

PRIVACY: PART 2

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THE VALUE OF PRIVACY

ATTITUDES, DEFINITIONS AND RIGHTS





Are you very concerned about threats to your personal privacy today?

Yes

No



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Yes

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Do you strongly agree that business organizations seek excessively personal information from consumers?

Yes

No



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Do you strongly agree that the government is invading the citizen's privacy?

Yes

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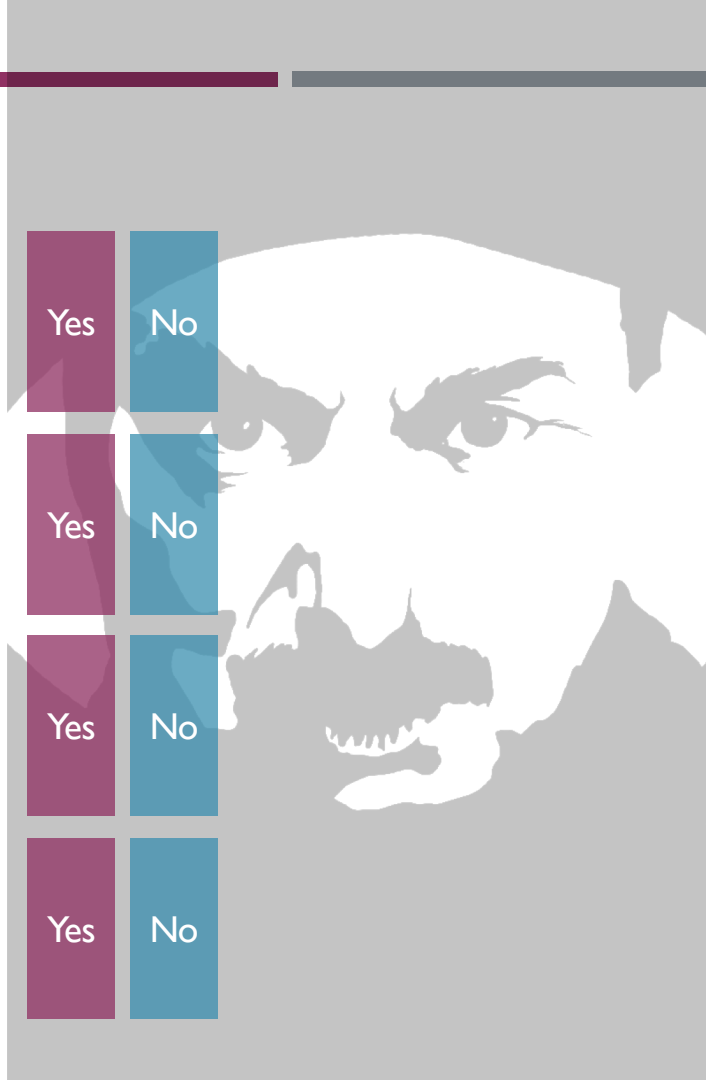
Yes

No

Do you agree that consumers have lost all control over circulation of their information?

Yes

No





Dr. Alan Westin - Professor of Public Law & Government Columbia University.

Conducted over 30 studies of attitudes to privacy from 1970 onwards.

This data from Harris-Equifax Consumer Privacy Survey. Tech. rep., 1991. Conducted for Equifax Inc. 1,255 adults of the U.S. public.

P. Kumaraguru and L. F. Cranor. Privacy indexes: A Survey of Westin's Studies. Technical report, Carnegie Mellon University, Dec 2005.



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.

Yes Yes Yes Yes

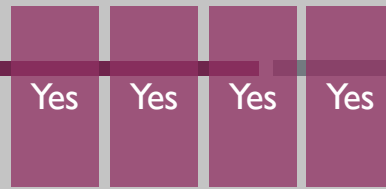
The Privacy
Fundamentalists

25%

Yes Yes Yes No

The Pragmatic:

They weigh the benefits to them of various consumer opportunities and services. They look to see what practical procedures for accuracy, challenge and correction of errors the business organization or government agency follows. They believe that business organizations or government should “earn” the public’s trust rather than assume automatically that they have it. And, 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.



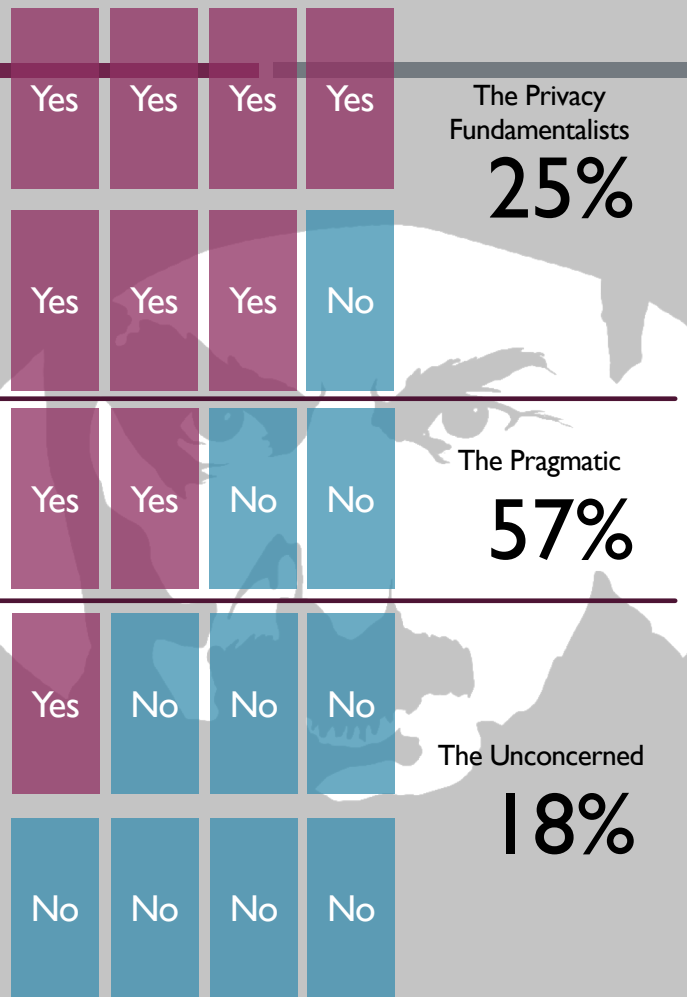
The Privacy
Fundamentalists
25%



The Pragmatic
57%

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.



Privacy, n.

1. The state or condition of being alone, undisturbed, or free from public attention, as a matter of choice or right; seclusion; freedom from interference or intrusion.

3. a. Absence or avoidance of publicity or display; secrecy, concealment, discretion; protection from public knowledge or availability. Now *rare*, or merging with sense 1.

- *Oxford English Dictionary*



“ACHILLES Of this my privacy
I have strong reasons.

ULYSSES But 'gainst your privacy
The reasons are more potent and heroic:
'Tis known, Achilles, that you are in love
With one of Priam's daughters.”

William Shakespeare, Troilus and Cressida (1609)

CONCEPTUALISING PRIVACY

The Right to Be Let Alone

Warren & Brandeis, 1890

Limited Access

Godkin, 1890

Privacy as Personhood

Freund, 1975

Control over Information

Fried, 1984

Intimacy

Farber, 1997

Secrecy

Posner, 1998

RIGHT TO PRIVACY?



Samuel D. Warren



Louis Brandeis

“... the existing law affords a principle from which may be invoked to protect the privacy of the individual from invasion either by the too enterprising press, the photographer, or the possessor of any other modern device for rewording or reproducing scenes or sounds. **For the protection afforded is not confined by the authorities to those cases where any particular medium or form of expression has been adopted**, not to products of the intellect... If, then, the decisions indicate a general right to privacy for thoughts, emotions, and sensations, these should receive the same protection, whether expressed in writing, or in conduct, in conversation, in attitudes, or in facial expression.”

Warren and Brandeis “The Right to Privacy”,
Harvard Law Review.
Vol. IV , No. 5, December 15, 1890

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Property

Writing and Art

Private Information

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RIGHT TO PRIVACY?



The Drafting Committee
(Lebanon, USSR, China, France, US,
UK, Australia, Chile, Canada)

Universal Declaration of Human Rights – United Nations (1948)

Article 12

No one shall be subjected to arbitrary interference with his privacy, family, home or correspondence, nor to attacks upon his honour and reputation. Everyone has the **right** to the protection of the law against such interference or attacks.

THE VALUE OF PRIVACY

Richards, N. (2014). *Intellectual privacy: Rethinking civil liberties in the digital age*. New York: Oxford University Press.

Nyst C. Two sides of the same coin – the right to privacy and freedom of expression. (2013) Translation by Privacy International. *Cuestión de Derechos*

Intellectual privacy “is a zone of protection that guards our ability to make up our minds freely... the protection from surveillance or unwanted interference by others when we are engaged in the process of generating ideas and forming beliefs”

“Privacy is the fundamental barrier that stands in the way of complete State control and domination. Without it, the social contract is broken, and individuals cannot recognize their democratic rights to participate, build, grow and think.”



HOW WE MANAGE PRIVACY

TRADE OFFS AND PARADOX



THE PRIVACY TRADE-OFF



Trading private information in
exchange for some value





What is Being Traded?



You are shopping in town using an app on your smart phone that has info about bargains. The app asks for permission to use your location to locate nearby bargains.



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You are shopping in town using an app on your smart phone that has info about bargains. The app asks for permission to use your location to locate nearby bargains.

Last night you went to a great party. This morning lots of your friends have posted pictures of the party, including ones with you in. They are having lots of fun discussing the photos. You could post your own photos too.

PRIVACY CALCULUS

RISK



Trading private information in
exchange for some value
(*a risk management decision*)



BENEFIT



What is the Risk/Benefit?



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Something doesn't add up...

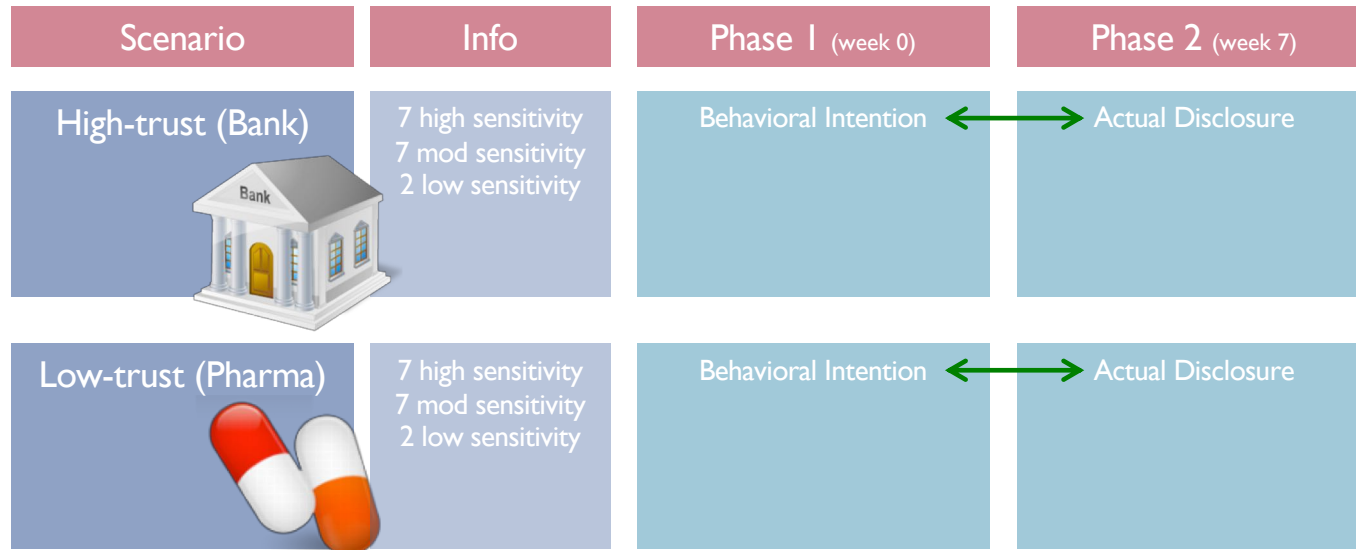
Scenario	Info	Phase 1 (week 0)	Phase 2 (week 7)
High-trust (Bank) 	7 high sensitivity 7 mod sensitivity 2 low sensitivity	Behavioral Intention	Actual Disclosure
Low-trust (Pharma) 	7 high sensitivity 7 mod sensitivity 2 low sensitivity	Behavioral Intention	Actual Disclosure

Something doesn't add up...

Compare Intention to Action

Scenario	Info	Phase 1 (week 0)	Phase 2 (week 7)
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Condition	Mean (SD)—Items Willing to Disclose (Phase 1)	Mean (SD)—Items Actually Disclosed (Phase 2)	Big Numbers: if $p < 0.05$ (5%) it is considered significant		Effect Size
			<i>t</i> -Statistic	Significance	
Overall	10.49 (3.10)	15.16 (1.15)	-10.02	$p = .001$.65
Bank	10.38 (3.17)	15.13 (1.21)	-7.41	$p = .000$.64
Pharma	10.65 (3.07)	15.22 (1.09)	-6.66	$p = .000$.67



PRIVACY

PARADOX

People's privacy intentions do not match their behavior



Cognitive Effects



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Cognitive Effects



Bounded Rationality

Privacy choices are affected by **incomplete** and **asymmetric** information

Rational ignorance: when the cost of learning about a situation enough to inform a rational decision would be higher than the potential benefit

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Behavioral Anomalies

Valence Effect: the tendency to overestimate the likelihood of favorable events

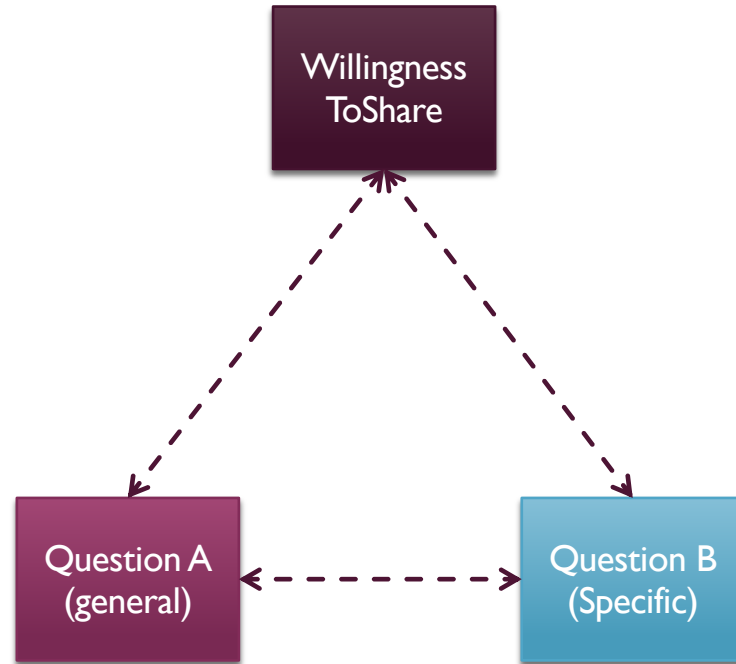
Overconfidence: to be more confident in one's knowledge or abilities than warranted by facts

Status quo bias. People prefer for things to stay the same

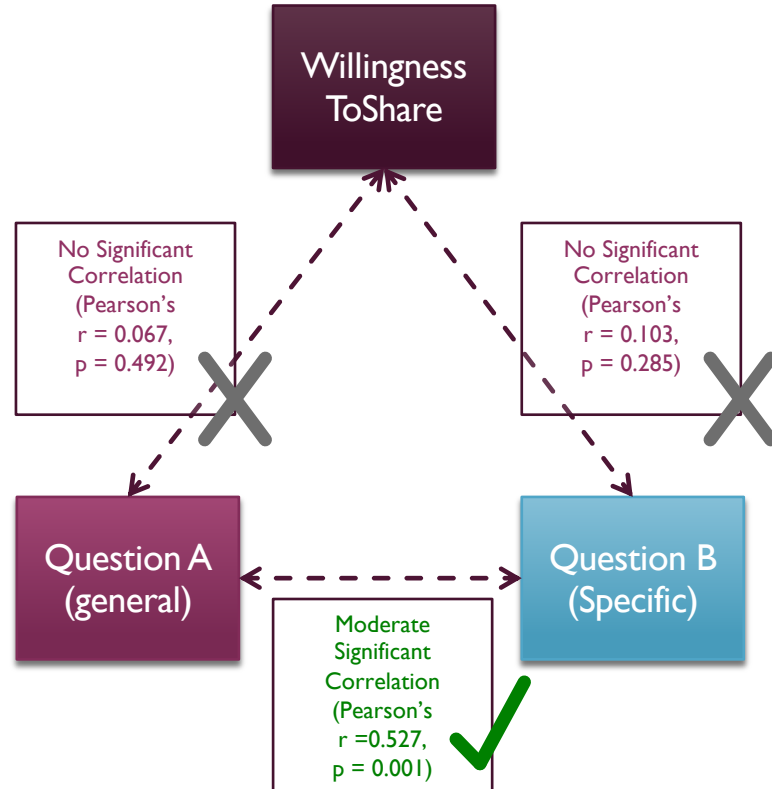
Reciprocity and fairness: the innate desire to act fairly in transactions with others

Inequity aversion: individuals express discontent when they feel others are unfairly getting rewards they do not deserve

- Participants asked to respond to specific location-based privacy scenarios
 - Answers converted into a WillingnessToShare score
- Then asked two specific questions:
 - Question A. How concerned are you about threats to your online privacy?
 - Question B. How concerned are you about the fact that your location might be used for other purposes too?



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Why?

Why?

Agency

“Comfortable with sharing online”

“Not interested in publishing my location online”

Why?

Agency

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Contextual

“It was convenient”

“Didn't trust the application”

Why?

Agency

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Contextual

“It was convenient”

“Didn't trust the application”

Situated

“I was part of a group”

“It was a private event”

Why?

Agency

23%

122

“Comfortable with sharing online”

“Not interested in publishing my location online”

Contextual

77%

(405)

“It was convenient”

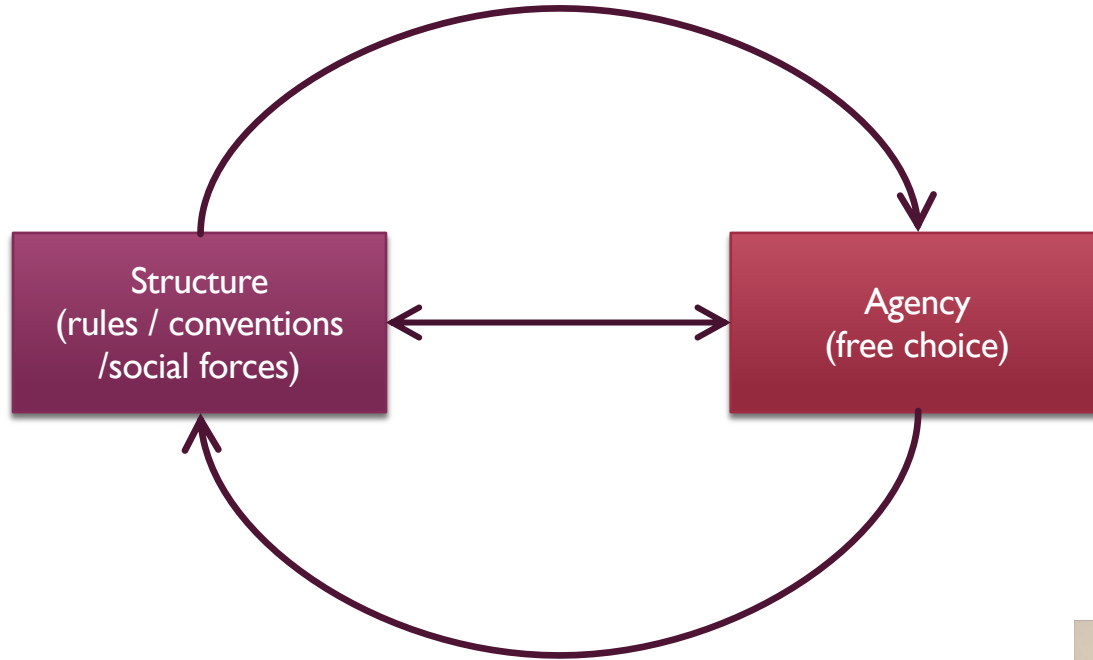
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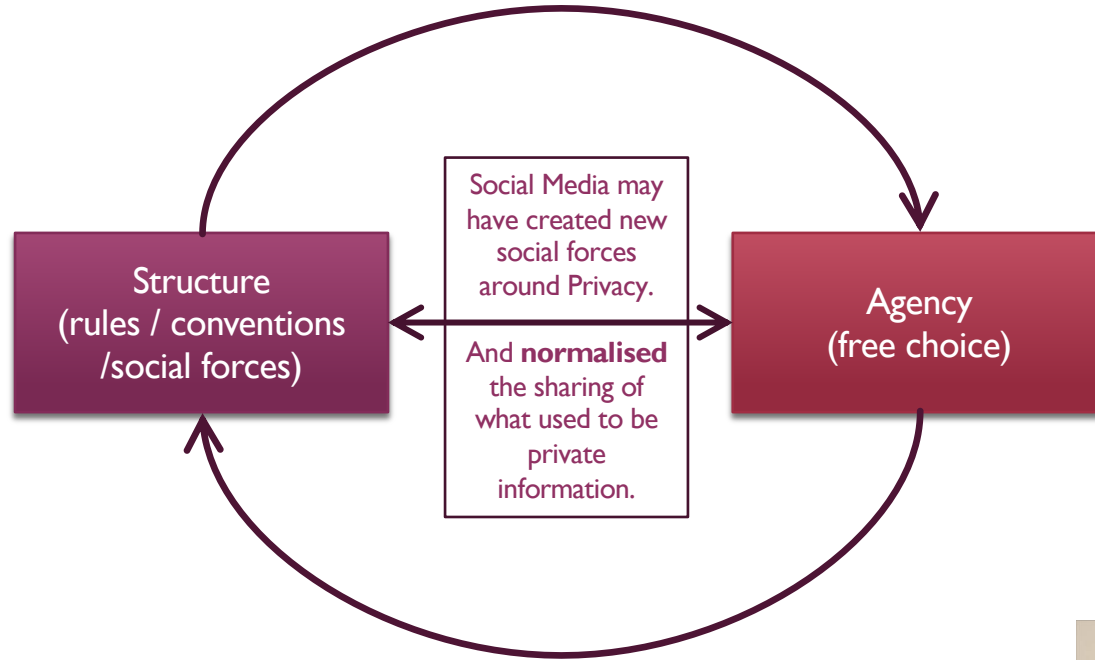
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Anthony Giddens, sociologist, coined the term Structuration in 1984:
"social structures are both constituted by human agency, and yet at the
same time are the very medium of this constitution."





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SOLVING THE PROBLEM

EIGHT WAYS TO SAVE OUR PRIVACY



I

Transparency

‘Sunlight is said to be the best disinfectants,
electric light the most efficient policeman’

- Louis Brandeis, American Supreme Court Justice

E.g.

Data Controller Registers

Subject Access Requests

Open Access Data

But **Power Imbalance** works against the individual –
information asymmetry, rational ignorance, etc.

2

Purpose Limitation

Data must be collected for a defined purpose, and cannot be used later for another



The infographic features the acronym 'GDPR' in large white letters on a blue background. Below it, five yellow icons are arranged horizontally, each connected to the 'GDPR' text by a dotted line. From left to right: a person icon with a padlock, a document icon with a checkmark, an alarm clock icon with 'GDPR' on its face, a padlock icon with an 'X', and a key icon. Below each icon is a corresponding label: 'Data Protection Officer (DPO)', 'Compliance', '25 May 2018', 'Data Breaches', and 'Personal Data'.

Doesn't include the Extended Digital Self, data transfers not covered, and what is a purpose anyway?

3

Self- Management

Giving users more direct control over their data

E.g.

Privacy Policies

Personal Data Managers



Privacy Policies are not readable/understandable, Data Managers lack integration and are a security risk

4

Right To Be Forgotten

Established in the European Court of Justice in 2014
Became *'The Right to Erasure'* in the GDPR

Applies

to personal data that is considered:

**inadequate,
irrelevant,
or no longer relevant**

Can conflict with freedom of expression, or public interest,
Requires a proactive formal request

5

Data Amnesia

Societal forgetting - expiry dates attached to data after which **it would decay** in parts or be deleted

requires **no intervention** from individuals

What data would be excluded?
By policy or technical design?

6

Anonymity

The strategy to **remove or encrypt information** that can be used to identify an individual

E.g.

Network/Data modification

Entity Clustering

Complex and Cumbersome
Can **Distort** the data

6

Anonymity

“On Monday, the Health and Social Care Information Centre admitted giving the insurance industry the coded hospital records of millions of patients, pseudonymised...”

Care.data is in chaos. It breaks my heart | ... Goldacre | Comment is free | The Guardian

www.theguardian.com/commentisfree/2014/feb/2

the guardian


News | Sport | Comment | Culture | Business | Money | Life & style | Travel | Environment | Te

Comment is free

Care.data is in chaos. It breaks my heart

Medical data has huge power to do good, but it presents risks too. When leaked, it cannot be unlearned. When lost, public trust cannot be easily regained

Share 1408
Tweet 2,504
+1 43
Pin it 4
in Share 19
Email


 **Ben Goldacre**
The Guardian, Friday 28 February 2014 18.45 GMT
[Jump to comments \(128\)](#)

Article history

Society
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Health policy

More from **Comment is free** on
Society



7

Safe Havens

Take data into archival custody, where it is kept under **strict access controls** until the information is made public

E.g.

UK National Archives – Record of Government Data

30 Years – Government Documents

50 Years – Secret Intelligence Material

100 Years – Census Data

Reliant on **Cybersecurity** Measures
And strong **legal consequences**

8

Privacy By Design

Incorporate Privacy into **every step** in the software design and engineering process

E.g.

Privacy Patterns (<https://privacypatterns.org>)

- **Location Granularity**
- **Awareness Feed**
- **Use of Dummies**
- **Reciprocity**
- **Privacy Labels**

Places **onus** on software engineers
Implementation of some patterns very **difficult**

IS PRIVACY

DEAD

OR JUST

RESTING?

