Knowledge claims and forms of expertise in the context of a techno-natural disaster

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FMU-IAEA International Academic Conference, *Radiation, Health, and Society: Post-Fukushima Implications for Health Professional Education*

25 July - 27 July, 2014, Fukushima Medical University

Points of departure

- expertise is a seemingly ubiquitous source of authority in contemporary societies
- “rational citizens” are seen as those following expert advice (particularly in the health domain)
- only in situations of crisis/controversy experts (and partly their expertise) are put in question

Paradox of expertise

While expertise is increasingly sought for and used as a source for making societal choices – in particular in science, technology and health related issues –, it is simultaneously contested.

Questions

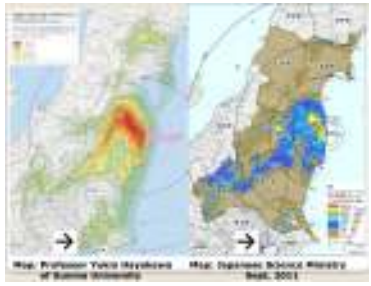
- Who can voice knowledge claims in society when we are confronted with challenging sociotechnical issues? And how is this done?
- What forms of knowledge can gain authority and what happens in its transmission from one person to another, from one context to another?
- How do knowledge claims relate to forms of expertise?
- What role do established power relations play in such situations and how are they challenged?

Situational analysis: techno-natural disasters

substantial disruption of the economic, social and cultural life of people: important changes in space and time

Reorganising space

- maps



- physical demarcations (e.g. control posts)

- displacement of matter (e.g. radioactive earth)

Time

Challenge to the medical profession

"Medicine is a science, like other sciences, but it is also a source of succor — a source of relief or assistance in times of distress. The two faces of medicine often conflict. One dimension of that conflict is urgency: medicine as a science has to try to get things right however long it takes, but medicine as succor has to provide an answer here and now." (Collins & Pinch)

Situational analysis: techno-natural disasters

- well-functioning and culturally embedded articulations between "the technological" and "the social" break
- they challenge our knowledge systems
  - ✓ teach us about our limits (of knowledge, of models, …), but also open possibilities for new understandings
  - ✓ make us understand how knowledge and non-knowledge is distributed across communities (scientific and non-scientific)
  - ✓ how risks are socially perceived and acted upon
  - ✓ .....

➔ different kinds of knowlegdes and experiences need to be addressed and integrated in order to take action acceptable to the diverse actors affected

Information paradigm: „If we only had the right information ...“

- strong belief that if the right information is available this would quasi automatically lead to generating appropriate solutions
- Not acknowledged:

  (1) ***the*** necessary and reliable set of data is always constructed from hindsight;

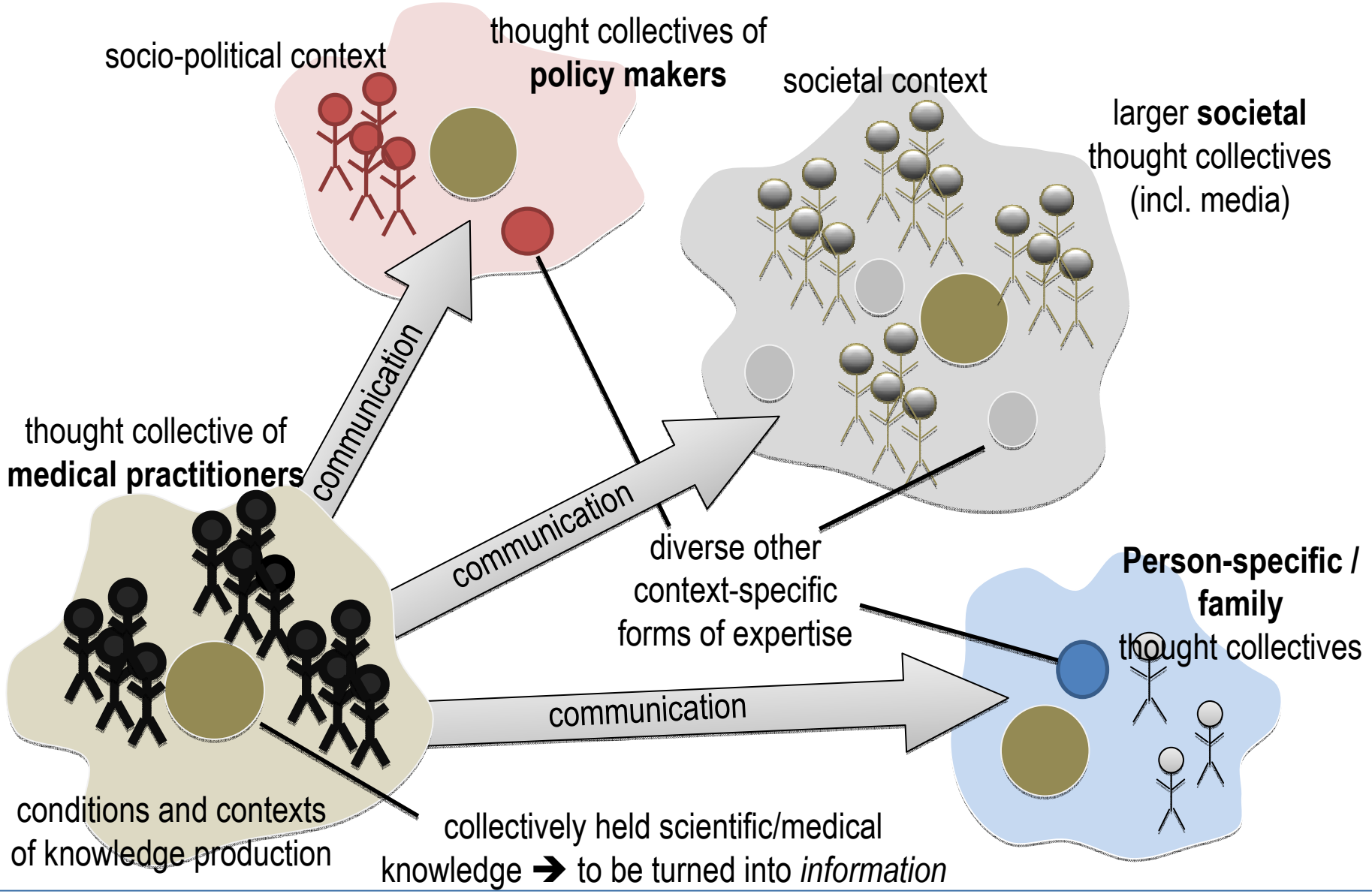
  (2) data gathering happens under extreme and often rapidly changing circumstances ➔ data continuously shift;

  (3) “the problem” is frequently not a merely “technical” one: the widely present repair logic does not work

  (4) skilled persons capable to interpret these data in real-world contexts are not widely available; and

  (5) a balance has to be found between adequate information and overflow of information

Scientific/medical knowledge and its situated communication



What does that mean for the role of the expert and trust/authority of expertise?

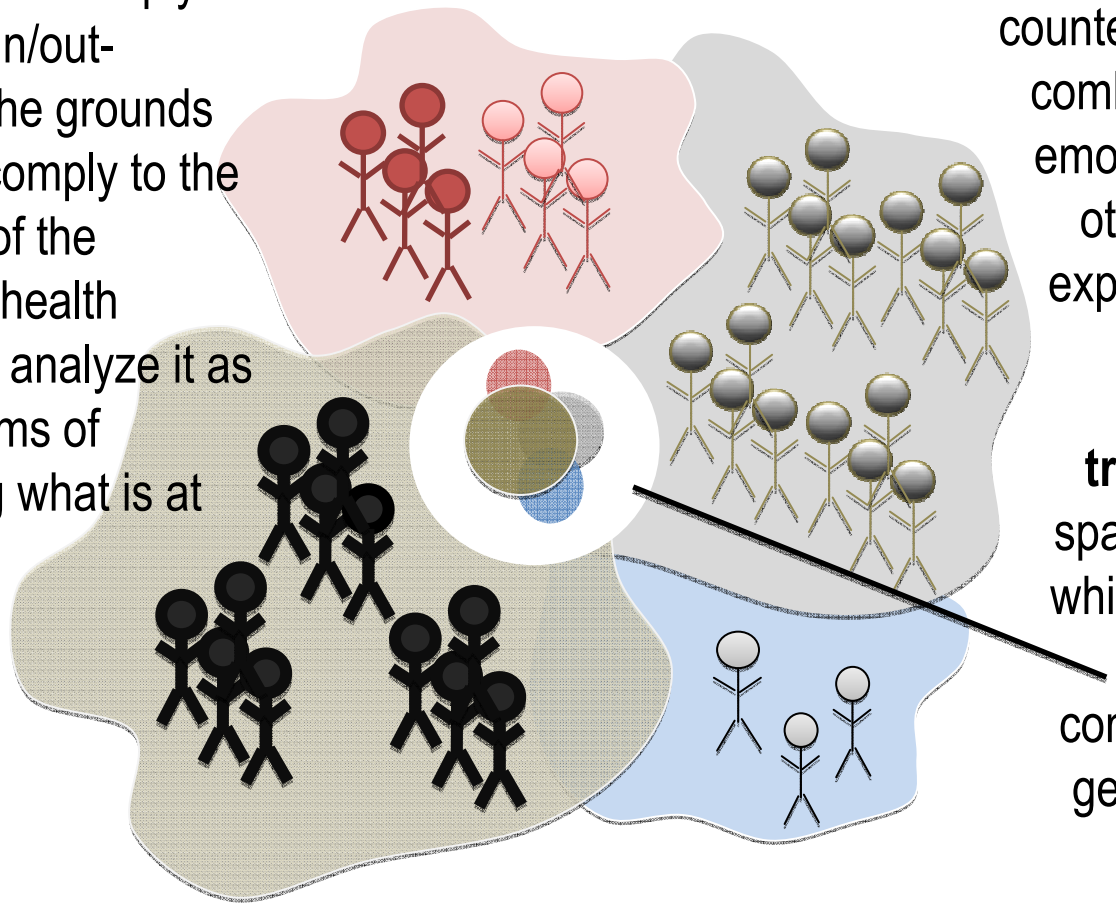
- **How is expertise acquired?**
  - generally through belonging to a well-established thought collective;
  - predominantly “routine expertise”, i.e. learning how to solve familiar problems by using a set of tools, techniques and approaches shared by the members of the collective
  - well-entrenched communicative relations with actors in and out-side the thought collective

What does that mean for the role of the expert and trust/authority of expertise?

- **What happens in cases of crisis/conflict?**
  - expertise can no longer exclusively build on routines
  - expertise has to become "the result of collective learning and assessment" (Limoges 1993);
  - "the collective" is no longer solely fellow health professionals, but now also includes different kinds of affected people (e.g. patients, relatives, citizens, …)
- **Who counts as an expert in such situations?** – expertise is not solely a property of a person acquired through learning within a thought collective; it needs to be developed and re-established in every fundamentally new situation ➔ trust and authority are always on the line

Multiplication of expertise

multiplicity of available expertise ➔ not simply discard other in/out-formation on the grounds that it do not comply to the thought style of the community of health professionals; analyze it as alternative forms of understanding what is at stake



more open contexts of knowledge production/communication

"out-formation" (Ezrahi): counterpoint to in-formation; combination of cognitive, emotional, aesthetic and other dimensions of experience available in society

trading zone (Galison): spaces in which collectives which normally do not have (a sustained) communication manage to get communication going ➔ develop a shared language

A crisis of expertise?

No – but health professionals need to develop new kinds of expertise (next to routine expertise) in order to respond adequately in such complex situations

✓**Interactional expertise*:** develop and master of the language of the domain where scientists and members of society meet

✓**contributory expertise***: contribute to a more collective understanding of the **socio-technical** (and not only the technical or the social) problem at stake

✓**adaptive expertise**: capacity to address new and complex problems "by creatively transferring and transforming elements of diagnoses, interpretations, and solutions across contexts" (Hackett/Rhoten 2009)

* Notions taken from Collins/Evans, yet used in a way different to their understanding

Beyond the moment of disaster

•Opening-up towards other knowledge actors ➔ participatory thinking instead of boundary drawing

•Acknowledging that *"outformation"* matters:

- integrating different knowledge cultures: rethink how knowledge is produced and shared
- considering knowledge geographies: how knowledge is distributed across different places, social groups, …
- different rationalities: acknowledge context-specific logics at work

•moving away from overestimating our capacity to control complex systems to a more humble and integrative ways of addressing potential problems