

Textual Analysis

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1. Roeber et al. pp. 95-108

RQ

"how different context dimensions of data sharing impact user's personal decision to share personal information" (p.96)

Key Passages

No explicit statement is made about the researcher's perspective.

Many passages are relevant, and they are highly consistent in the perspective they evidence.

- **Dimension**

"... personal data – is becoming a critical asset in more and more industries" (p.95)
"a major driver of economic growth"

- **Objective vs. Constraints on that Objective**

The motivation is to "increase consumers' willingness to share their data" (p.95)

"Incidents ... underline how unstable the grounds are for organizations"

"organizations ... are contemplating how they can improve their products or reduce costs by leveraging digital identity. Our research aims to contribute to a more comprehensive understanding"

"The analysis ... [provides] interesting insights for private and public institutions" (p.105)

"These findings bear several implications that are relevant for organizations and policy makers"

"comprehensive data minimization pays off for organizations"

"minimization through anonymization significantly increases the share of consumers willing to participate"

"we strongly advocate for organizations that aim for higher share of consent to increase the choices they offer consumers"

"the anxiety of consumers regarding the use of their personal data is increasing" (p.95)

"More choices for data sharing along the context dimensions would allow consumers to adopt their sharing better to their preferences and probably result in an overall increased sharing that is more beneficial for organizations and consumers alike" (p.105). The sole mention of benefits to people comes in a throwaway comment at the very end of the conclusions, which is primarily about benefits for organisations, and which in any case goes beyond the data – as signalled by the qualifier "probably".

Conclusion

1. System-Sponsor Perspective, and uncompromisingly so
2. Economic Dimension, and unequivocally so

2. Gkatzelis et al. pp. 109-123

Objective (cf. RQ)

“we present mechanisms that facilitate [the exchange of personal data from individuals to companies] while satisfying a collection of desired properties” (p.195)

Key Passages

“we approach this problem from the market maker’s perspective” (p.111)

- **Dimension**

“The economic value of this [personal] data is reflected in the success of many [companies which routinely sell this information]” (p.109)

“companies ... gather lots of data about groups of individuals that would be very useful to third parties”

- **Objective vs. Constraints on that Objective**

“**Our goal is to minimize the expected value of the price that the buyers are asked to pay for the samples**” (p.110)

“appropriately bundling the buyer demand can significantly decrease the price of unbiased samples”

“we identify the optimal way to bundle demand so as **to minimize the expected payment to a risk averse seller**”

“raw private data [but] In contrast to the differential privacy literature, our approach does not add any noise to the data”, i.e. where the data-set is rich, it is re-identifiable

“large amounts of potentially useful private data cannot be accessed by interested parties due to privacy concerns” (p.109)

“One solution ... would be the creation of a market for private data through which buyers can pay individuals (sellers) in exchange for obtaining access to their private data ... This approach has the potential to make useful data repositories accessible to interested parties while respecting the preferences and privacy attitudes of individuals”

“The requirement of an unbiased sample implies that each individual should be selected with the same probability, independently of how much he values privacy” [which presumably including ‘privacy fundamentalists’, and hence assumes away individuals who refuse to sell their data]

“mechanisms that incentivize the sellers to always report their true privacy related preferences” (p.111)

“**bundling the buyers’ demand can decrease the price that buyers have to pay per individual**, while ensuring that sellers are willing to participate” (p.119)

Conclusion

1. System-Sponsor Perspective, i.e. the market-maker
Buyer interests are central to the analysis, but seller interests are constraints, and all individuals are implicitly assumed to have a price, i.e. denial of consent is outside the model
2. Economic Dimension, and unequivocally so

3. Heimbach et al. pp. 125-138

RQ

“we evaluate the value of Facebook profile data to create meaningful product recommendations” (p.125)

Key Passages

“such an approach can help to overcome the user cold start problem simply by connecting with an already existing social network profile without the need for explicit user feedback or other external data” (p.127)

“Developers of product recommenders based on Facebook profile data need to ...” (p.137)

- **Dimension**

“meaningful product recommendations”

- **Objective vs. Constraints on that Objective**

“recommender systems ... suffer from the new user cold start problem which occurs when no transaction history is available for the particular new prospective buyer” (p.125)

“the social shopping site of **the world’s largest mail order company (anonymous for confidentiality reasons)**” (p.126). So confidentiality is essential for ‘the world’s largest mail order company’, whereas the profiles of social media users are not subject to the constraint embedded in data protection laws that limit use of data according to its purpose!

“The advantage of these approaches is to receive detailed information about even new users without the need for conscious, explicit feedback by the user” (p.127) – and, indeed, without free and informed consent

“When users log in with their social networking platform account, they enable access to users’ demographics (similar to the data gained by the registration form) and users’ interests and preferences (shared content, favorites etc.). Thus, the system has access to rather rich, complete and up-to-date data”. This conveniently overlooks the question of consent

“The availability and extent of the profile data depends on the user’s attitude towards entering and making the information visible in his or her profile” (p.128). This implicitly assumes that inclusion in the profile represents consent to any use by any party

“seems to be a promising solution for typical recommender cold start problems” (p.137)

“the subjects ... participated voluntarily but may refrain from using the system in a real setting”

Conclusion

1. System-Sponsor Perspective, in that the results are addressed to developers of product recommender systems, and to eCommerce sites utilising them
There is no express consideration of the interests of consumers, no recognition of the relevance of consent to the use of profile data, and tacit acknowledgement that consumers may not like their data exploited in this manner
2. Economic Dimension, in that the purpose is expressly for corporate marketing, to produce “meaningful product recommendations” for people who are not customers

4. Rayna et al. pp. 139-154

Objective, cf. RQ

“to show that, by rewarding consumers for the disclosure of information, it is possible to design a form of first-degree price discrimination that is mutually advantageous to both firms and consumers” (p.140)
“a new way of resolving conflicting interests while improving social welfare” (p.152)

Key Passages

“this article shows how using mutually advantageous price discrimination could be used **to mitigate the effects of consumer piracy and, potentially, to increase revenues in the music industry**” (p.140)

“the advent of big data ... has brought companies even closer to a perfect valuation of willingness to pay” (p.141)

- **Dimension**

“a way to monetize the ‘long tail’” (p.143)

- **Objective vs. Constraints on that Objective**

“mutually advantageous first-degree price discrimination” (title), where **‘first-degree price discrimination’ means “each consumer pays a different price – exactly equal to his/her willingness to pay – for the exact same product or service”** (fn.1)

BUT “[Amazon’s use of this] strategy rapidly backfired when some consumers realized they were paying more than others for the very same product” (p.139) [i.e. it isn’t perceived by consumers to be advantageous to them]

AND **“first-degree price discrimination requires consumers to disclose information that would, otherwise, remain hidden”** (p.140)

“by rewarding consumers for disclosing personal information it is possible to achieve a situation where first-degree price discrimination is mutually advantageous and both buyers and sellers gain by adopting such a pricing model” (p.139)

But “the article considers the robustness of this model when consumers adopt an opportunistic behavior which consists in manipulating personal data in order to masquerade as a consumer with a lower willingness to pay“

“[other] models ... often result, overall, in lower revenues for creators” (p.140)

“consumers could ... attempt to manipulate personal data collected in order to artificially decrease the perceived willingness to pay (thereby making a financial gain). The robustness of the model with regard to such opportunistic behavior is investigated”

“first-degree price discrimination has properties that make it particularly suitable in the case of digital goods. However, **this can only happen if consumers are willing to accept it, which, considering the uproar that followed Amazon’s attempt to first-degree price discriminate, is unlikely to happen**” (p.142)

“the case of a single monopoly is considered” (p.142)

“If the firm was able to collect enough personal data to engage in first-degree price discrimination”

“exhaustive personal data collected” (Fig.2, p.144)

“the ‘refund’ mechanism introduced in the model would enable to artificially create value for consumers” (p.150)

“one of the main obstacles of the pricing model presented in this article may well be privacy laws” (p.151)

“It could also be worthwhile considering what happens if consumers ‘dislike’ being monitored. While the consequences are fairly obvious when this corresponds to a perceived one-off

cost for consumers, this might get far more complex when consumer perceive a cost of giving up privacy that depends on the amount of data “ (p.152)

Conclusion

1. System-Sponsor Perspective, specifically a monopolist with a sufficiently attractive product and sufficient data about customers to use price to manipulate customers' behaviour
The references to 'mutually advantageous' could be interpreted as indicating a dual-perspective approach. However:
 - (1) the authors' notion of mutuality is based not on the interests of the consumers themselves, but on the economic concept of 'social welfare'
 - (2) the study is heavily committed to enabling a market-maker to advantage buyers of personal data over the individuals selling it to them
 - (3) the study presumes absolute disclosure of all personal data, without qualification, as a foundational aspect of market design
 - (4) the presumptions are implicit that no consumer would ever want an ability to declare a denial of consent, and every consumer will sell their data for a price
 - (5) privacy interests and data protection laws are impediments, which need to be removed in order to enable economic rationalism to fulfil its promise

2. Economic Dimension, and unequivocally so

5. Maguire et al. pp. 155-160

Objective (cf. RQ)

“An interoperable context-aware metadata-based architecture that allows permissions and policies to be bound to data, and is flexible enough to allow for changing trust norms, help balance the tension between users and business, satisfy regulators’ desire for increased transparency and greater accountability, and still enable data to flow in ways that provide value to all participants in the ecosystem” (p.155)

Key Passages

“Unleashing [big data’s] potential requires **policy frameworks that enable data – including personal data – to flow, be analyzed, and be exchanged freely** across geopolitical boundaries, while minimizing risks and harms to individuals and enterprises” (p.155)

“The emergence of a data-driven economy has resulted in an increasingly urgent need for **a flexible policy framework that can drive new business models and innovation** by enabling data to flow, while at the same time protecting the rights of individuals” (p.160)

“When implemented as part of a principles-based policy framework to guide trustworthy data practices, this flexible approach can help satisfy **the interests of regulators, users, and industry**”

- **Dimension**

“the real value comes from enabling data flows across the trust boundaries of multiple entities” (p.159)

- **Objective vs. Constraints on that Objective**

“This necessitates **a dialog among all major stakeholders in the data ecosystem**” (p.155). Reading the paper as a whole, it is far from clear whether the authors intend ‘the individuals to whom the data relates’ to be recognised even as a stakeholder, let alone a ‘major stakeholder’ permitted entry to the dialogue.

“user permissions and policies can be permanently associated with data, enabling any entity to handle that data in a way that is consistent with a user’s wishes”. This is no more than the emasculated P3P specification provided. It enables policy statements; it fails to enforce policy statements.

“This approach can also enable users to change preferences and permissions over time, prevent undesirable use of previously collected data”. The word ‘can’ is misleading. It ‘could’, but only if the architecture included mandatory policy-enforcement. It doesn’t.

“an interoperable metadata-based architecture offers value to all stakeholders in the data ecosystem, not only users” (p.156)

“Data processors can more easily interpret, understand, and comply with permissions and policies defined for specific data”. But, again, there is no requirement that they do so.

“Although metadata can help facilitate compliance with the policies expressed by making policies readily available, it cannot guarantee that entities handling the data will honor those policies” (p.157). The proposal is for a metadata-based architecture; but it avoids embodying technical protections, and flick-passes that aspect to ‘principles’ and ‘trust frameworks’

“Encrypting the data and putting the keys under the control of a gatekeeper forces a decision requestor to consult a gatekeeper and provide proof that key elements of the policies specified in the metadata are met” (p.158). The notion of a ‘gatekeeper’ is introduced only in respect of “data that is more sensitive”. The manner in which the process would work is not articulated, the expression ‘key elements of the policies’ provides wiggle-room, and nothing in the model provides the gatekeeper with the power to preclude use of data where the ‘proof’ is not provided. In short, the design is incomplete on the critical aspect that could have taken the idea beyond P3P of 1998.

“Multiple types of policies need to be expressed and bound to data. These include **policies set by data controllers, users, third parties, and regulators**”. The individuals to whom the data relates are a highly significant omission from the list, raising serious doubts about whether the authors intend individuals to be recognised as parties to the process.

“Take the simple example of somebody taking a picture of other people. The person taking the picture may have copyright on the picture, **but the subjects in the picture may have rights over when and where the picture can be shown**. Because there are multiple parties who have different interests, their policies may conflict”. This is the first (and, it appears, sole) instance of text in the paper that contemplates individuals setting policies in relation to data relating to themselves. It appears in “a simple example”, not in the architectural specification.

“To ensure that data is used in accordance with its policies, policy logic with a common taxonomy must be defined and understood by the parties within a given trust framework”. This contemplates policy enforcement, but enforcement remains outside the proposed framework.

“..., Relecloud’s gatekeeper denies the use because Lamna prohibits reidentification of its patients” (p.159). This does imply that the gatekeeper has the power to preclude use of the data. However, it appears only in an example, and does not represent formal articulation of the architectural specification.

“Although metadata alone cannot guarantee that entities will abide by specified policies, it can facilitate their enforcement by making them readily accessible” (p.160, emphasis added)

Conclusion

1. System-Sponsor Perspective, in that the objective is to “enable ... personal data .. to flow, be analyzed, and be exchanged freely ...”, subject to constraints.
Claims are made about “value to all participants / stakeholders in the [data] ecosystem”.
However, the individuals to whom data relate are almost entirely absent from the authors’ discussion, they are omitted from the two lists of stakeholders that appear in the paper, and, despite a single mention of them in one example, it is far from clear that the authors intend them to be recognised as “key stakeholders” and thereby permitted a voice in the “dialog”.
2. Economic Dimension, in that the objective is to “drive new business models and innovation”

6. Spiekermann et al. pp. 161-167

Objective (cf. RQ)

“This article outlines some of the economic, technical, social, and ethical issues associated with personal data markets, focusing on **the privacy challenges** they raise” (p.161)

“We ... highlight **the major questions that market players and policy makers will arguably need to face** in handling [personal data] markets” (p.162)

Key Passages

“Our position—against this background—is that **companies, which hold customer relationships should go back to more trustworthy relationships with their customers**”. Hence, although a 3/4-page segment of the 5-page paper on pp.164-165 considers the concerns of individuals, the Position Paper’s purpose is to communicate a conclusion for companies.

• Dimension

“Personal data is seen as a new asset because of its potential for **creating added value** for companies and consumers, and for its ability to enable services hardly imaginable without it” (p.161)

“The challenge is how to internalize ... privacy externalities so that the data subject can be fairly compensated”

• Objective vs. Constraints on that Objective

“Companies use personal data for a variety of purposes ...” (p.161)

“personal data can become a burden for organizations as much as an asset”

“**Public opinion can turn against a firm** considered responsible for its breach, **damaging its brand or even a whole industry**” (p.162)

“**Against the background of these market promises as well as economic, social and political risks**, we aim to offer an academic perspective on personal data markets”

“more and more organizations today engage in the trading of consumer data, operating in legal grey zones when it comes to handling personal information assets”

“Thought leaders have proposed whole new market structures and business models that may allow consumers to get into the driver’s seat for their personal data (Searls 2012; Hamlin 2013). Established software vendors envision the technical architecture that would be needed to do so. And start-ups such as Qiy, Connect or Gigya go ahead and propose tools and services that they believe make it happen”. This is, however, presented as a ‘challenge’ to business, not as a means of addressing the needs of individuals, nor as a way of shifting research from a system-sponsor orientation to a dual- or multi-perspective approach.

“How can buyers and sellers negotiate in a setting where information is inherently asymmetric?” (p.163). This question represents dual-perspective approach; but it is presented as a ‘challenge’ to organisations, and is not further articulated or revisited.

“ ... a more general concern is how the mere existence of personal data markets may affect society. Consider, for instance, strategic data subjects who maximize the value of their personal data and therefore engage in strategic behavior, such as avoiding leaving traces that link them to people from troubled neighborhoods. How does this affect social cohesion, equality of opportunity, freedom, and democracy?”. This recognises that the individuals to whom data relates have interests; but it does so only in passing, and it quickly moves on to the broader social impacts.

“ ... if personal data becomes property, important legal challenges will include tailoring property rights so that they are compatible with the notion of privacy as a fundamental right , defining the initial allocation of property rights, balancing sanctions, and seeking international coordination”

“one can envisage interfaces that empower individuals to manage their personal data (Zwick and Dholakia 2004), ideally on their own trusted devices “ (p.164)

Section on 'Social and ethical challenges'

"The 'proertization of the human being' touches upon fundamental discourses in philosophy, sociology, and political sciences about what is private and public, what constitutes identity and what it takes to be a responsible (in German: 'mündiger') citizen with sufficient liberty to form preferences and opinions by him or herself" (p.164)

"the joint effect of technological advances and market forces renders people into "data subjects" whose "digital identities" are traded and used (potentially without their knowledge and consent)"

"Solove's legal analysis of what Western cultures consider to be 'privacy' reveals that the commercial data handling practices now promoted by personal data market proponents seem to completely undermine or even dissolve this value. Common market practices, such as the aggregation of personal data, identification, secondary use, exclusion, and decisional interference are all recognized privacy breaches according to Solove's taxonomy. This seems to be a dilemma in which personal data markets operate for now"

"The question is therefore whether the desire to stay private may disadvantage some people in personal data markets more than others. And if we assume that individuals trade personal data, what kind of controls and guarantees do they want and need to trust in the market they participate in?" (p.165)

"... 'first parties' [companies investing in customer relationships] have in recent years given up an important part of the data market to 'third parties' who collect, aggregate, infer, resell and package users' data. Mostly, we would argue, doing so without any ordinary user expecting that this is happening"

"If they learned about today's volume and business done with their data among third parties, they may be surprised and feel betrayed. No matter whether and to what extent first party companies have engaged in data deals themselves, they could all be hit by a backlash from users once they find out"

"people only accept active data sharing where they are consciously involved in the data exchange. They don't appreciate passive data collection"

Conclusion

1. System-Sponsor Perspective, in that everything in the opening section that defines the purpose of the article is expressed in terms of business needs and risks, with individuals' privacy interests presenting as a constraint on corporate objectives, not as an objective of one of the stakeholder groups.

There are mentions of "value for ... consumers", but the focus throughout is on "value for companies", subject to the constraints not of the competing interests of other stakeholders, but of "privacy challenges".

2. Economic Dimension, in that the framing of the paper is concerned with "personal data ... as a new asset" for "creating value", and protection of individuals is framed in terms of appropriate allocations of rights, and fair prices for use of their data

Textual Analysis

Conclusions

Firstly, it's important to appreciate the nature of this evaluation.

It is not an assessment of whether or not the content of the papers contains any value for privacy.

It is an assessment of the researcher perspective adopted in the papers.

Of course there are aspects of some of the papers, and especially of the Position Paper, that include some recognition of the interests of individuals, and some positive implications for individuals.

Secondly, all of the six papers in the Special Issue are on the Economic Dimension, and all are committed to the System-Sponsor perspective, most of them emphatically so.

Thirdly, the Position Paper brings some balance to the Special Issue, by identifying the concerns of individuals.

However, the Position Paper is very clearly addressed to organisations, it frames consumers' concerns as 'challenges' to organisations, and it is positively and pleasantly expressed. rather than communicating concerns about, or disputes with, the other five papers.