Providing Uninformed Consent for Private Information - Questioning the Information Privacy Calculus

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1. Abstract

Problem
Consumers give consent for data collection and usage without being aware and properly informed. Privacy calculus does not happen if consumers are unaware of data collection and usage.

Question
Are consumers making conscious and informed decisions in the digital environment when sharing their information? Are they able to anticipate consequences and

Relevance
How can we provide a digital environment that nudges individuals towards **informed and sophisticated decision making for sharing private information**?

Method
Planned online experiments on Mturk, laboratory experiments and online field experiments.

Anticipated Results
We believe that consumers are not aware of the consequences of sharing information. Knowledge about information collection and usage alone is not sufficient, as consumers focus their attention on different aspects of the decision process and subsequently, unconsciously provide sensitive information, especially if incentives for sharing are provided. Sophisticated information sharing can only be ensured if the individual is aware and can anticipate the consequences of sharing their private data.

2. Literature Background

Privacy Paradox[14]
Over 90% of US internet users are concerned about their online privacy[16], but despite their concerns consumers still disclose a huge amount of personal information online for even small benefits or even unknowingly for free[1]. This contradiction in stated intentions and actual behavior is labeled as the *privacy paradox*[14].

Privacy Calculus[7]
Current research claims that users make an active trade-off between benefits and costs when disclosing information online[7], but there is some evidence that questions rational consumer behavior and choice in this context[1]. Further, no exact value can be assigned to private information[6]. Hence, the value of the exchange is arbitrary and applying an economic calculus that draws on utility maximization is difficult[5,10].

Awareness Problem[8]
Only about 30% of consumers state to be informed of company data usage[16]. We believe that even knowing about data practices does not mean consumers actively use that knowledge when making online decisions[2]. Awareness of data processes is the passive component of information privacy[12] and consumers rather focus their attention on different information and tasks[9,11]. Drawing on **situation awareness**[8], we believe that consumers can make grounded choices if they are both (1) aware of the data collection and (2) comprehend what their data is used for. Only then are they able to understand the consequences and make sophisticated decisions (3).

3. Research Questions

1. Are consumers actually aware of the possible consequences when sharing information online?
2. Does awareness of data collection and usage change information sharing behavior?
3. Is consumer knowledge alone sufficient for sensible information sharing behavior?
4. What drives sophisticated decision making when sharing private information?
5. Does behavior change across cultural and social values?

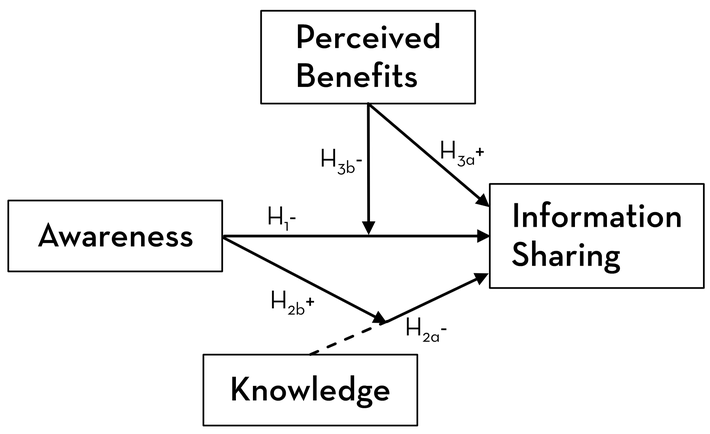
4. Theoretical Background

Situation Awareness[8]
1. Perception: Perception of elements in current situation
   -> Awareness of data collection
2. Comprehension: Comprehension of current situation
   -> Knowledge of data usage
3. Projection: Projection of future status
   -> Information sharing behavior

Social Contract Theory[5,13]
- In return for benefits and incentives, consumers are willing to disclose information.

Information Avoidance[9]
- Individuals disregard potentially useful information that could aid their behavior and decision making.
- Individuals focus on positive information, while remaining inattentive to unfavorable information.

5. Theoretical Framework



Situation Awareness[8]

H1: Being aware of data collection and usage process decreases information sharing behavior.

H2a: Being well informed is decreasing information sharing behavior. This effect should not be significant as long as the individual is not aware of the situation.

H2b: Being aware of the situation increases the negative effect knowledge has on information sharing.

Social Contract Theory[5,13]

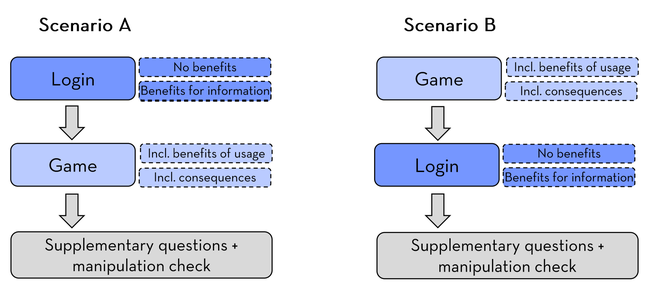
H3a: Perceived benefits increase the information sharing behavior.

Information Avoidance[9]

H3b: Perceived benefits decrease the influence of awareness on information sharing.

6. Experimental Design

Scenario: Participants participate in an online game that aims at indirectly increasing awareness for data collection and usage.
Treatment: Playing the game (measure of awareness) either before or after the chance to log in.
Outcome: Type of login and information provided (sharing behavior). Level of detail for information sharing depends on the amount of information provided.
Measurements: Benefits are offered in form of detailed reports and statistics for the individual's performance; Knowledge is measured in percentage of correct answers.



7. Discussion

Research Implications
So far, most research assumes an active privacy calculus consumers make when providing private information in exchange for benefits. This paper claims that an active choice can only be made if consumers are aware of data collection and usage procedures and can translate that knowledge to potential consequences. Further research should integrate these results when analyzing the privacy paradox.

Firm Implications
Making consumers aware of what data is used for in comprehensive ways can increase trust in the company[3]. Moreover, consumers might know where recommendations are coming from and be more open to them. Further, consumers are more aware of recommendation procedures and hence, less prone to filter bubbles.

Policy Implications
The General Data Processing Regulation (GDPR) does force companies to inform data subjects of collection and usage in theory, but in practice the information provided is too complex and not informative. Better restrictions on how information is displayed might increase consumer awareness and informed decisions. Moreover, cultural differences and values should be taken into account when designing new policies[1,15].

Outlook
- Online Experiments on Amazon Mturk to test the basic concept of awareness on information sharing behavior (Q3 2019).
- Lab experiments to better control for experimental setting (Q4 2019).
- Online field experiment to reproduce the concept on a bigger sample. This aims at testing for cultural and social values (Q1 2020)[15].
- Incorporate antecedents for knowledge, e.g. risk-assessment and trust in company, as well as perceived costs.

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