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# **Privacy, non-discrimination and due process: Some pitfalls of smart technologies**

Mireille Hildebrandt



Vrije  
Universiteit  
Brussel

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## Who is me?

- Law (LLM)
- Legal Philosophy (PhD)
- LSTS fundamental research:
  - Correlatable humans
  - Law and autonomic computing
- EU funded research:
  - FIDIS: profiling



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# Profiling the European Citizen Cross-Disciplinary Perspectives

*Mireille Hildebrandt &  
Serge Gutwirth (eds.)*



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## What's next?

- Smart Technologies
- Novel type of knowledge
- Opacity and Transparency
- Drawbacks
- Privacy, due process, non-discrimination
- Data protection
- From PETs to TETs
- Ambient Law



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# Smart Technologies

- Smart devices (cars)
- Smart online environments  
(behavioural advertising;  
personalised websites)
- Smart physical environments  
(Ambient Intelligence; the  
Internet of Things)



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# Smart technologies

- Ubiquitous computing  
(hidden complexity, the environment is the interface)
- Autonomic computing  
(self-managing computing systems)



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# Smart technologies

- Proactive invisible unpredictable
- Hiding data makes less smart
- Opposing paradigms
- Privacy paradox



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# A Novel type of knowledge

- Defining profiling:
  - Pattern recognition
  - *Construction and application* of (individual or group) profiles
- Construction: process of KDD
- Application: Identification
  - Unique or Category



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## Novel knowledge: construction

- The end of theory (Anderson)?
- From explanations (**causality**) and understanding (**meaning**) to **correlations**
- **Bottom up, unsupervised learning: *generating* hypotheses**
- Computational pattern recognition



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## Novel knowledge: application

- Autonomic proactive  
*Application* of profiles:
- From sequential interactions to  
real time interventions
- Subliminal communications



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# Transparency and Opacity

- Who is profiling who?
- Invisible visibility
  
- Democracy & Rule of Law:
  - Opacity of citizens
  - Transparency of power



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# Transparency and Opacity

- Agre and Rotenberg:

'the right to privacy is the freedom from unreasonable constraints on the construction of one's own identity'



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# Transparency and Opacity

- Zarsky:

‘autonomy trap’

‘unfair discrimination’



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## Drawbacks

- Errors:
  - Inaccurate input
  - Non-distributive profiles
- Customisation= normalisation?
- Filtering = segmentation?
  - lack of confrontation with the unexpected (fragmentation)
  - lack of shared knowledge (no civil society)



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# Privacy

- Capture & storage of personal data: who cares?
- Construction of group profiles: who knows?
- Matching can disclose life-style, earning capacity, health risks
- Secrets of the self



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# Privacy

- Profiling renders the difference between data and personal data redundant
- Trivial data can become relevant if they match a group profile



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# Non-discrimination

- The right to be treated as equal despite inequalities
- Social sorting
- Price discrimination
- Re-recognition & matching suffices



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# Due process

- ‘Equality of arms’
- Contestability of automated decisions
- On the basis of which group profiles have I been categorised?



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# Data Protection

- Focus on personal data
- Looking in the wrong direction?
  
- From data to knowledge
- From data minimisation to minimisation of the emerging knowledge asymmetries



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## From PETs to TETs?

- Need for smart data minimisation:

To know which of your data  
you want to hide,  
you need to anticipate  
which profiles they match



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# Legal TETs

- Art. 12 D 95/46 EC
- Right to obtain information on the logic of processing in the case of automated decisions



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# Technical TETs

A. Based on info of the data  
controller (processor)

B. Based on counterprofiling  
(social networking)



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# Ambient Law

- From oral to written law
- From written to digital law?
  
- Articulating legal norms into the smart infrastructure they aim to protect against



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# Ambient Law

I. Legislative intervention in the design stage (democracy; CTA)

II. Constestability of technological normativity (Rule of Law; HMI)



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**Thank you for your attention**

**ANY QUESTIONS?**



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