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Cross-pollination between privacy/data protection and sustainable development: the case of smart grids

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Introduction

- Aim(s) of the paper
  - Interdisciplinary perspective
    - Law + STS
  - Look at ICT4Env. From the double perspective of Env. + P/DP law
    - What can Env. and D/DP law learn from each other, and how can they interact?
      - → **What can we say about Env. through privacy? = real question**
    - Articulation through STS analysis of "green techs"
    - Case of smart grids.

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Taking SD seriously (1)

- EU situation:
  - Legal: Art. 11 TFEU
  - Policy:
    - 1st EU Sustainable Development Strategy (SDS): 2001
    - Renewed EU SDS: 2006
    - Periodic reviews, last one: 2009

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Taking SD seriously (2)

- Definition of SD: very blurry concept
  - Renewed EU SDS:
    - *"An overarching objective of the* [EU] *(…) governing all the Union's policies and activities. It is about safeguarding the earth's capacity to support life in all its diversity and is based on the principles of democracy, gender equality, solidarity, the rule of law and respect for fundamental rights, including freedom and equal opportunities for all."*

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Taking SD seriously (3)

- **EU strategy is broken down into**
  - 4 key objectives (i.e., content of SD)
    - Env. Protection
    - Social equity and cohesion (cf. HR)
    - Economic prosperity
    - International responsibilities.
  - 10 policy principles
    - Human Rights, democracy, intergenerational equity; Mainstreaming; Precaution, Polluter pays, BAKnowledge
  - 7 Key Challenges: operational targets/ actions to fulfill the 4 objectives
    - Climate change + clean energy; sustainable transport; sust. consumption and production

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ICT for sustainability (Dev)

- ICT for energy efficiency : C(2009)7604 final
  - Buildings, transport, electricity grid, (+ smart cities a combination of it all).
  - Key challenges:
    - Climate change & clean energy
    - Sustainable transport
    - Sustainable consumption & production.

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ICT4EE

- What does it mean? → (OECD, 2010)
  - ICTs with better environmental performance (direct impacts)
  - ICTs to improve environmental performance throughout the economy and society (enabling and systemic impacts)
    - Enabling: affect the environmental footprint of other products
      - e.g., smart cars, smart grids (cf. transmission and distribution losses), smart lightning heating (buildings)
    - Systemic: behavioural change and other non-technological factors: provision of information (including dynamic pricing info).
      - E.g., smart meters.

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Smart Grids: EE (1)

- In what ways do smart grids/meters contribute to EE?
  - Smart meters:
    - One of the smart metering technologies (+ intelligent storage devices, etc.).
    - Management of energy consumption
      - Info% use & price of electricity
      - Much depends upon behavioral changes
      - Many factors
        - » How the info is received: Direct (home/net) vs Indirect (monthly bills)
        - » Meters part of broader “smart homes”?
        - » Online or offline?

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Smart Grids: EE (2)

- Smart grids is more than management of energy consumption:
  - Energy generation (Renewable Energy)
  - Energy transmission & distribution (avoid losses)
  - New energy storage solution (EV-Grid)
  - Final energy consumption (cf. meter):
    - Information
    - Dynamic pricing
    - Remote demand-side management

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Smart grids: P/DP issues (1)

- Caveats: =/= options
  - (possible) compulsory use; Interval of meter readings; Scope, length, and place of storage of consumption data; Access to such data; Remote control by the operator.

Smart grids: P/DP issues (2)

- Yet, common challenges:
  - Knowledge inferred from data: home & family life
  - remote storage and control:
    - Security (hackers, burglars)
    - Denial of service/discrimination
    - "1/3 party business"
  - Amount of data
    - Not necessary for billing purposes (cf. data minimisation, PSP, …).
  - Access to data?
    - Who, under what conditions?

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P/DP *vs* Env.?

- Proposed measures to tackle P/DP:
  - Some do not impact upon Env. goals:
    - E.g., data minimisation: aggregate/ pseudonymise data after sufficient use.
  - Some might interfere:
    - E.g., end of automatic reading of ¼ hour electricity & hourly for gas (NDLS)
  - Some (apparently) interfere:
    - Reform of Dutch smart grids bill (some data processing are crucial)
    - ECtHR: *Moreno Gómez v. Spain*:
      - noise pollution of wind turbine = violation

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P/DP & Env.?

- Research question (finally):
  - Is it possible to uphold P/DP **and** the Env. performances of smart grids (& *vice versa*), and if yes how?
    - → search for a composition/ reconciliation /e/ 2 rights.
    - No trade-offs or zero-sum game
    - Upholding one right weakens *per se* the other; that it is not possible to implement one right without infringing upon the other.

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The proportionality test of Art. 8.2 ECHR

- Possibility to think the cohabitation through (strong) necessity in democratic society test:
  - Not lenient balancing
  - Instead:
    - urgent social need
    - not extend further than necessary (cf. erosion)
    - reasonably in proportion to the aim
      - Subsidiarity
      - proportionality

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Cohabitation (1): how?

- Where can we find criteria?
  - Cross-pollination /e/ P/DP & SD!
  - Integration of SD concerns within the test
    - → Possibility to regulate P/DP **&** Env. through the hook of privacy (%ality test)!

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Cohabitation (2): SD Seriously

- Cf. beginning: SD = holistic concept
  - Protection Env.
  - Respect of fundamental rights
- But: how do we use it in % ality test?
  - Maybe:
    - Other side of the coin
      - To be used upstream (cf. PbD)?

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Cohabitation (3): Sustainable science

- What is it?
  - Part of EU R&D on SD
  - How to conduct R&D so as to truly meet goals of (holistic) sustainability?
  - Kinship with:
    - Elinor Ostrom (commons)
    - Ivan Illich: Tools for Conviviality
    - (Callon, Jasanoff, et al.): users-lead innovation

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- How does it work?
  - Encompass the interaction of global processes with the ecological and social characteristics of particular places and sectors
  - Integrate the effects of key processes across the full range of scales from local to global
  - Address issues as the behavior of complex, self-organizing systems (e.g., nature-society) to multiple and interacting stresses.
  - Based upon:
    - Resilience
    - Iterative learning
    - Multiple types of knowledge
    - Participation

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Conclusion: Env. + P/DP through %ality?

- Can we infuse SS criteria in the %ality test of Art. 8.2 ECHR?
  - Subsidiarity and necessity
- If yes, then we can in fact regulate env. Issues through privacy protection, and make the two rights cohabitate.
  - Furthermore: kinship: reflexivity.

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Thank you!