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Better understanding impact of scientific knowledge on policy. Conceptualising policy making conditions

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Background

- Increasing demand for science and evidence for society and policy
- Scientists and scientific organisations are asked to do more impactful science
- Considerable dis-satisfaction with the way science relates to policy
- Assumptions: “Failure” mainly related to the science system and scientists (many studies, e.g. (ESRC 2009, Young 2008)
- Remedies: Adapt incentive structures in and for scientific organisations
- Existing academic studies mainly focus on:
  - Supply of knowledge: science production and incentives
  - Linkage mechanisms

Our basic Idea

- Focus on **knowledge users** in public policy
  - **personal characteristics**, **institutional conditions**
- …and their **interactions**
  - not a formalistic “dissemination” or heroic “co-generation”
- …while taking note of conditions, behaviour, interaction of scientists
- Fill a gap:
  - analysis of science system, scientists and linkage mechanisms
  - the (more recent) focus on process perspective (SIAMPI, ASIRPA)
  - political science approach with scientific input or experts as one variable
- Developing a longitudinal research programme

Main building blocks

- **Scientific evidence**: knowledge (co)produced by professionals in universities, public research organisation, think tanks

- **Impact: on whom** - Actors in policy making arena (all levels)
  1. "policy makers": agents in public organisations deciding or supporting decision making on policy choices (what, why, how, budgets)
  2. Politicians: elected, Parliaments/ Department heads
  3. (Intermediators)

- **Impact: nature** (Weiss 1999, Almeida / Bascolo 2006)
  - **Conceptual**: change in awareness, problem definition, normative/cognitive
  - **Instrumental**:
    - problem solving (I),
    - strategic (II)

  - *Either might happen without the other*

Theoretical lens

- Concept of institutional conditions (Scott 2013)
  - Socio-cognitive: (socially mediated) frames of interpretation, meaning
  - Normative: guiding values, norms, collective processes shaping expectations
  - Regulative: formal rules, incentive structures

  - Institutional carriers: express / embody / transport elements

- Explaining policy change: Reflexive institutionalism
  - Meaning of ideas, evidence and discourse for policy change

Reflexive Neo-institutionalism

- Political science approach to understand policy change
- Institutions are not only “constraints” for change
- Change comes about not (only) through
  - calculation of interests in given incentive structures,
  - windows of opportunities to change established historical pathways
  - evolutionary change of socially accepted norms

- Rather…
  - problem definition, solution space, perception of interest open to change
  - through reflection and of exchange on **cognitive** and **normative ideas**

(based on V. Schmidt 2007, 2012, 2015 (discursive institutionalism) and Edler 2000, 2002 (reflexive institutionalism)

Ideas in Discourse

- Ideas transported / modified in discourses (who “says” what to whom, how)
  - Coordinative:
    - to develop policy solutions in the policy space establish “consensus”
  - Communicative:
    - to interact with broader public, to gain political legitimacy
    - Interplay of policy knowledge with broader societal narrative
  - Complex interplay

In the Focus

- Policy change as result of scientific input
- Nature of normative and cognitive ideas (evidence) and its (co-) production
- Nature of discourse and discursive interaction (“producer and user”)
- **Regulative, normative** and **cognitive** conditions and processes
  - **…within organisations** (search, use)
  - **…of interaction** (e.g. science-policy; or policy-intermediaries)
    - Exchanges and deliberations between science and policy organisations
    - Co-creation of meaning and expectations
  - impact values and cognition in policy making organisations (vice versa)

(3) Broader, contextual institutional conditions, role of science in society

Towards an operationalisation

Institutional Carriers / Institutional Processes
Relational Systems
Symbolic Systems
Routines
Material Culture

Towards an operationalisation

Institutional Carriers / Institutional Processes	Endogenous institutional Conditions	Institutionalised interactions
Relational Systems	• R: Organisational hierarchies; funding streams • N: Informal authority systems • C: Identities; variety/isomorphism	
Symbolic Systems	• R: Formal rules and lawful obligations; targets; material rewards • N: Social roles that structure expected behaviour; valued impact expectations; informal rewards • C: Frames, schemas and typifications; mimetic behaviour; taken-for-granted elements	
Routines	• R: formal instruction; monitoring; evaluation • N: Collective action; [informal] activities; institutional work • C: Scripts; habits	
Material Culture	• R: Objects complying with standards and specifications • N: Perceptions of material culture of a certain standard as appropriate for the task • C: Objects with symbolic value	

Towards an operationalisation: (Policy making) organisation

Institutional Carriers / Institutional Processes	Within Organisations
Relational Systems	• Where are the sources of authority located in the policy organisation with respect to ideation based on research? • Are there dedicated units or groups dealing with scientific research?
Symbolic Systems	• What are values, beliefs and attitudes in the policy organisation with respect to scientific research and handling research results?
Routines	• What are professional routines in the organisation? • What are windows of opportunity for the use of scientific research in routinised policy processes?
Artefacts	• What is the material culture of policymaking organisation? • Are there objects signifying the role of scientific research? (libraries, repositories)

Towards an operationalisation: Interaction / relationship

Institutional Carriers / Institutional Processes	Between Organisations
Relational Systems	• What are authority relationships between policy and research organisations, including intermediaries and other stakeholders?
Symbolic Systems	• Is there significant separation between values and ultimate societal goals between policy organisations and research organisations? • Is there contestation?
Routines	• What are the expectations of regular interfaces (direct or mediated) between research and policymaking actors? • What usually happens procedurally at these interfaces?
Artefacts	• Where do institutional interactions take place? • Are they mediated by objects (phones, newspapers)? • What is the role of material culture?

Something to build on… systematically

Institutional Carriers / Institutional Processes	Within Organisations	Between Organisations
Relational Systems	Sources of decisions about credibility of knowledge (Bannister/Hardil 2017)	Existence of mission-oriented research; research contracted by the user side
Symbolic Systems	Importance to have organsational environment that values research (van der Arend 2014; Bowen / Zwi 2005)	-Discourse continuity and complementarity (Upham and Dendler 2015) -Value-charged discourse (Douglas, 2009)
Routines	Attention to routines at different stages of knowledge absorption (Moktar et al 2013)	Embeddedness in networks and regular exchanges (SIAMPI)
Artefacts	Objects signifying the importance of research in policy organisations (Uzochukwu et al 2016)	The roles of direct and indirect productive interactions

Beyond Science-Policy Organisations:

Overall value of science in society

What does it add…

- **We reverse the science biased focus**
- **Allow proper "demand side assessment"** (Sarewitz/Pielke 2007)
- We propose **reflexive institutionalism** taking
  - **content** and
  - **institutional conditions** seriously, at various levels
- We distinguish types of impact, **focus on neglected *conceptual* impact**
- …and in doing so might better understand (lack of) **instrumental impact**

Thank you!

[Annex] Exogenous institutional processes beyond organisational fields

Institutional Carriers / Institutional Processes	Beyond Organisational Fields
Relational Systems	What is the authority of science in society natonally? Regionally?
Symbolic Systems	What are the dominant world views and normative orientations in society? What are national strategy and goals?
Routines	What is the general ethics and professional codes of conduct for professionals in the society?
Artefacts	What are research and policy infrastructures and material conditions nationally? Regionally?

Annex: Something to build on

- Users need to show impact of policy, legitimise policy: demand for credible, salient, legitimate knowledge (Cash et al 2003, Pielke 2000)
- Value charged knowledge **meets normative / socio-cognitive user context** (Douglas 2009)
- **Ability to deal with uncertainty** major user factor (Bradshaw/Borchers 2000)
- **Role of values and beliefs of policy makers as filters** for evidence (Bowen / Zwi 2005)
- Knowledge in line with **professional and/or operational experience of user** organisation more likely to be used (Bannister/Hardil 2017)
- **Different roles in organisations: Who decides** which knowledge is relevant and credible? Why? (Bannister/Hardil 2017)
- Importance of **individual attributes** (education etc.), **professional routines** and **scientific context** changes for **different stages** of knowledge absorption (Moktar et al 2013, user survey)
- Perception of **conditions of science production** (autonomy, funding dependency etc.) influence nature of knowledge (Douglas 2009, James/Duncan 2017)

- However: no conceptual framework and theoretical underpinning