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If PETs are the solution, what was the problem?

Mireille Hildebrandt

http://works.bepress.com/mireille_hildebrandt/



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Agenda:

- Privacy: 2 x 2 approaches
- Threats: 2 x 3 values
- Computational Turn
- Ambient Law



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Privacy approaches 2 x 2



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- Privacy approaches I
- Anonymization/pseudonymity
 - Probabilistic nature of a.
 - Data mining allows de-anonymization
 - D 46/95/EC not applicable
- Data minimization
 - Makes environment less 'smart' (data as resource)
 - Smart minimization: credentials, transparency
 - Against the grain of free content/added value services (data as currency)



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Privacy approaches II

- Privacy as sovereignty
 - Data ownership
 - Data confidentiality
 - Access control
 - A posteriori control
 - Self-determination as a sovereign
- Privacy as boundary negotiation
 - Relational concept
 - Contextual integrity
 - Autonomy as the capacity to develop second order beliefs and desires (reflection)
 - Right to 'the freedom from unreasonable constraints on the building of one's identity'



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PETs (Dolinar e.a.)



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Overview

- Privacy preferences & policy languages
- Trust (encryption, PKI) and reputation systems
- ID management
- Access management
- A-posteriori privacy protection (PPDM, sticky policies, privacy audit trail)

Multi-layered approach

- Trustworthy ICT infrastructure (data controllers)
- Citizen/consumer/end-user participation (data subject)
- Market-dependence (absent incentive structure?)



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Threats 2 x 3 values



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Threats I



Autonomy

- Control, self-determination
- Primacy of consent

Privacy

- Opacity
- Negative freedom (freedom from)

- **Social Justice**

- Inclusion (danger of social sorting)
- Positive freedom (freedom to)



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Threats II



Privacy

- Opacity, autonomy, boundary negotiation
- Negative freedom (freedom from) and:

Freedom for discrimination

- Invisible social sorting
- Positive freedom (freedom to), requiring:

Due Process

- Invisible visibility
- Contestability of how one is being profiled



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The Computational Turn



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What 's the real threat?
What problem has to be solved here?



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‘ it’s not the data stupid, it’s the
inferred knowledge’



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Computational Turn

- KDD: we have become correlatable humans
- ‘if machines define a situation as real, it is real in its consequences’
- From vulcano-ashclouds, to blacklists to CRM and insurance policies
- Data as a resource (for the industry) and a currency (for the citizen)



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‘When your carpet calls your doctor’

The Economist – April 10, 2010



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Due Process: Transparency



- What is inferred from *my data*?
- Individual profiles
- What knowledge is inferred *from data bases*?
- Group profiles
- How do I match such knowledge?
- What consequences to expect?



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Transparency Enhancing Tools



- Type I: access to/information about the 'logic of processing'
 - (art. 12 D 46/95/EC)
- Type II: counter-profiling
 - (cf. Privacy mirrors, inference machines)



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Ambient Law



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What is Ambient Law?



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- Articulating legal norms into the ICT infrastructure that you need to protect against
- [cf. Paradox of the Rule of Law: protecting yourself against the State (legislator & executive) by means of the State (court)]
 - Involve the democratic legislator
 - Arrange for contestation
- See e.g. Hildebrandt & Koops in MLR May 2010



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- BverfG 2008: fundamental right to a trustworthy ICT infrastructure



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- Kolinar e.a.:

Art. 6 (1) b of D 46/95/EC

‘personal data must be collected for specified, explicit and legitimate purposes and may not be further processed in a way incompatible with those purposes’

Ambient Law (?):

‘Prior to processing of personal data Privacy Policy Negotiation pattern should be implemented on the part of data collection and any subsequent disclosure of data should be done with respect to Sticky Policy pattern and Privacy Audit Trial pattern should be implemented on the part of data processing’



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Art. 12 D 46/95/EC

Right of access

- MS shall guarantee every data subject the right to obtain from the controller:
- **Knowledge of the logic involved in any automatic processing** of data concerning him at least in the case of the automated decisions referred to in art. 15 (1)

Ambient Law (?):

- The findings of data analysis (KDD) should be accessible in a clear and comprehensible manner whenever applying them to a natural or legal person.



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- Do we need to enact a right to know where one's data are stored (cloud computing)?
- If personal data are stored in a cloud, data subjects should be provided with a visual analytics that dynamically maps the whereabouts of their personal data. Evidence should be available to back up the analytics (auditability).



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Thank you for your attention

Any questions?



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