Big Data in Government:

Of the Big Data Myth
## and Its Translations in Local Governments

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Why am I here?

- Public Administration Researcher with interest in technology

- *What is the effect of technological change on administrative change?* (Pollitt 2011)

- Hidden Agenda:
  Bringing a nuanced understanding of technology into mainstream PAR

- using mainstream PAR theories:
  New Institutionalism with extensions
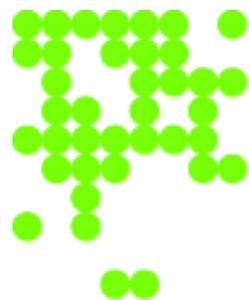
Wicked Problems, Contested Administrations: Knowledge, Coordination, Strategy

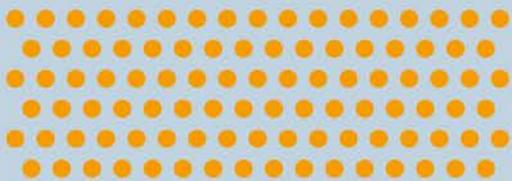## What are Wicked Problems?

- Complexity

- Ambiguity

- Uncertainty

What are Wicked Problems?

- Complexity – actor constellations

- Ambiguity – problem definitions

- Uncertainty – bounded rationality

What is Big Data?

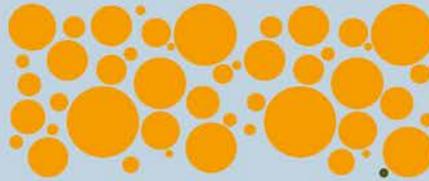| Volume	Variety	Velocity
Data at scale	**Data in many forms**	**Data in motion**
Terabytes to petabytes of data	Structured, unstructured, text, multimedia	Analysis of streaming data to enable decisions within fractions of a second
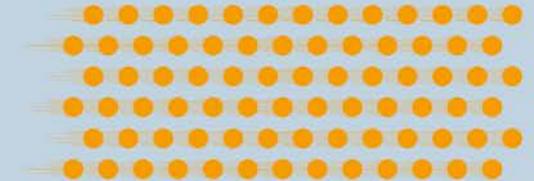
How I understand Big Data Analytics

- no narrow technical definition

- „data culture" (Strategic IT Planning Department of Vienna)

- highly interpretively flexible socio-technical assemblage (Ruppert et al. 2015)

Big Data + Government = ♥ ?

– Government is a knowledge-based business:

"Bureaucratic administration means fundamentally dominance through knowledge" (Weber 1922)

– Big Data among most important technologies for the future of public administration (Pollitt 2014)

  – Historical importance of information management
    (Porter 1996; Scott 1998; Desrosières 2002)

Early Times for Big Data in Government

- Big Data only around since 2010/2011

- Big Data in government in an „embryonic stage"
  (European Commission 2015)

- more or less random pilot projects scattered all over the world

- Governments in a „pre-evaluation phase" (City of Vienna)
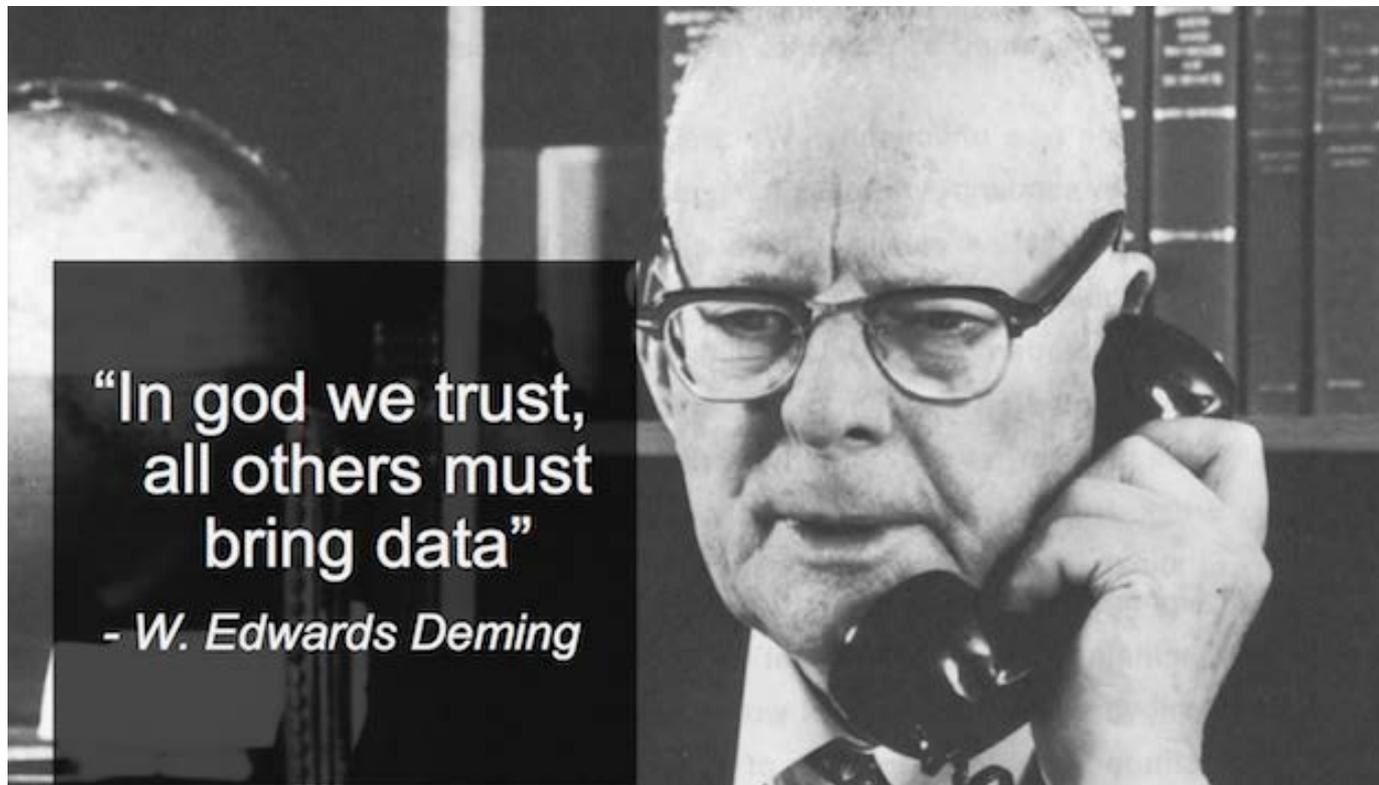
Overarching Research Questions

1. How do local governments make sense of Big Data Analytics?

2. Do we see convergence or divergence in their understandings, and in turn practice?

How is the myth of Big Data/data-driven government translated in different contexts?

The Myth of Big Data

The Myth of Big Data

"In god we trust, all others must bring data"
- W. Edwards Deming

The Myth of Big Data

- „Ideology" of Dataism (van Dijck 2014):
  Given enough data, rational analysis can solve any problem.

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  Given enough data, rational analysis can solve any problem.

- *Big Data can unravel Wicked Problems.*

- Links to meta-narratives of rationality, modernism, positivism, etc.

- Revives "ideal of replacing politics with knowledge" (Torgerson 1986)
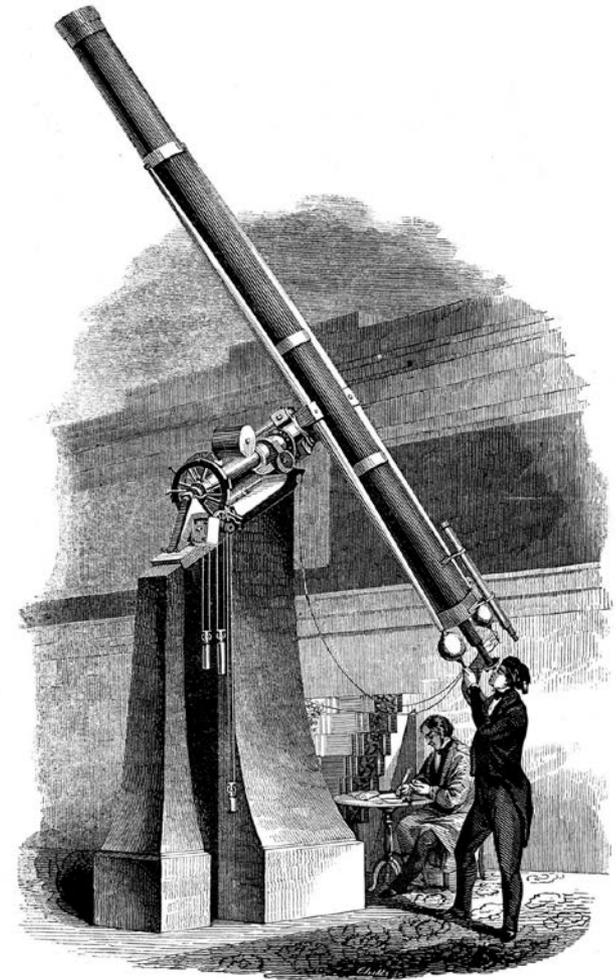
"Any sufficiently advanced technology is indistinguishable from magic."

Arthur C. Clarke

- How does such a myth spread?

- How does it influence local practices?

From Management Fashion to Rational Myth

- Rational Myths as taken-for-granted „truths" in a field, locally institutionalized to achieve legitimacy

- Rational Myths are stabilized Management Fashions

- „management gurus" spread Management Fashions

Typical Elements of Management Fashions (Benders & van Veen 2001)

Promises of, preferably substantial, performance enhancement

The threat of bankruptcy in case of non-adoption

Using well-known and successful users of the concept in question

Stressing the concept's universal applicability

Presenting the concept as an easily understandable commodity with a catchy title

Presenting the concept as timely, innovative and future-oriented

Interpretative viability, i.e. leaving a certain room for interpretation

Promises of, preferably substantial, performance enhancement

- "Getting the right data to the right decision-makers— precisely when they need it—can go a long way to help streamline government and reduce costs while delivering higher-value service"
  Hewlett Packard

- "Get Big Data right, and you'll unlock a treasure chest of improved intelligence that can inform better and faster decision-making up and down your organisation."
  IPL

The threat of bankruptcy in case of non-adoption

- „Only the data driven government will be ready to rise to the challenge of meeting citizen's increasing demands and expectation"
  Atos

- „At a time when public sector resources and budgets are shrinking and citizens are demanding improved services, big data promises much needed relief for government agencies."
  Splunk

Stressing the concept's universal applicability

- "Public sector organisations could all benefit from harnessing the power of the Big Data they have available to them."
IPL

- "Virtually every agency collects data but many struggle to turn the information into useful information that can inform and drive decisions."
IBM Analytics

Data-driven government as an emergent Rational Myth?

- All the right ingredients for a Management Fashion

    - Driven by consultancies

    - Typical elements of Management Fashions

    - Links to dominant meta-narratives

    - Falls on fallow ground with public administrations

Global Discourse on
Big Data in Government

Vienna

Manchester

Amsterdam

Old Expectation of Convergence

New Public Management Is Dead—Long Live Digital-Era Governance

Patrick Dunleavy
London School of Economics and Political Science

Helen Margetts
Oxford Internet Institute, Oxford University

Simon Bastow
Jane Tinkler
London School of Economics and Political Science

Big Data in Government: No Magic Concept

Techno-utopias

Surveillance dystopias

Role of Narratives in Diffusion of Institutions

- Narratives as packages of „theorization" (Strang & Meyer 1993)

- What are the features of the practice?

- What problems can it solve?

- Who are appropriate users?

- What are the underlying cause-effect relations?

Early Times: Proto-Institutionalization

– "proto-institutions are candidates for institutionalization"
(Zietsma & McKnight 2009)

– "new practices, rules, and technologies" which "may become new institutions if they diffuse sufficiently"
(Lawrence, Hardy & Phillips 2002)

– discursive process of establishing shared meanings for emergent social practices

Global Discourse on
Big Data in Government

Vienna   Manchester   Amsterdam

Three Cities

	Vienna	Amsterdam	Manchester
Population	2,68 Mio	2,42 Mio	2,71 Mio
GDP per capita	42,049 €	47,465 €	27,407 €
E-Gov Development Rank	20	5	8
E-Gov Development Score	0,7912	0,8897	0,8695
Innovation Cities Rank (EU)	3	5	14
Administrative Culture	**(Weberian) Rechtstaat**	**originally legalistic, now pluralistic/ consensual**	**Public Interest (NPM)**
Local Government System	North Middle European	North Middle European	Anglo

Global Discourse on
Big Data in Government

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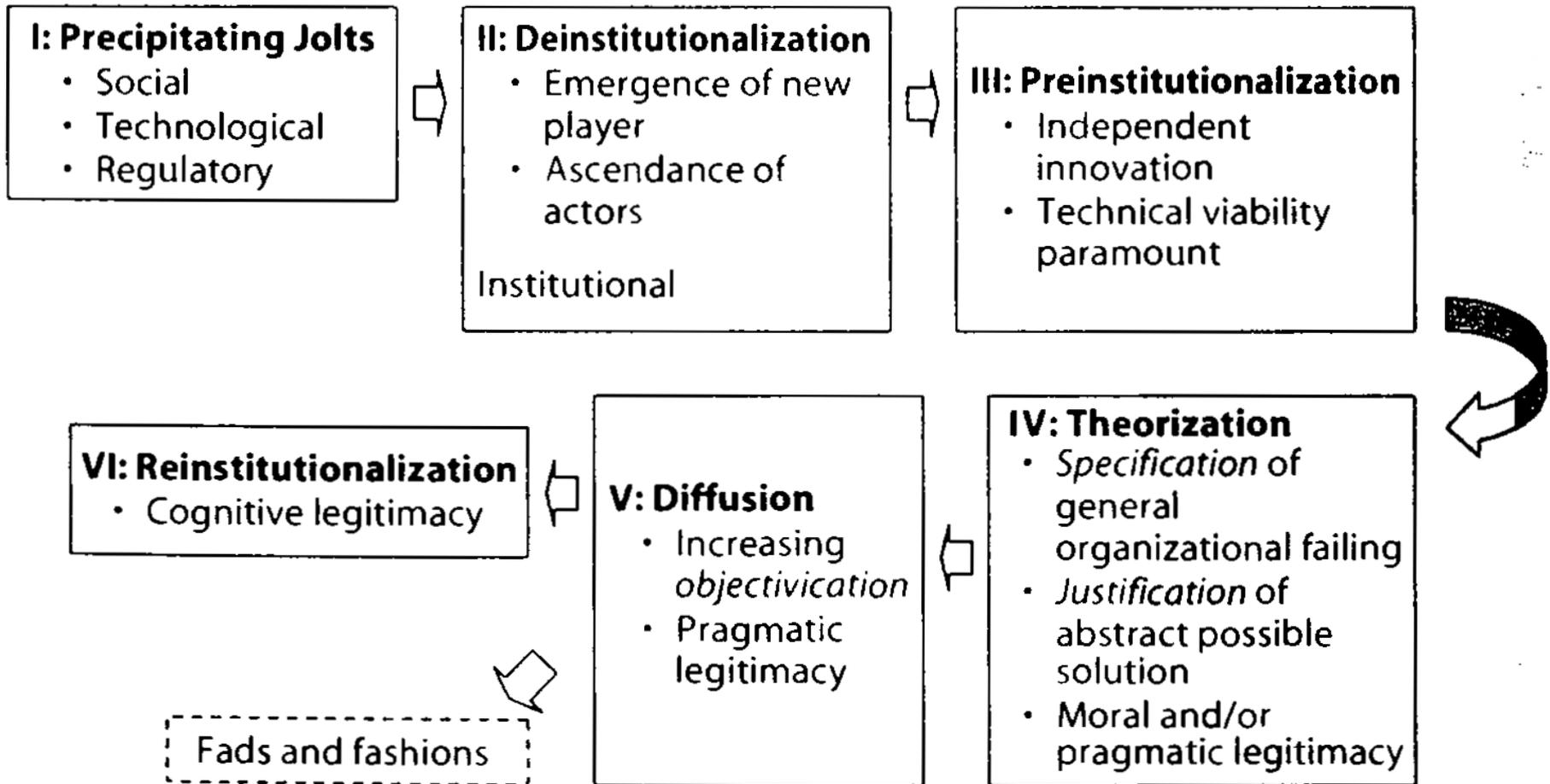## Translation & Editing (Sahlin & Wedlin 2008)

- "Translation refers to the notion that ideas change when they travel from one context to another" (Boxenbaum 2009)

- e.g. shaped by existing local institutional arrangements

- re-theorized in each institutional context

  --> divergence

Institutional Work

- bringing actors back in (beyond institutional entrepreneurs)
    - Discourse coalitions driven by interests and systems of meaning

- Creating, maintaining, demolishing institutions

- Making use of narratives and rhetorical strategies

Summing it up

- Emerging myth of Big Data in Government

- But various narratives of Big Data in Government

- Influenced by local context, streams in the global discourse, actors' interests and systems of meaning

I: Precipitating Jolts
- Social
- Technological
- Regulatory

II: Deinstitutionalization
- Emergence of new player
- Ascendance of actors

Institutional

III: Preinstitutionalization
- Independent innovation
- Technical viability paramount

IV: Theorization
- *Specification* of general organizational failing
- *Justification* of abstract possible solution
- Moral and/or pragmatic legitimacy

V: Diffusion
- Increasing *objectivication*
- Pragmatic legitimacy

VI: Reinstitutionalization
- Cognitive legitimacy

Fads and fashions

Greenwood, Suddaby, Hinings (2002)

Thanks!

Contact

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