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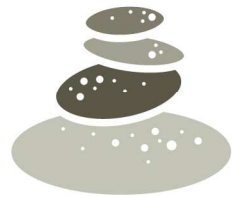
A Legal Framework for Trust in the Future Internet

Mireille Hildebrandt

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

April 20, 2010

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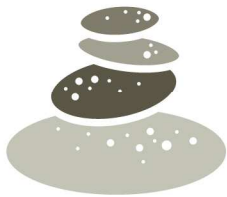


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Agenda:



- **The Concept of Trust**
 - Luhmann: Confidence and Trust
 - Nissenbaum: Securing Trust?
- **Legal Certainty**
 - Privacy, Freedom from discrimination, Due process
- **Ambient Law**
 - Legal protection by design
 - Enactment, enforceability, contestability
 - Art. 12 D 95/46/EC



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The Concept of Trust



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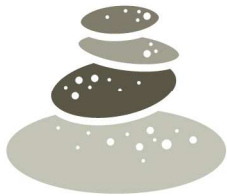


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Luhmann: Trust & Confidence



- C: default, expectation that the environment will not fail you
 - Money, eMail, infrastructure
 - Danger
 - External attribution
- T: choice, to take the risk that your trust is betrayed
 - Banking, e-Commerce, actions-decisions
 - Risk
 - Internal attribution



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Luhmann:

Trust is a mechanism for reducing
complexity and uncertainty



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Nissenbaum

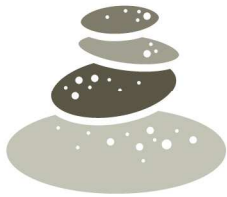
- Is trust online a matter of security?
- Conditions for trust between 'agents':
 - history and reputation (missing online)
 - Personal characteristics (missing online)
 - Mutuality and reciprocity (asymmetries online)
 - Role fulfillment (vague online)
 - Contextual factors (inscrutable contexts)
- Solution: security
 - Access control; Transparency of identity; Surveillance
- Securing trust versus nourishing trust
 - Trust presupposes vulnerability (securing trust trades freedom and range of opportunity for certainty and safety)
- Security is no panacea
 - Insider/outsider paradigm



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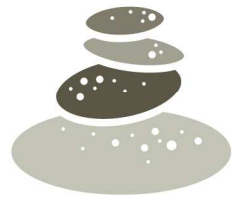
Nissenbaum



Both trust and security are mechanisms
for reducing complexity

Trust enables people to act in a richly
complex world,

Security reduces both the richness and
the complexity



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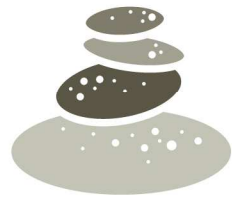
Future Internet



- World wide web
- IoT
- IoS
- Ambient Intelligence
- Autonomic Computing

Smart infrastructures:

Ubiquitous, proactive, hidden
complexity



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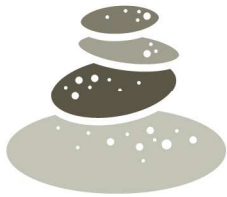


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The computational turn



- Data as oil/resource
- Data as currency
- Knowledge discovery in data bases
- Machine learning
- Targeted marketing
- Individual profiles
- Personalized group profiles
- Ambient Intelligence, IoT



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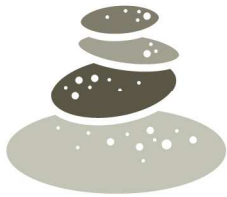
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Data Scientist:



‘combines the skills of software programmer, statistician and storyteller/artist to explain the nuggets of gold hidden under mountains of data’

The Economist (February 27th 2010)



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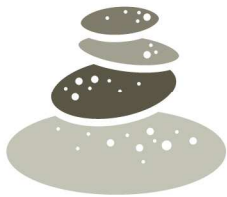


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‘When your carpet calls your doctor’

The Economist – April 10, 2010



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Legal Certainty



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Legal Certainty



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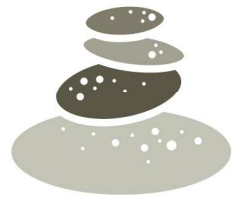
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- Stabilizing expectations:
 - De facto: what do I expect in terms of privacy, profiling and transparency?
 - Normative: which expectations should the law protect?

Creating framework for trust,
which cannot be 'secured'



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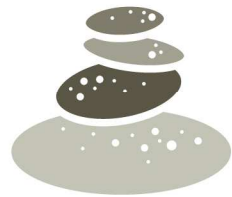


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Privacy



- Privacy to nourish construction of Identity, not reduced to anonymity or data confidentiality
- Incorrect or invasive linkability, or unfair usage of linkability
 - Link to other data pertaining to the same person
 - Link to computational knowledge (group profiles)



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Freedom from discrimination



- Treating as equal does not equate with equal treatment
- Dworkin: constitutional democracy entails equal concern and respect
- Habermas: private sphere for strategic action [law to ensure level playing field]
- Profiling: what does KDD afford?
 - Behavioural advertising, servicing, automated segmentation and treatment
- Issue of net neutrality (Comcast case US)



Due Process



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- Privacy and Freedom from discrimination:
- Need for transparency
- Who knows what about me (or **about my type of person**)?



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Ambient Law



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Ambient Law



- Articulate legal protection into the ICT infrastructure
 - Default (Thaler & Sunstein)
 - Cf value conscious design
 - Cf Privacy by design
 - Eg PETs and TETs



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Democracy & Rule of Law



- Enactment (legislator)
- Enforceability (administration)
- Contestability (court of law)

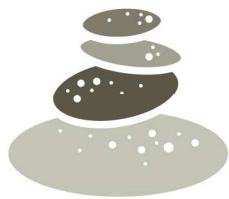
- Separation of powers based on the ICT infrastructure of the printing press



Ambient Law

Caveats:

- Conflation of enactment and enforcement
- [Citron: automated decision making systems combine individual adjudication with rulemaking, while adhering to the procedural safeguard of neither...]
- Disabling contestation



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Ambient Law



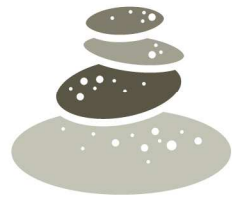
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- Enactment by democratic legislator!
- Possibility of contestation must be built-into the legal-technical infrastructure



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Data Protection Directive

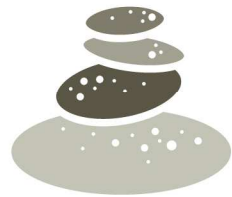


D 95/46/EC

Art. 12 [and 15]

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)



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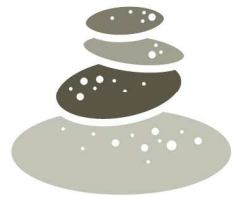
Data Protection Directive



D 95/46/EC

Recital 41:

(...) every data subject must also have the **right to know the logic involved in the automatic processing of data concerning him**, at least in the case of the automated decisions referred to in Article 15 (1); whereas this right must not adversely affect **trade secrets or intellectual property and in particular the copyright protecting the software**; whereas these considerations must not, however, result in the data subject being refused all information



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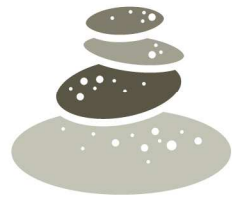


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Facilitate *productive* trust

- Create intuitive interfaces for **transparency enhancing tools (TETs)** that provide the substance of the transparency right of
- art. 12
- This will enable **smart instead of blind data minimisation**
- As well as **smart data sharing**:
 - With whom, when, where, in which context



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Thank you for your attention

Any questions?



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