

Online Privacy
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Week: 1
Privacy Concepts and Studies

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Lets look at some definitions of Privacy



So, now that given you some background, what, until now, what you should have understood is this relevance of this topic, I am going to make you watch few more videos and look at some of the documents that have been generated more recently about this topic. But for now, I think this is good enough to watch the video on the pizza delivery and on social dilemma and the great hack, giving you a good sense of what is happening around us.

There are few other very interesting documentaries that have been produced recently, which we will watch later in the semester. Now, what let us shift to what is privacy itself, definitions of privacy, I asked you to say what privacy is for you? But now let us take a look at what are the formal definitions of privacy that are out there.

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“Privacy is a value so complex, so entangled in competing and contradictory dimensions, so engorged with various and distinct meanings, that I sometimes despair whether it can be usefully addressed at all.”

https://digitalcommons.law.yale.edu/cgi/viewcontent.cgi?article=1184&context=fss_pape

Three Concepts of Privacy
ROBERT C. POST*

Privacy is a value so complex, so entangled in competing and contradictory dimensions, so engorged with various and distinct meanings, that I sometimes despair whether it can be usefully addressed at all. Jeffrey Rosen, *courage in eloquently addressing the subject with the sweep and vigor evident in *The Unwanted Gaze* is entirely admirable.*¹ He has composed a rich and useful book, filled with perceptive observations and nuggets of sound advice. But as to capturing the core concept of privacy itself, I find myself cautious and reserved.

In this brief Review Essay, I shall isolate and review three different and in some respects incompatible concepts of privacy that are each mentioned in the Prologue to *The Unwanted Gaze*. The first connects privacy to the creation of knowledge; the second connects privacy to dignity; and the third connects privacy to freedom. I shall argue that the first concept should not be understood as a question of privacy; that the second is a helpful way of apprehending privacy, but that it should focus our attention primarily upon forms of social structure; and that the third is best conceived as an argument for liberal limitations on government regulation.

Rosen introduces the first sense of privacy early in the Prologue when he seeks to explain the “sense of violation” that Monica Lewinsky undoubtedly experienced when her “consensual sexual relationship with a powerful public figure” became public. Rosen argues that “a central value of privacy is the freedom of being misdefined and judged out of context.” He also argues that Lewinsky, like any normal person, “was judged on the basis of [her] most estimable, tastes and preferences.”² Rosen con-

So, this definition of privacy, so everywhere, if you see this, so throughout the lectures, all videos, all slides, which has this particular symbol means that he I am I will use the document that is there cite in the slide, also for discussion, I would also recommend you to go take a look at it.

I will open it and show you some right parts. For the discussion board I want to have as part of the slides. But for you to get a better understanding of the topic, I think it will be very, very nice if you go back to read the document that I am referring to. So, look at the definition, what is given in this paper, which says privacy is a value, so complex, so entangled in competing and contradictory dimensions, so engorged with various and distinct meanings, that I sometimes disturb whether it can be easier to stop. So, look at words that so that is why I was giving you earlier the understanding of think about your own privacy, talk to your parents and see what their privacy is.

It is these things, if you do you will get a sense of. Because I think for example, topic about let us say your parents are sharing the information about you getting a job, or your brother getting a job or a sister getting a job to somebody saying, (())(03:23) daughter finished this program, and she just got into a job. And the next question somebody would ask or your parents will be happily saying that all the packages so much.

So, is that to share? Probably if you ask your parents, they are going to say that, we are excited. So, we want to share. But if you look at it, from your point of view, probably the expectations are different. So, that is why it is complex entangled, competing. Competing, because our own privacy, your own privacy expectations are going to be changing either in different contexts.

Or when you change, for example, a steak, I am guessing many, many of you would be in the age group. This again generalization many of you would be in the age group of let us take 17 to 25. Now, listening to this lecture, some may be beyond are probably some may be lesser also. But your own privacy expectation to change.

What you thought when you are like 13 to keep private is not what you are thinking right now when you are 20 and it is definitely not going to be the same when you are going to be 30 or 40. So, the contradictory part is also there, which is yourself will argue what he said now, as I say, 17 year old person later which being different.

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ROBERT C. POST*

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In this brief Review Essay, I shall isolate and review three different and in some respects incompatible concepts of privacy that are each mentioned in the Prologue to *The Unwanted Gaze*. The first connects privacy to the creation of knowledge; the second connects privacy to dignity; and the third connects privacy to freedom. I shall argue that the first concept should not be understood



misjudged on the basis of [her] most embarrassing, and therefore most identifiable, tastes and preferences.”⁵ Rosen continues:



Monica Lewinsky didn't mind that her friends knew she had given the President a copy of Nicholson Baker's *Vox*, because her friends knew that she was much more than the type of person who would read a book about phone sex. But when our reading habits or private e-mails are exposed to strangers, we may be reduced, in the public eye, to nothing more than the most salacious book we once read or the most vulgar joke we once told.⁶

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1. JEFFREY ROSEN, *THE UNWANTED GAZE: THE DESTRUCTION OF PRIVACY IN AMERICA* 11 (2000).
2. *Id.* at 8.
3. *Id.* at 4.
4. *Id.* at 8.



by bringing all persons within the bounds of a single normalized community;



31. *Id.* at 11.
32. GEORGE HERBERT MEAD, *ON SOCIAL PSYCHOLOGY* 239 (Anselm Strauss ed., 1964).
33. *Id.* at 230.
34. *Id.* at 238, 240.
35. *Id.* at 238.

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privacy as freedom protects individual autonomy by nullifying the reach of that community. Privacy as freedom carves out a space in which, as Rosen elsewhere states, individuals can be “allowed to define themselves.”³⁶

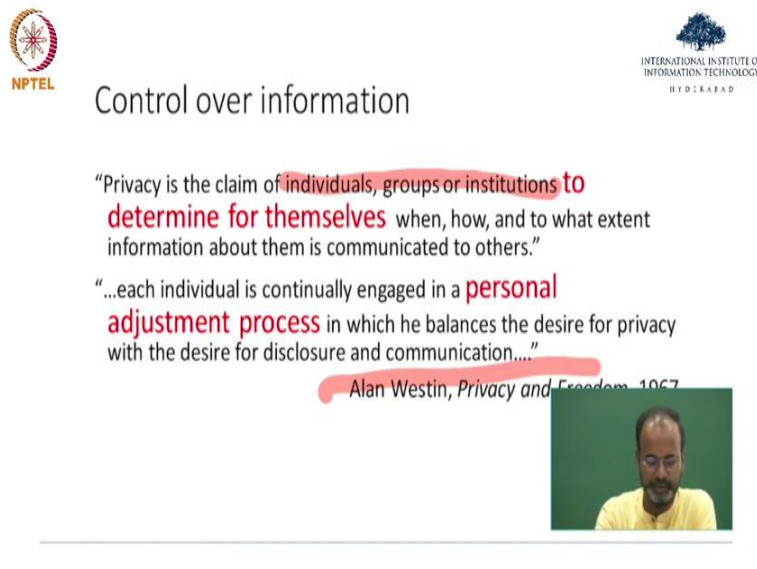
Privacy as freedom used to be associated with nature. As Richard Sennett has

So, let me just show you the report. So, this is the report that I had it in the slide which, shows that it is three concepts of privacy, the first concept, privacy to the creation of knowledge, the second connects privacy to dignity. And the third connects to privacy to freedom. I think this idea of privacy, which is right to be alone right to be forgotten.

All of these themes will come as part of this class, which is what I wanted to highlight as part of this report. So, here is one text that I will let you to read yourself, to understand the complexity of the definition of privacy itself. Given that it is video, you can pause it and read it also. So, this is what I is a report that I thought I will highlight this. What we will do, as part of the slides,

wherever that image is there of the paper, I would go back to the report and see, which has by some aspect of the report, I will walk you through, and then we will go back to the slides again.

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The slide features the NPTEL logo on the left and the International Institute of Information Technology logo on the right. The title is "Control over information". It contains two quotes: "Privacy is the claim of individuals, groups or institutions to determine for themselves when, how, and to what extent information about them is communicated to others." and "...each individual is continually engaged in a personal adjustment process in which he balances the desire for privacy with the desire for disclosure and communication...". A citation at the bottom reads "Alan Westin, Privacy and Freedom, 1967". A small video inset shows a man in a yellow shirt.

Control so, continuing with the definition of privacy, what we will do now is we will look at control or information. This is another definition of privacy, which was given by Alan Westin, which is, which says that privacy is the claim of individuals or groups or institutions. Keep that in mind.

Because I think it is not just about us as individuals expecting privacy to determine for themselves, when, how and to what extent information about them is communicated to others. Each individual is continually engaged in personal adjustment process in which he balances the desire for privacy, with the desire of disclosure and communication. It is just arguing, continuing to argue the point that I am saying about it is complex, it is difficult to define, and we are changing our definitions of privacy as we move forward.

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Westin's 4 states of Privacy



- Solitude
 - individual separated from the group and freed from the observation of other persons
- Intimacy
 - individual is part of a small unit
- Anonymity
 - individual in public but still seeks and finds freedom from identification and surveillance
- Reserve
 - the creation of a psychological barrier against unwanted intrusion and communication



Westin also created these 4 states of privacy, which is Solitude, Intimacy, Anonymity and Reserve, which looked at solitude means individuals separated from the group and freed from the observation of other persons. This is look, I do not want to be involved in any discussion I just want to stay alone is what solitude means.

Intimacy is individually as part of a small unit, which is they are there let us take if your three friends, four friends, information just flows only between you and your very, very close to each other. Anonymity at the point that I said we will also look at later in the semester is that individualism, public anonymization is the idea where I want to share information, I want to be public.

But I want my re identification which is mean to be a wider that is the idea here, individual is public but still seeks and finds freedom from identification and surveillance. Reserve the creation of a psychological barrier against unwanted intrusion holding back communication. This is very similar to solitude.

Here, I just want to share information I want to be reserved, kept away from any kind of discussion or intrusion. Now that we have seen the four states of privacy from Alan Westin. Let us look at few other bar definitions of privacy or states of privacy are the words that people are used researchers and faculty and others will be used for the word for privacy.

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Solove's Privacy Taxonomy

- Information Collection
 - Surveillance
 - Interrogation
- Information Processing
 - Aggregation
 - Identification
 - Secondary Use
- Invasion
 - Intrusion
 - Decisional Interference
- Information Dissemination
 - Breach of Confidentiality
 - Disclosure
 - Exposure
 - Increased Accessibility
 - Blackmail
 - Appropriation
 - Distortion

<https://www.privacysecurityacademy.com/wp-content/uploads/2018/02/Handout-Found-Professor-Soloves-Taxonomy-of-Privacy-01.pdf>

So, this is Daniel Soloves, privacy taxonomy. So, he uses the word information collection information processing invasion and information dissemination. So, for all the documents that I am referring, I either have the URL here. And whenever there is a image like this in the slide, it means that I am going to be going to the document also and using it for conveying some points.

And it is also referring that I would recommend you to go look at the document also, I will only look at some parts of the document. But it will be very nice for you to read the document also. So, what does soloves privacy taxonomy, information collection, why information is being collected?

It could be for surveillance, it could be for interrogation, keeping the privacy in mind, that is what this point is. Information Processing, you collect lots of information, CCTV feeds, in your cities, you may have seen, what are they doing, they are doing aggregating the information to see whether the same person is moving from one point to another point.

These CCTV feeds can be used for tracking people. Knowing something that happens on unpredictable things that happen, or some crisis that happened, these kinds of CCTV cameras we used to find that. Identification of people, let us take if somebody is lost, can you use the CCTV feeds to track the person and find the person let us take if it is a kid, who is lost.

Some secondary usage of the processing information that is being collected and processed also. Invasion intrusion decisional interference can the information be used for taking some decisions against us, Facebook using the information for us that they collected from us and use it somehow against us or against us meaning in terms of let us take, selling some life insurance policies, or even some malicious entities using that information against us?

There is been incidences in the past where Facebook post has been used to kidnap people, because they aware about of the person is being posted on Facebook. And therefore, that information is used for taking, kidnapping, Kid kidnapping, people. Information dissemination is breach of confidentiality, disclosure, exposure, increased accessibility, blackmail, all of this, if you see it is self explanatory words. But because of information that is being shared, you can look at these things being used.

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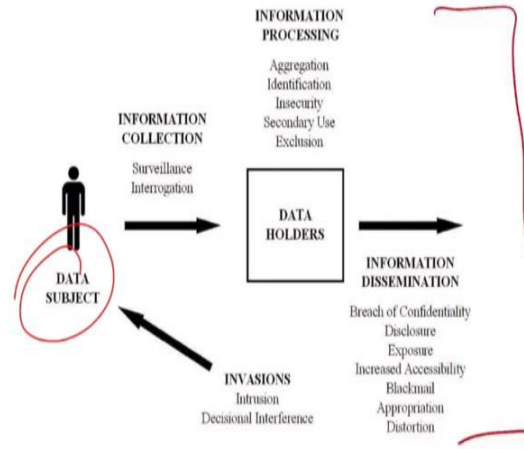
The slide features three logos at the top: NPTEL on the left, Security Academy in the center, and IIIT Hyderabad on the right. Below the logos, the text reads: 'INFORMATION PRIVACY LAW COURSE SERIES' and 'Foundations and Themes of US Privacy Law'. The main title is 'PROFESSOR SOLOVE'S TAXONOMY OF PRIVACY'. A subtitle states: 'Adapted from Daniel J. Solove, UNDERSTANDING PRIVACY (Harvard University Press 2008)'. The main text contains a paragraph with several lines highlighted in red: 'Privacy is a product of norms, activities, and legal protections. Privacy is about respecting the desires of individuals where compatible with the aims of the larger community. Privacy is not just about what people expect but about what they desire. Privacy is not merely an individual right - it is an important component of any flourishing community.' A red circle is drawn around the last sentence. Below this, another paragraph begins: 'Privacy is not one thing, but a cluster of many distinct yet related things. Below is Professor Solove's taxonomy of the different kinds of related activities that fall under the'. To the right of this text is a small video inset showing a man in a yellow shirt. At the bottom, the text 'INFORMATION PROCESSING' is followed by a list: 'Aggregation', 'Identification', and 'Insecurity'.

So, here is the here is the actual document from where I took this taxonomy, which is, if we look at so I am using these documents, I am also going to convey some of the points that probably is important or interesting to know about, in this case, it talks about privacy is a product of norms, activities and legal protections. Privacy is not merely an individual, it is an important component of a flourishing community. So, we saw this kind of a theme earlier also, which is privacy is not just about individuals, it could be about groups, it could be about organizations, it could be about a community, that is what the emphasis.

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Privacy is not one thing, but a cluster of many distinct yet related things. Below is Professor Solove's taxonomy of the different kinds of related activities that fall under the rubric of privacy.



None of these activities are inherently bad. Nor is privacy inherently good. The interests that sometimes conflict with privacy – free speech, security, transparency, and efficient consumer transactions – are all quite valuable. We must balance the value of privacy and conflicting interests to determine which should prevail in any particular situation.



In many cases, protecting privacy does not involve a zero-sum tradeoff. We can protect privacy without sacrificing a conflicting interest if we have procedures and limitations that address the problems. For example, the Fourth Amendment protects privacy not by forbidding the government from searching but by requiring procedures of oversight and limitation.

Information Collection

The means and process of gathering data can create privacy problems.

Surveillance is the watching, listening to, or recording of an individual's activities. It can chill expression and political activity, give too much power to the watchers, and make people feel creepy and inhibited.

Interrogation consists of various forms of questioning or probing for information. It can be too prying and coercive in some circumstances.

Information Processing

IS Profiling by itself a problem?



So, data subject is us, our information is being processed. So, if you look at the taxonomy that I showed earlier in the slide is taken from here. And this describes each of the parts of the taxonomy here in detail, so none of these activities are inherently bad. So, which is the taxonomy part, which is information collection, processing, invasion and information dissemination, nothing by itself is bad.

Nor is privacy inherently good. They entwine that sometimes conflict with privacy, free speech, security, transparency, and efficient consumer transactions are all quite valuable, necessary. As consumers, we want protection consumers who want recommendations, we must balance the

value of privacy and conflicting interest to determine which should prevail in any particular situation. So, this coming back again earlier I told you about control of information which is the same thing. So, one question that I would like to have a some sort of a discussion in the mailing list is also is about.

So, let us take let us consider Facebook, YouTube all of them seem to be profiling us. So, they know what videos do we watch they understand what posts that we are liking they also know which friends do you talk to most frequently they know all this because of this, they can profile us and say that yours Cricket fan.

And you like Sachin Tendulkar and therefore you should probably like the new add the Sachin Tendulkar is showing up. Let them show the add to us. So, these kinds of things are happening profiling is by itself a problem creating that information about you, knowing that you like this book knowing like, knowing that you like this cricketer, is by itself, is that good or bad? It is a question for you. Let us discuss it in the class in the mailing list. So, I would highly recommend you to take a look at this document as and when possible.

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The slide features two logos at the top: NPTEL on the left and the International Institute of Information Technology (IIIT Hyderabad) on the right. The main text on the left reads "Westin's Privacy Indexes" followed by "Fundamentalist", "Pragmatist", and "Unconcerned" on separate lines. On the right, there is a document thumbnail with a red circle around a document icon. The document title is "Privacy Indexes: A Survey of Westin's Studies" by Ponnurangam Kumaraguru, Loris Faith Crucer, CMU-ISRI-138, December 2005. Below the title is an abstract starting with "Since the late 1970's Dr. Alan Westin has conducted over 30 privacy surveys. For each of his surveys, Westin has created one or more Privacy Indexes to summarize his results and to show trends in privacy concerns. Many privacy researchers are interested in using these privacy indexes as benchmarks to which they can compare their own survey results. However, the details of how the indexes were calculated have not been reported except in the original survey reports. These reports were originally distributed in paper form, and many are no longer readily available. We obtained paper copies of five of these survey reports and found a sixth report online. We also found summaries of eight additional reports online. Here we report on the methodology used each year to calculate the privacy indexes and draw some conclusions about which indexes can be used to help privacy trends." At the bottom, there is a URL: <http://reports-archive.adm.cs.cmu.edu/anon/isri2005/CMU-ISRI-05-138.pdf> and a page number "24".

So, next, let us look at Westins Privacy Indexes. So, what is this Westins Privacy Indexes. What is Westin do? Westin over a period of 30 years or so ask the same kind of questions. Similar topics, for example, internet privacy, telephone privacy, general privacy, these kinds of topics that he took.

He created questions and asked the same questions and statistically representative sample across the US for many, many years. And how is this useful? This could be useful to say that what are the perceptions of people of privacy over years of a particular topic? Very interesting. Meaning I think there are even contribute about how helpful these surveys are. But we can get to that later.

For now, the Westins Privacy Indexes all about finding out what US citizens think about the concept of privacy, different types of privacy, for example, and classifying the users into fundamentalist pragmatists and concern because what he did. He did this to look at US citizens. And ask them questions and collected data for many years. And this is a report that was written on top of, say 30 years 25-30 years of data collection by Westins, which compared what did he do? And how did he come up with the classification.

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**Privacy Indexes:
A Survey of Westin's Studies**

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Abstract

Since the late 1970's Dr. Alan Westin has conducted over 30 privacy surveys. For each of his surveys, Westin has created one or more Privacy Indexes to summarize his results and to show trends in privacy concerns. Many privacy researchers are interested in using these privacy indexes as benchmarks to which they can compare their own survey results. However, the details of how the indexes were calculated have not been reported except in the original survey reports. These reports were originally distributed in paper form, and many are no longer readily available. We obtained paper copies of five of these survey reports and found a sixth report online. We also found summaries of eight additional reports online. Here we report on the methodology used each year to calculate the privacy indexes and draw some conclusions about which indexes can be used to infer privacy trends.



1. Introduction

Dr. Alan Westin conducted over 30 privacy-related surveys between 1978 and 2004 [21]. These surveys cover general privacy, consumer privacy, medical privacy, and other privacy-related areas. For most of these surveys Westin created a "Privacy Index" to summarize his results and to show trends in privacy concerns. Unfortunately, the details of how Westin calculated these privacy indexes have not been reported except in the original survey reports. These reports were originally distributed in paper form, and the early ones are no longer readily available. Some of the more recent survey reports are currently available for purchase from Privacy & American Business.¹ We were able to obtain paper copies of five of these survey reports [10], [12], [13], [15], [17] and were able to find a sixth report online [4]. We were also able to obtain the executive summary of eight additional reports online [5], [6], [7], [11], [14], [16], [18], [19]. Table 1 provides the information regarding reports discussed in this paper.

Table 1: Details of the studies discussed in this paper

| Year | Name of study | Report / Summary found | Source type |
|------|--|------------------------|-------------|
| 1990 | Equifax Executive Summary | Summary | Online |
| 1991 | Harris-Equifax Consumer Privacy Survey | Report | Hard copy |
| 1992 | Equifax Executive Summary | Summary | Online |
| 1993 | Health Information Privacy Survey | Report | Hard copy |
| 1994 | Equifax-Harris Consumer Privacy Survey | Report | Hard copy |



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| 1993 | Health Information Privacy Survey | Report | Hard copy |
| 1994 | Equifax-Harris Consumer Privacy Survey | Report | Hard copy |
| 1995 | 1995 Equifax / Harris Consumer Privacy Survey | Summary | Online |
| 1996 | Equifax-Harris Consumer Privacy Survey | Report | Hard copy |
| 1997 | The results of Commerce, Communication, and Privacy Online for Privacy & American Business | Summary | Online |
| 1998 | E-Commerce & Privacy: What Net Users Want | Report | Hard copy |
| 1998 | The Privacy Concerns and Consumer Choice | Summary | Online |

So, this is the report that we go through quickly, not necessarily in detail of all of them again, I will leave you to take a look at what is if you are interested in so this is basically looking at 30 privacy related surveys between 1978 and 2004. As I said, they looked at different types of privacy, for example, consumer privacy, information privacy, particularly health here, different aspects of privacy, I will show you some questions that he asked also.

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respond to privacy concerns with appropriate policies, products, and services. All of these surveys were conducted via telephone and surveyed randomly-selected statistical samples of the United States adult population. Because they are random-sample surveys and are statistically representative, they serve as useful benchmarks for comparisons with surveys conducted in other countries or surveys conducted with convenience samples.



Westin created several privacy indexes to summarize his survey results and show privacy trends over time. While creating the indexes, Westin classified the public into three categories. Westin has interchangeably used the following categories to refer to the groups of people that he created: (1) High and Fundamentalist, (2) Medium and Pragmatist, (3) Low and Unconcerned. Of the 14 survey reports (complete or summaries) that we examined, six specified the values for all the three categories while one report provided the value for the High category only. The rest of the reports did not discuss about the privacy indexes.

We also found other studies where the researchers have directly or indirectly compared the indexes described by Westin to the results obtained by them in their own studies [1], [2]. Many privacy researchers around the globe are interested in using these privacy indexes as benchmarks to which they can compare their own survey results and also use these indexes to classify people in other countries. In this paper, we report the methodology used by Westin to calculate the privacy indexes and draw some conclusions about which indexes can be used to infer privacy trends.

The remainder of this paper is organized as follows: In the following section, we present Westin's methodology for creating privacy indexes. We include the text of the questions from which the privacy indexes were obtained.³ In the discussion section, we present some conclusions about these privacy indexes and present some criticism that has been raised about these surveys.

³ To be consistent with the reports written by Westin, we have also used the terms as presented in Westin's



specific questions and definitions given by Westin for the categories of people.



2.1. Harris – Equifax Consumer Privacy Survey – 1990 and 1991

The earliest privacy index we studied was Westin's "General Privacy Concern Index," developed as part of the 1990 study. In order to gain a better understanding of privacy concerns, Westin used a series of four questions to divide respondents into three groups, representing levels of privacy concern. As reported in Westin's 1991 survey report [10], respondents were asked:⁴

1. Whether they are very concerned about threats to their personal privacy today.
2. Whether they agree strongly that business organizations seek excessively personal information from consumers.
3. Whether they agree strongly that the Federal government since Watergate is still invading the citizen's privacy.
4. Whether they agree that consumers have lost all control over circulation of their information.

The answers to these questions were used to assign each respondent to a privacy concern group as follows:

| | | |
|----------|---|-----------------------------------|
| High | - | 3 or 4 privacy-concerned answers |
| Moderate | - | 2 privacy-concerned answers |
| Low | - | 1 or no privacy-concerned answers |

Westin then examined respondents' responses to all the other privacy-related questions from the 1990 study and found that the general privacy concern index was a good predictor of general concern level and privacy concern level.

Using the classification mentioned above, Westin divided the respondents into three categories:

The privacy Fundamentalists: Fundamentalists are generally distrustful of organizations that ask for their personal information, worried about the accuracy of computerized



So, Westin classified the public into three categories. Westin has interchangeably use the following categories to refer to the groups of people that are high and fundamentalist, medium and pragmatist, low and unconcerned. These three things will come back in looking at what classification did he do.

So, one of the one example here given is that, so he looked at whether they are very concerned about threats to their personal privacy, whether they agree strongly that business organization seeks excessively personal information from consumers whether they agree strongly that the federal government since Watergate is still invading citizens privacy, whether they agree that

consumers have lost control over circulation of their information. So, this is a set of questions that you would hear asked and then depending on the answers for these for you would put them into high, medium and low, which is, if there are answers to 3 or 4 privacy concerns answers from the above 4 questions.

You would put them as I, then if it is only 2, you would put them as moderate if it is 1 or no privacy concerns at all, he will put them and low. And these high, medium and low really relevant to the fundamentalist and pragmatists are non-concern. Generally, simply to think about it. Some questions were asked, depending on the answers that the questions had. The users are classified into three different categories.

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Westin then examined respondents' responses to an unclear privacy-related questions in the 1990 study and found that the general privacy concern index was a good predictor for relating general concern level and privacy concern level.



Using the classification mentioned above, Westin divided the respondents into the following categories:

The privacy Fundamentalists: Fundamentalists are generally **distrustful of organizations** that ask for their personal information, **worried about the accuracy** of computerized information and additional uses made of it, and are in favor of new laws and regulatory actions to spell out privacy rights and provide enforceable remedies. They generally choose privacy controls over consumer-service benefits when these compete with each other. About **10%** of the public are privacy Fundamentalists.

The Pragmatic: They **weigh the benefits to them of various consumer opportunities and services**, protections of public safety or enforcement of personal morality against the degree of intrusiveness of personal information sought and the increase in government power involved. They look to see what practical procedures for accuracy, challenge and correction of errors the business organization or government agency follows when consumer or citizen evaluations are involved. They believe that business organizations or government should **earn the public's trust rather than** assume automatically that they have it. And, where consumer matters are involved, they want the opportunity to decide whether to opt out of even non-evaluative uses of their personal information as in compilations of mailing lists. About **40%** of public fall into this category.

The Unconcerned: The Unconcerned are generally trustful of organizations collecting their personal information, comfortable with existing organizational procedures and uses are ready to forego privacy claims to secure consumer-service benefits or public-order values and not in favor of the enactment of new privacy laws or regulations. About **50%** of public fall into this category.

⁴ We were unable to obtain the complete report of the 1990 study. The sources cited that we have provided



uses. About 10% of the public are privacy fundamentalists.

The Pragmatic: They weigh the benefits to them of various consumer opportunities and services, protections of public safety or enforcement of personal morality against the degree of intrusiveness of personal information sought and the increase in government power involved. They look to see what practical procedures for accuracy, challenge and correction of errors the business organization or government agency follows when consumer or citizen evaluations are involved. They believe that business organizations or government should "earn the public's trust rather than" assume automatically that they have it. And, where consumer matters are involved, they want the opportunity to decide whether to opt out of even non-evaluative uses of their personal information as in compilations of mailing lists. About 40% of public fall into this category.

The Unconcerned: The Unconcerned are generally trustful of organizations collecting their personal information, comfortable with existing organizational procedures and uses are ready to forego privacy claims to secure consumer-service benefits or public-order values and not in favor of the enactment of new privacy laws or regulations. About 50% of public fall into this category.

⁴ We were unable to obtain the complete report of the 1990 study. The privacy index that we have provided here for the year 1990 is from the 1991 report [10].

T Informed Decision.



Here the definitions of fundamentalist pragmatists and concern. The fundamentalists are generally distrustful of organizations that ask for their personal information, worried about the accuracy of computerized information and additional use made of it and are in favor of new laws and regulatory actions to spell out privacy rights and provide enforceable remedies.

So, essentially, these are people who are going to be strict about what information they are sharing, for example, I have some friends who do not show up on pictures when you take we go to conferences, we meet up in places when we try to take pictures. They are not interested in standing the picture they would offer saying that, can I take the picture and not really be in the picture?

One, sort of say behavior of this fundamentalist type of people. Pragmatic, are pragmatic is that they weigh the benefits of them of various consumer opportunities and services. So, these are set of people who are not really sort of, say, super worried about their privacy, but they would make the judgement depending on the situation.

Can I should I give my cell number so let us take if I give they saying in a point of sale of a product that you want to buy or a shoe shirt that you want to buy? They say that sir, give you a number. And we will give you 10 percent discount and the bill is that something that the user wants to you want to desired. And particularly, you can think about it life, if the bill is about 500 rupees, will you do that 10 percent or the bill is like 50,000 rupees, will you do that 10 percent.

So, that is the pragmatic view. They believe that the business organizations or government should own the public trust rather than assume automatically that they have it, again, a characteristics of a pragmatic. Unconcerned is that the unconcerned are generally trustful of organizations collecting their personal information collecting with existing organizational procedures in uses.

So, this is a set of people who think bad look. I think (23:29) Facebook is doing good. Twitter is doing well, government is collecting my information. All of that is good. Nothing is a problem. This set of people may even think that I have nothing to lose, it is that if anybody has access to my information, that is the category of unconcerned.

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here for the year 1990 is from the 1991 report [10].

- 5 -

INTERNATIONAL INSTITUTE OF INFORMATION TECHNOLOGY HYD:KAJAD

T *Informed Decision*


In the 1991 study, Westin created the "Consumer Privacy Concern Index." He used questions about business use of personal information as the basis for creation of the index. He used the response of the following question to create the index [10]:

4 a. Do you agree or disagree with the following statement (READ EACH ITEM)? Do you agree / disagree very strongly or somewhat strongly?

1. Consumers have lost all control over how personal information about them is circulated and used by companies.

| | | |
|----------------------------|---|---------------------|
| Agree very strongly | 1 | (37) ⁵ |
| Agree somewhat strongly | 2 | (34) |
| Disagree somewhat strongly | 3 | (20) |
| Disagree very strongly | 4 | (3) |
| Neither / Not sure | 5 | (4) |

2. My privacy rights as a consumer in credit reporting are adequately protected today and business practices





ತುಲನೆ ಮಾಡಿದಾಗ, 1990 ಮತ್ತು 1991ರ ವರದಿಗಳಲ್ಲಿ ಈ ಸೂಚಕದ ಮೂಲಕ ಅತ್ಯಂತ ಹೆಚ್ಚಿನ ಮಟ್ಟದ ಸಂವೇದನೆಯನ್ನು ತೋರಿಸಿದವರು ಅತ್ಯಂತ ಹೆಚ್ಚಿನ ಮಟ್ಟದ ಸಂವೇದನೆಯನ್ನು ತೋರಿಸಿದವರು ಅತ್ಯಂತ ಹೆಚ್ಚಿನ ಮಟ್ಟದ ಸಂವೇದನೆಯನ್ನು ತೋರಿಸಿದವರು.



Westin in the 1991 report provided the comparison of the index values for 1990 and 1991 studies [10]:

Consumer privacy concerns for 1991 and 1990 is as follows

| | 1990 | 1991 |
|------------------|------|------|
| High concern | 46 % | 41% |
| Moderate concern | 36 % | 39% |
| Low concern | 17 % | 20% |

2.2. Harris-Equifax Health Information Privacy Survey – 1993

Westin created the "Medical Privacy Concern Index" and "Computer Fear Index" as part of his 1993 survey. Westin used "Medical Sensitivity Index" (described below) and an additional two

³ The numbers in parenthesis are the exact values from the reports.

⁶ Westin has used "agree" to be sum of "agree very strongly" and "agree somewhat," th mentioned in the reports. Similar aspects were seen in few other reports also [15], [17].



So, one of the things that you want to know, the thing that will be very consistent across this class is also that understanding all of this is helping in making informed decision. You or any user that we educate through the process is making the choice making the decision using that information that is provided privacy policy, informed decision, please read the privacy policy, the privacy policy says something, make a choice depending on the information that is provided in the privacy policy.

Here, if you see high concern, moderate for 1990 and 1991, the differences here, which is 46 percent, and 41 percent 36, and 39, 70. So, essentially, the proportion keeps changing between high, low and medium, depending on the year depending on the topic that is studied also, there is a table later, which gives the exact values for many of these years and many of these topics also.

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Table 3 : Values and names for various privacy indexes. We were not able to obtain the index name for the 2004 study.²³

| Year of Study | Index | Category name with % of population in the study |
|---------------|--------------------------------|---|
| 1990 [10] | General Privacy Concern Index | Privacy Fundamentalists - 25% |
| | | Privacy Unconcerned - 8% |
| | | Privacy Pragmatists - 5% |
| 1990 [10] | Consumer Privacy Concern Index | High Concern - 41% |
| | | Medium Concern - 39% |
| | | Low Concern - 20% |
| 1991 [10] | Consumer Privacy Concern Index | High Concern - 46% |
| | | Medium Concern - 36% |
| | | Low Concern - 17% |
| 1993 [12] | Medical Sensitivity Index | High - 13% |
| | | Medium - 45% |
| | | Low - 42% |
| 1993 [12] | Medical Privacy Concern Index | High - 48% |

| | | |
|----------|--|---------------------------|
| | | Privacy Pragmatists - 64% |
| 2004 [3] | | High - 35% |

Table 4 : Values for each option from the common question; the column "Total" provides the sum of the column "Very concerned" and the column "somewhat concerned."²⁴

| Year | Very concerned | Somewhat concerned | Not very concerned | Not concerned at all | Not sure | Total |
|-----------|----------------|--------------------|--------------------|----------------------|----------|-------|
| 1978 [13] | 31% | 33% | 17% | 19% | 1% | 64% |
| 1983 [13] | 48% | 29% | 15% | 7% | 0% | 77% |
| 1990 [13] | 46% | 33% | 14% | 6% | 1% | 79% |
| 1991 [13] | 48% | 31% | 12% | 7% | 1% | 79% |
| 1992 [13] | 47% | 31% | 13% | 8% | 2% | 78% |
| 1993 [13] | 49% | 30% | 11% | 6% | 3% | 79% |
| 1994 [13] | 51% | 33% | 10% | 5% | 1% | 84% |
| 1995 [14] | 47% | 35% | DNA | DNA | DNA | 82% |
| 1996 [15] | DNTAQ | DNTAQ | DNTAQ | DNTAQ | DNTAQ | DNTAQ |
| 1998 [17] | 55% | 33% | DNA | DNA | DNA | 88% |
| 1998 [18] | 56% | 31% | DNA | DNA | DNA | 87% |
| 2001 [4] | DNTAQ | DNTAQ | DNTAQ | DNTAQ | DNTAQ | DNTAQ |
| 2003 [6] | DNA | DNA | DNA | DNA | DNA | DNA |
| 2004 [3] | DNA | DNA | DNA | DNA | DNA | DNA |

DNA - Data Not Available, DNTAQ - Did Not Ask The Question

So, this one, if you see just talks about general privacy concerns, what the distribution is consumer privacy concern, what is the distribution is high, medium, and low. So, this would give you a sense of and this kind of data has been very helpful in making policy decisions. What kind of solution should somebody build in terms of consumers should organizations be requested or mandated to have this card. Which can help understand who the customer is? And then use that to make decisions on what products they are buying? So, these kinds of things? Should that be allowed should that be not allowed. This is been done.

For many years, so there is a lot of data to show the user behavior in the US at least. So, that helps get a sense of quantitatively, what is the user behavior? What is the user perceptions in rather than user behavior, user perceptions and attitudes? Because there is lots of situations on the question talks about and depending on the situation, how users behave, is used for collecting this data. I hope that helps you to understand what Westin had in mind and how he kind of classified US citizens in terms of these three categories.

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Westin's Privacy Indexes

| | |
|----------------|-------|
| Fundamentalist | + 25% |
| Pragmatist | + 60% |
| Unconcerned | + 15% |

Privacy Indexes: A Survey of Westin's Studies
Purnanang Komaragata, Lorie Faith Connor
CMU-ISRI-05-119
December 2005
Institute for Software Research International
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Abstract



Since the late 1970's Dr. Alan Westin has conducted over 30 privacy surveys. For each of his surveys, Westin has created one or more Privacy Indexes to summarize his results and to show trends in privacy concerns. Many privacy researchers are interested in using these privacy indexes as benchmarks to which they can compare their own survey results. However, the details of how the indexes were calculated have not been reported except in the original survey reports. These reports were originally distributed in paper form, and many are no longer readily available. We obtained paper copies of five of these survey reports and found a sixth report online. We also found summaries of eight additional reports online. Here we report on the methodology used each year to calculate the privacy indexes and discuss some conclusions about which indexes can be used to infer privacy trends.

<http://reports-archive.adm.cs.cmu.edu/anon/isri2005/CMU-ISRI-05-119.pdf>

Privacy in India: Attitudes and Awareness

So, that is Westin's privacy indexes. And if you look at overall generally if you take average across many years said the data was collected. So, fundamentalist would be about 25 percent pragmatist about 60 percent. And unconcerned is about 15 percent. One curious question that you can ask skin disease, heart disease numbers, look for India. That is something we can ask. You can probably ask these questions for large set of people and get some numbers, which was tried before.

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Privacy in India

1st quantitative study in India
2005 study

*Interview
FG/D
Survey
Lab
Real world
Field Study*

https://precog.iit.ac.in/Publications_files/pk_lc_PET_2005.pdf


Privacy in India: Attitudes and Awareness BYD:KARAD

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Abstract. In recent years, numerous surveys have been conducted to assess attitudes about privacy in the United States, Australia, Canada, and the European Union. Very little information has been published about privacy attitudes in India. As India is becoming a leader in business process outsourcing, increasing amounts of personal information from other countries is flowing into India. Questions have been raised about the ability of Indian companies to adequately protect this information. We conducted an exploratory study to gain an initial understanding of attitudes about privacy among the Indian high-tech workforce. We carried out a written survey and one-on-one interviews to assess the level of awareness about privacy-related issues and concerns about privacy among a sample of educated people in India. Our results demonstrate an overall lack of awareness of privacy issues and how concerns about privacy in India have been found in similar studies conducted in the United States.

1 Introduction

As India is becoming a leader in business process outsourcing, increasing amounts of personal data from other countries are flowing into India. India's outsourcing business brought in \$12 billion in 2003 and is projected to reach \$20 billion in 2005 [1]. The Indian outsourcing industry currently employs 2 million people but legislation in India may limit future growth [2]. Outsource companies collect and receive data, including the medical records [3]. While concerns and confidentiality can be adequately addressed [4], little is known about the protection of this data.



So, in 2005, a study was done to understand quantitatively what people think about privacy. This was a very small study in terms of number of users. But 400 people fill the survey and interview study also, because I think there is multiple methodologies that you can collect data, for example, one could be just interview, just meeting somebody and asking them questions.

And you can get some 10 people together called focus group discussion. And then you can do some survey, and send the questions online now to get some people or physical get people to fill. And then you can get some people on the lab to study lab. Get people into the lab, and make them do something and studied depending, on the decisions that they are making.

How they behave, you study what they think about privacy. And then there is this real-world study. Or it is also called as field study, let us do. So, these are different methods of collecting data, if you were to think about it, so this study was done on interviews and interviews and surveys were different questions were asked in terms of privacy, some inspiration was drawn from Westin study also, to collect this data.

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Privacy in India: Attitudes and Awareness

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Abstract. In recent years, numerous surveys have been conducted to assess attitudes about privacy in the United States, Australia, Canada, and the European Union. Very little information has been published about privacy attitudes in India. As India is becoming a leader in business process outsourcing, increasing amounts of personal information from other countries is flowing into India. Questions have been raised about the ability of Indian companies to adequately protect this information. We conducted an exploratory study to gain an initial understanding of attitudes about privacy among the Indian high tech workforce. We carried out a written survey and one-on-one interviews to assess the level of awareness about privacy-related issues and concern about privacy among a sample of educated people in India. Our results demonstrate an overall lack of awareness of privacy issues and less concern about privacy in India than has been found in similar studies conducted in the United States.



Information in the chart:
Age, Gender, Source station, Destination station, Seat number, First Name, Last Name, Passenger Name Record Number

Figure 3: People checking the reservation charts at an Indian railway station [4].

Table 2. Level of concern about public posting of personal information

| | Concern about public posting of grades | Concern about the railway posting personal information |
|----------------|--|--|
| Very concerned | 21% | 17% |



So, this is a study which is privacy in India attitudes and awareness. I will just walk you through some interesting parts of this report only again, it may be interesting for you to take a look at it one example. One motivational example was this thing about? Railway so, if you go to a railway station, where you can see the chart and in train, every compartment will have these many number of these pieces of information their which is your first name, last name, gender, from where you are starting in the train, to where you are going to go into the train all of that it is this kind of information.

I mean, it is necessary to have it there? Can somebody misuse this information? All of that is a big question to ask? This information, for example, you could start having interesting conversations with people in the in your compartment knowing that, where they are going and from where they are going to where they are going, which otherwise the train is also probably from that you can get it, but gender, age all of that is that necessary to put it out on the public in that compartment is a question that you can ask.

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graphics of our sample.

Table 1 : Characteristics of the sample (Annual Income calculated with \$ 1 = Rs.45).

| | N = 407 |
|--------------------------------|------------|
| | Percentage |
| Age | |
| Less than 18 years | 3.44 |
| 18 - 24 years | 60.20 |
| 25 - 29 years | 22.36 |
| 30 - 39 years | 10.57 |
| 40 - 49 years | 1.47 |
| 50 - 64 years | 1.47 |
| No answer | 0.49 |
| Sex | |
| Male | 75.68 |
| Female | 24.32 |
| No answer | 0.00 |
| Education | |
| Less than High school | 0.25 |
| Higher School | 8.85 |
| Some College | 6.14 |
| College Graduate | 49.39 |
| Post Graduate | 33.42 |
| Doctorate | 1.23 |
| No answer | 0.74 |
| Household annual income | |
| Less than \$500 | 10.57 |
| Between \$501 and \$1560 | 10.07 |
| Between \$1561 and \$2220 | 9.83 |
| Between \$2221 and \$3330 | 11.30 |
| Between \$3331 and \$4440 | 10.57 |
| Greater than \$4441 | 26.54 |
| No answer | 21.13 |
| Profession | |
| Computer related | 45.45 |
| Manufacturing | 0.00 |

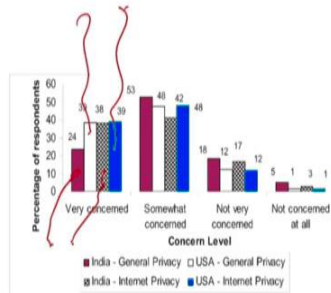


Figure 2: General and Internet privacy concern in India, compared with 1998 survey of American Internet users [10]



4.2 Posting Personal Information

We asked several questions to gauge attitudes about common situations in which personal information is not well protected. Two of these situations involve posting of personal information in public places.

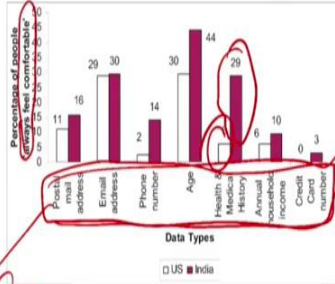


Figure 4 : Level of concern sharing different data with web sites, Indian survey compared with 1998 survey of American Internet users [10]

The most striking difference between the AT&T survey and our Indian survey is found in the level of comfort people have in sharing health and medical information with web sites. While 29% of our respondents always feel comfortable sharing health information with web sites, only 6% of respondents in the AT&T study said they always feel comfortable sharing this information. Likewise, 33% of respondents in the AT&T study and 21% of respondents in our study never feel comfortable sharing

So, this study focused on so if you look at it, this study was done with 407 people, some distribution of characteristics of the users who fill the data, which is age, gender, education, income profession, just to get a sense, but let us look at some results. So, here is one result which shows that general and internet privacy concern in India compared to 1998.

So, unfortunately this data was collected in 2004. And there was no data to compare within India that point. So, therefore, the 1998 survey, which was done in the US was compared if we look at India, where so one question which is general privacy and internet privacy India general privacy concern is here and India internet privacy concerns are here he will say general privacy internet privacy what does this mean?

This basically means that worried concerned how many people are very concerned about general privacy. General privacy is a question that I showed you earlier in the western study is very concerned 24 percent of the participants in India are very concerned about general privacy compared to 39 percent in the US internet privacy about 38 percent are concerned very concerned then India compared to 39 percent interesting.

But please remember the comparison is between 2004 and India 1998, in the US. We just have to keep that in mind. So, if you look at a general impression that you will get it is that internet privacy concerns in India is lesser compared to the 1998 privacy concerns in the US that is one of the conclusions that came out of this research and particularly if you look at some specific data levels of concern, levels of concern sharing different data with websites.

So, if you look at it health information, health information India percentage of people always feel comfortable about sharing the data health is so, high 29 percent are with sharing their health information, whereas compared to 6 percent in the US. So, this is just to give you and these are things that you want to keep in mind also, because these are kind of information that will keep coming back in the class, which are also called as PII which is Personally Identifiable Information. Some of them.

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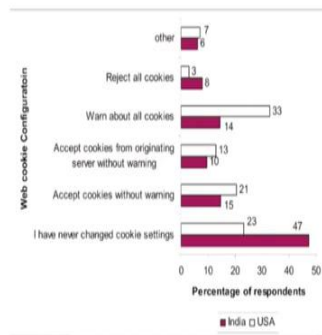


Figure 5: Web cookie configuration reported by Indians compared with 1998 AT&T survey [10]

We presented two scenarios in which we described the use of persistent identification numbers stored in cookies that web sites could use to track their visitors; however, we did not use the word "cookie" in our descriptions. We found that 78% of our respondents would definitely or probably agree to the use of such identification numbers to receive customized service, while 58% of our respondents would agree to the use of such identification numbers to provide customized education. These results



India's largest privacy study

2011 / 2012
10,427 respondents

int
FORD
Survey

Privacy in India Demystified
I Am More Privacy Conscious Than What You Think
Pramodhan Kananagar - Niharika Sachdeva

Abstract: Almost all users with access to the Internet use and access to the Internet. For many, the Internet is not just a means of communication, but a primary mode of doing business, social networking, and entertainment. The Internet is an essential part of our lives. The Internet is also a source of information, entertainment, and social networking. The Internet is also a source of information, entertainment, and social networking. The Internet is also a source of information, entertainment, and social networking.

3 Methodology

We conducted the study in 3 different phases - interviews, Focused Group Discussions (FGD) and surveys. To explore users' privacy practices and expectations, we conducted 20 semi-structured, in depth interview studies with residents of Delhi, India. After completing the interviews, we conducted 4 FGDs with a total of 31 participants to brainstorm on various aspects of privacy. Using the inferences from the interviews, FGDs, current changes in the news media and OSN, we developed a survey protocol and used it to collect 10,427 responses from all parts of India. In this section, we explain the methodology of each of the different phases of the study. We were not required to go through an Institutional Review Board (IRB) approval process before conducting the study. However, the authors of this paper have previously been involved in studies with U.S. IRB approvals, and have applied similar practices in this study. Participants were shown "consent information", which they agreed to participate in our study.

3.1 Interviews

compensated all participants for their time and efforts.



Fig. 1 An interview that we conducted in Delhi.

3.2 Focus Group Discussions (FGD)

We conducted 4 FGDs with 7 or 8 participants in a group to further explore users' privacy practices. Participants were from various age groups and educational backgrounds. Since perceptions of privacy vary across cultural background, we sampled participants to maintain a



Table 1 Demographics of the participants in the interviews. Values in the table are in percentage.

| | N=20 |
|-----------------------|------|
| Gender | |
| Female | 45 |
| Male | 55 |
| Age | |
| 20 - 24 | 10 |
| 25 - 29 | 10 |
| 30 - 39 | 35 |
| 40 - 49 | 25 |
| 50+ | 20 |
| Marital status | |
| Single | 40 |
| Married | 60 |
| Education | |
| Less than graduate | 5 |
| Graduate | 20 |
| Post graduate | 40 |
| Ph.D. | 10 |
| Professional | 25 |
| Occupation | |
| Student | 10 |
| Work from home | 10 |
| Job in public sector | 15 |
| Job in private sector | 30 |
| Homemaker | 5 |
| Business | 10 |
| Civil engineer | 5 |



Fig. 2 A focused group discussion with students that we conducted in Delhi.

Table 2 Gender and education characteristics of participants in the Focus Group Discussions. Values in the table are in percentage. Age of participants and N represents the total number of FGD.

| | FGD1 | FGD2 | FGD3 |
|---------------|---------|------|-------|
| Age | 18-25 | 46+ | 26-35 |
| | N=8 | N=8 | N=8 |
| | Percent | | |
| Gender | | | |



nizations, metro stations, households, malls, etc. Before starting the data collection, we did pilot study for about 70 respondents. Appendix 6: Survey - Questionnaire [46] gives the actual questionnaire that we used for data collection. Majority (60%) of the participants got to know about our survey through various market research organizations that we worked with to collect data and about 31% of the respondents got to know it through "friends and acquaintances." Majority of the participants (63%) filled the survey in "Public space e.g. shopping mall, cinema, market, and park" and about 28% filled it in their campus or organization.

Table 3 Demographics of survey participants, N = 10,427.

| Gender | (%) |
|----------------------------|-------|
| Female | 61.11 |
| Male | 38.89 |
| Age (in years) | (%) |
| 18 to 24 | 69.97 |
| 25 to 34 | 15.58 |
| 35 to 50 | 6.67 |
| 51 to 65 | 7.78 |
| Education Completed | (%) |

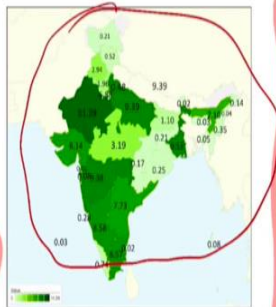


Fig. 3 Percentage of sample from different states in India. Mizoram is the only with no representation in our sample.

the word privacy, what comes to your mind?"), 7 of them mentioned 'privacy from other people,' 7 mentioned some form of 'information network' (e.g. Inter-



my phone number but can share my email ID." During the FGDs, we presented a list to the participants to identify PII. Appendix 5: FGD - Personally Identifiable Information has the content that we presented to the users [46]. Table 4 presents the percentage of participants who marked the information as PII from each of the FGD; last column in the table presents the total of all four FGDs. From Table 4, we see that more than 90% of the participants considered the following information as PII: bank account number, credit card number / debit card number, property details, passport number, and email and other passwords. This shows a lot of emphasis on financial / information details among citizens. Participants considered gender, religion, and category-SC (Schedule Caste) / ST (Schedule Tribe) / OBC (Other Backward Classes) / general as the least in terms of PII. We found that each participant had different privacy expectations and definition. Further, personal details like email address were less private. To develop on this understanding, we included questions in the survey which could provide empirical understanding of privacy concept and personal information in the Indian context.

Changing privacy on OSN and the Internet: Most participants were ignorant about various privacy issues related to the Internet and online social media. For example, about 75% of the participants had never read

31 participants in total, one participant did not provide the details, so N = 30.

| | FGD1 | FGD2 | FGD3 | FGD4 | Total |
|------------------------------|-------------|--------|-------|-------|-------|
| Age | 18-25 | 46+ | 26-35 | 26-35 | |
| | N=8 | N=7 | N=8 | N=7 | N=30 |
| | Percentages | | | | |
| Designation | 12.50 | 0.00 | 75.00 | 28.57 | 30.00 |
| Date of Birth | 62.50 | 14.29 | 12.50 | 57.14 | 36.67 |
| Birth Place | 37.50 | 0.00 | 0.00 | 28.75 | 16.67 |
| Gender | 12.50 | 0.00 | 0.00 | 14.29 | 6.67 |
| Family member names | 62.50 | 28.57 | 0.00 | 71.43 | 40.00 |
| Photograph (Hard copy) | 75.00 | 85.71 | 50.00 | 85.71 | 73.33 |
| Marital status | 37.50 | 14.29 | 0.00 | 28.57 | 20.00 |
| Photograph (Digital copy) | 100.00 | 71.43 | 50.00 | 85.71 | 76.67 |
| Permanent address | 62.50 | 28.57 | 0.00 | 71.43 | 40.00 |
| Passport photocopy | 75.00 | 100.00 | 62.50 | 85.71 | 80.00 |
| Voters card photocopy | 100.00 | 100.00 | 75.00 | 71.43 | 86.67 |
| Educational qualification | 0.00 | 28.57 | 0.00 | 14.29 | 10.00 |
| Category-SC/ST/ OBC/ General | 12.50 | 0.00 | 0.00 | 14.29 | 6.67 |
| Ration card photocopy | 50.00 | 85.71 | 50.00 | 71.43 | 63.33 |
| Phone number (landline) | 87.50 | 57.14 | 25.00 | 57.14 | 56.67 |
| ID card | 62.50 | 85.71 | 75.00 | 85.71 | 76.67 |



Similarly, you will see in other parts also where, India, data privacy concerns as much lesser. So, keeping this in mind if we were to think about what would be the privacy indices for India, which is fundamentalist but (34:46) unconcerned. It will be interesting to find these kinds of numbers.

So, that privacy in India first study, and a similar study was done with a large set of users in 2011, and 2012, with 10,427 participants, supposedly one of the largest study on privacy, quantitatively studying the attitudes and perceptions of users about privacy in India, in this study, the large number of questions from Westin was used about 83 questions were used in the study thing and this question, this study had all interviews FGD and survey and highly recommend you to go take a look at the report from this link.

And then see because it is quite a long report, and also the questions that are used are also interested in giving some scenarios. So, that is the report. Again, I am using it only to show what kind of data is there and what some this is a interview study that data was collected. And then there was also focused group discussion that was done in terms of studying privacy, asking questions about different topics.

And all data being given here, which is for the interviews for the focused group discussion and data that is this percentage of data from each part of India. Proportion of data that was collected from different parts of India, except for few cities, I think few cities and states data was collected from all other parts of India. So, that is 10,427 participants, that is a larger amount of data, all

this data is also publicly available. Feel free to look at the data also if you are interested in taking a look at the analysis.

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here. This is mainly done for the passengers to verify their seat and then board the train. We asked participants, how comfortable they felt about displaying these details during long-distance journeys. As shown in Table 5, we found only 11.78% participants felt uncomfortable displaying these details. This observation is very similar to the one expected in a collectivistic society. However, we also analyzed participants' attitude towards traveling information being given away by mobile service providers. One related scenario in the survey was: *While traveling in different states in India, mobile service providers use regional languages to present information e.g. user busy, and phone switched off. For example, if subscriber's phone connection is from Delhi and if she is traveling in Mumbai, the messages are presented in Marathi.* We asked participants, if they consider this feature privacy invasive. Contrary, to the display of travel details at train platforms, 53.99% participants felt use of regional language by mobile service providers as more privacy invasive (Table 5). In the first scenario (travel details), the exact location was exposed but the second scenario exposed the broad area or region where an individual was present. This explains that participants were more concerned about leakage of location to callers (highly probable that a caller may be a known person) than on a platform where individuals are presumably difficult to identify.

participants how they felt about their grades of entrance exam being displayed on the notice boards. Only 12.05% (see Table 5) participants said that they were uncomfortable about the grades being displayed on notice boards. However, when we asked participants how would they consider accessing their information through free Wi-Fi in public places, almost double the number of participants i.e. 34.82% felt uncomfortable. Like an individualist society, participants were more concerned about their privacy where they could be personally identified than public display of information where individuals are presumably difficult to identify.

5.1.2 Professional vs Personal Privacy Expectations

Hofstede found that an individualist society consists of loose ties between the individuals where everyone looks after themselves or utmost their immediate families. Hofstede also found that a collectivistic society shows strong cohesion within groups [37]. Contrary to the existing perception about India (i.e. India being a Collectivist society [37]), we found participants showed individualist behavior. Table 6 shows that participants shared personal information mostly with family members and few participants felt comfortable sharing personal information with friends and relatives. Like in



What do you feel about privacy of your personal information on your OSN?



| Q42, N = 6,855 | |
|--|--|
| It is not a concern at all | |
| Since I have specified my privacy settings, my data is secure from a privacy breach | |
| Even though, I have specified my privacy settings, I am concerned about privacy of my data | |
| It is a concern, but I still share personal information | |
| It is a concern; hence I do not share personal data on OSN | |





| Q42, N = 6,855 | |
|--|-------|
| It is not a concern at all | 19.38 |
| Since I have specified my privacy settings, my data is secure from a privacy breach | 42.13 |
| Even though, I have specified my privacy settings, I am concerned about privacy of my data | 23.84 |
| It is a concern, but I still share personal information | 8.03 |
| It is a concern; hence I do not share personal data on OSN | 6.74 |

If you receive a friendship request on your most frequently used OSN, how likely will you add as friends? (Choose all that apply)



So, that gives you a sense of again, quantitatively how to study privacy in India, privacy perceptions and attitudes in India. This is just one perspective. I suggested test for you this is part of the study also suggested test for you meaning I think you do it yourself, as you here the lecture, what do you feel about privacy of your personal information on your OSN, OSN here, keep it as whatever your favorite social network is, let us take if it is Facebook.

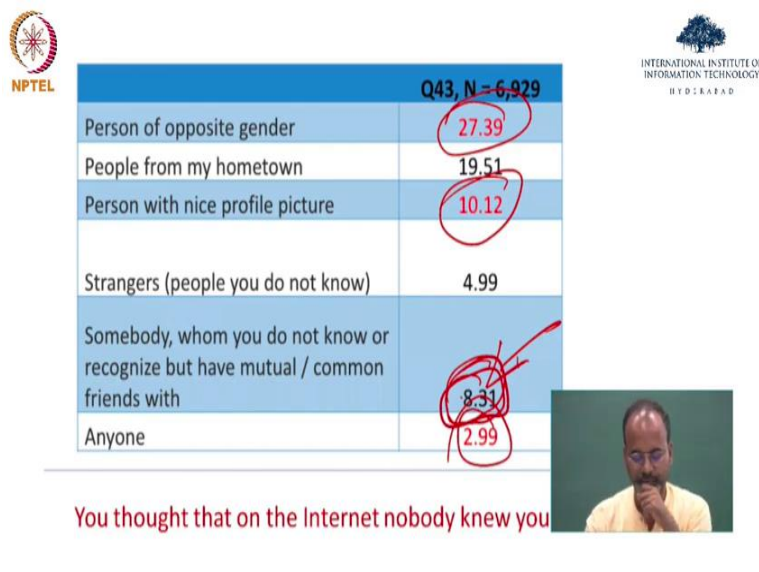
It is not a concern. So, this is not 10,427. But it is 6855. Because not everybody, because this was a physical form. Only for about 1000 people it was online, best of the 9000 filled it in physical form. So, they could skip the questions. It is not a concern at all. Since I specified my privacy settings, my data is secure.

Even though I have specified my privacy settings, I am concerned about my privacy of my data. It is a concern, but I still share personal information. It is a concern, and I do not share the data on OSN. So, just think about it? If you were to get 100 people to fill this data, this question, what would the percentage be?

And make a note of it as you are listening to this lecture, and put some numbers here? I hope you put you can pause it and then put the number. And now let me show you what the actual numbers were. So, it is not a concern at all. It is about close to 20 percent. 20 percent of the people think that look, I do not really have any concern with the Facebooks and Twitters having my data.

It will be super interesting to know how these numbers change, particularly given the situation now about people watching social data among (39:45). For the students in the class, it is probably biased if you are listening to this lecture. And if you if we were to fill this question, I am pretty sure the numbers are very different from us compared to let us take somebody who you are at home in a society that you love or your classmates that you are studying with. If you just do the same data collection, the numbers may be very different. This is 19. And look at this. This is 42 percent which specified my privacy settings, my data is secure from a privacy breach.

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Last question like this, if you receive a friendship request on your most frequently used online social network, which of the following people will you add as friends keep it, keep it for now and Facebook I guess, person of opposite gender again, the list of options for much longer. This is only to illustrate some point from the data that was collected.

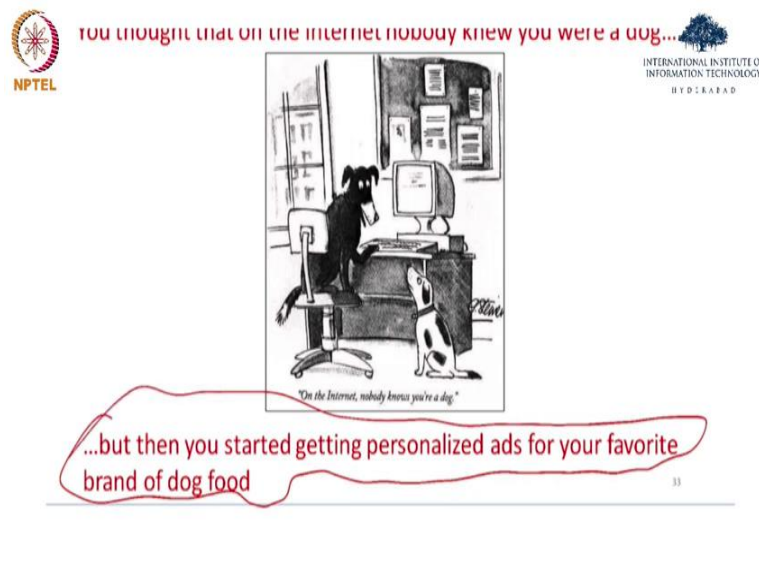
Person of opposite gender. People from my hometown. Person with nice profile picture, it is just a nice profile picture is now if I do not really care about who the person is. Strangers, people whom you do not know. Somebody whom you do not know or recognize, but have mutual or common friends and anyone pause the video and then put some numbers for let us take 100 percent.

I assume you have added some percentages for these roads. Now let us look at what the percentage actual percentage was collected from the data. This is person with opposite genders

27 percent, 2 percent is anyone I do not really care about who sending the requests. I will just keep accepting the request that is coming in.

Person with a nice profile picture it is just 10.12 percent. So, that is a large number of people who are accepting friends request that is coming in. Most of you probably, if you are thinking about this, most of you will probably fall into this category, which is, look, I do not know the person, but what, there are 74 people that are in mutual friends. And of that I know the 6 people who are very careful about picking their friends and Facebook, or Insta, and therefore, it is perfectly fine for me to accept the request. I am sure that is a very common rationale that we gave while making the decision.

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This cartoon was extremely popular in the 90s which is on the internet. It says on the internet, nobody knows you are a dog. You thought that on the internet, nobody knew you were a dog. And then but then you started getting personalized ads for your favorite brand of dog food. Just to argue the point that look, I think at some point in time, we feel like we were anonymous. Even now, I think many of us will feel like something that I do nobody will get noticed. I will delete my cookies I will do Incognito. So, there is those kinds of course those kinds of features are available now which probably was not available when this cartoon was made. And, but this is definitely what it was in the 1990s.