices and IT resources are more and more sophisticated to gather people information without their consent. Perhaps it's more than saying that something is right or wrong, maybe it's about an ethical challenge to work out.

Please, share with Creative Commons the database so others can use the data, too.

The survey felt really short as "world privacy survey". You did not ask too much in details for example what kind of content is really thought as something private (music one listens to, videos one shares or has shoot, social network aka who are your friends). I think this was too simple survey to title it with World Privacy Survey. I hope you will state the limitation when the results are out.

You should ask about educational status of participants

I fail to see the relevance of the survey category "to a potential employer before the first interview"

## Appendix B – Survey questions

The questionnaire of the online survey consisted of a matrix layout of information types and possible requesters. Listed below are the exact wordings used.

### REQUESTERS

1. A family member
2. A close friend
3. In a casual discussion with an acquaintance
4. In a casual discussion with a stranger you met in person
5. A potential employer before the first interview
6. A company collecting customer data
7. A stranger online, when both are using nicknames (pseudonyms)
8. In a public profile on an online social network (e.g. Facebook, QQ)

### INFORMATION TYPES

1. Your political opinions, such as how you voted in the last election
2. Your religious views and practices (or lack thereof)
3. Your employment status (e.g. student, unemployed, employed as title, retired)
4. Your total income last year
5. The last ten shops you shopped in and the things you bought
6. Your current location at any given time (as an address or a dot on a map)
7. Your current activity at any given time (e.g. drinking coffee, waiting for the bus)
8. A list of places you visited frequently during the past month
9. A list of activities you often did in the past month (e.g. went shopping, visited library, worked)
10. Your online browsing history for the past week (websites you have visited)
11. Your date of birth (and thus age)
12. The location (address) of your home
13. Your mobile phone number
14. A picture showing you and friends at a spare time social gathering
15. A picture showing you and relatives at a social family gathering
16. Positive opinions about a person (in their absence)
17. Negative opinions about a person (in their absence)
18. A recent event which made you feel happy
19. A recent event which made you feel angry or sad
20. A memorable sexual experience with a partner