

BIG DATA IN GOVERNMENT

KNOWLEDGE POLITICS AND POWER SHIFTS IN SMART CITIES

What is the hype of Big Data in government about?

- > Government is a knowledge-based business, so it can be expected to benefit from Big Data.
- > Governments gather vast amounts of data that are hardly systematically mined yet, even without the Internet of Things.
- > We are technologically closing in on the *panspectron*: Observing everything all the time – in real time (Braman 2009).

Two schools of thought on Big Data in government:

- > Big Data offers efficiency gains, but else business as usual.
- > Big Data revolutionizes the way we govern our societies, with the advent of „agile policymaking“ (Parcell & Holden 2013) and informatized decision(-support) systems.

What existing discourses does Big Data in government link to?

- > Big Data in government takes up the powerful discourse of the „rationality project“ (Stone 1988), previously evident in the 1960s' planning euphoria and the 2000s' evidence-based policymaking.
- > Ultimately, the „rationality project“ aims to replace politics with decisions based on knowledge/evidence/rationality (Torgerson 1986).
- > New Public Management has spread „governing by numbers“ (Rose 1991) throughout government.
- > As a ‚new‘ method of knowledge production, Big Data potentially disrupts existing knowledge orders.

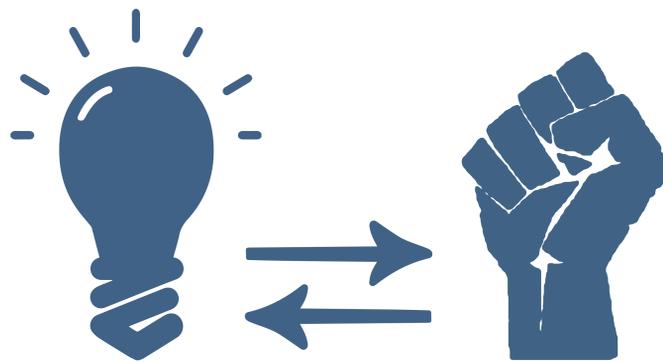
What are knowledge politics?

Knowledge politics establish and change knowledge orders (Wehling 2007) in society and within the political-administrative system, which determine:

- > What types of knowledge are considered legitimate? Where is the line between knowledge and belief?
- > What can and cannot be known? What is relevant?
- > What knowledge sources are authoritative? Who is an expert, who is a layperson? Who defines an issue?

How do knowledge politics cause power shifts?

- > A policy problem's definition determines its possible solutions (Rittel & Webber 1973).
- > Changes in knowledge orders privilege certain types of knowledge and their producers, and delegitimize others.
- > The current hype around the black box Big Data has charged it with promises and expectations, increasing its discursive impact in knowledge politics.



What are hypothetical effects of Big Data?

- > **Technocratization:** Policy issues are depoliticized as courses of action are determined by evidence and expertise rather than democratic processes (Rüb & Straßheim 2012).
- > **Rise of the analysts:** Within the political-administrative system, big data scientists take on a central and powerful role (Fischer & Forester 1993).
- > **Knowledge monopolization:** Government develops a centralized knowledge monopoly while competing local knowledge is delegitimized (Scott 1998).
- > **From governance to management:** Participatory practices striving for input legitimacy are abandoned in favour of data-driven output legitimacy (van de Donk et al. 1995).
- > **Counter-expertise:** Big Data is generally accepted as ‚authoritative knowledge‘ but interest groups and media generate „counter-expertise“ from Open Data (Fischer 1998).

How to look for the knowledge politics of Big Data?

- > Identify policy issues where Big Data-generated knowledge plays a role.
- > Examine knowledge orders as well as knowledge conflicts with the Sociology of Knowledge Approach to Discourse (Keller 2011).
- > Two-level approach: In the ‚public sphere‘ as well as within the political-administrative system.
- > In the political-administrative system, a micropolitical analysis complements the discourse analysis.

Why choose Smart Cities as research sites?

- > Sensors and the Internet of Things are most easily deployed in urban environments.
- > ‚Urban analytics‘ is the most mature application of Big Data in the public sector.
- > Policy issues are particularly complex, wicked and contested in metropolitan areas, and knowledge politics therefore especially dynamic.

What are the tentative case studies?

- > **Singapore:** arguably most advanced with Big Data; highly technocratic government; strong government surveillance;
- > **London:** advanced with Big Data; UK is home of evidence-based policymaking; government surveillance (CCTV) common;
- > **Smart City X:** Continental European Smart City (TBD)
- > **Smart City Y:** North American Smart City (TBD)

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Talk to me!

I am still in an early stage, so your comments matter. E.g. about:

- > Theoretical perspectives on Big Data in government.
- > Your experiences with Big Data in government.
- > Policy-relevant applications of Big Data in the public sector.
- > Potential Smart City case studies.
- > Utter disagreement.



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