Roles of an STS researcher in research on responsible innovation

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My research

- **Research program:** NWO-MVI

- **Topic:** Social and cultural implications of early diagnostics of Alzheimer's disease: ex ante assessment of an emergent technology

- **General question:** How to *assess* the social and cultural implications of *early diagnostics* for *Alzheimer's Disease*?

- **This presentation:** Working paper on how my experiences as a researcher

MVI program

– Demands on a researchers:

- **Pro-active**, strong coupling of alpha, beta and gamma research, integrated in the technological development process, aimed at **valorisation** and with a strong international character.
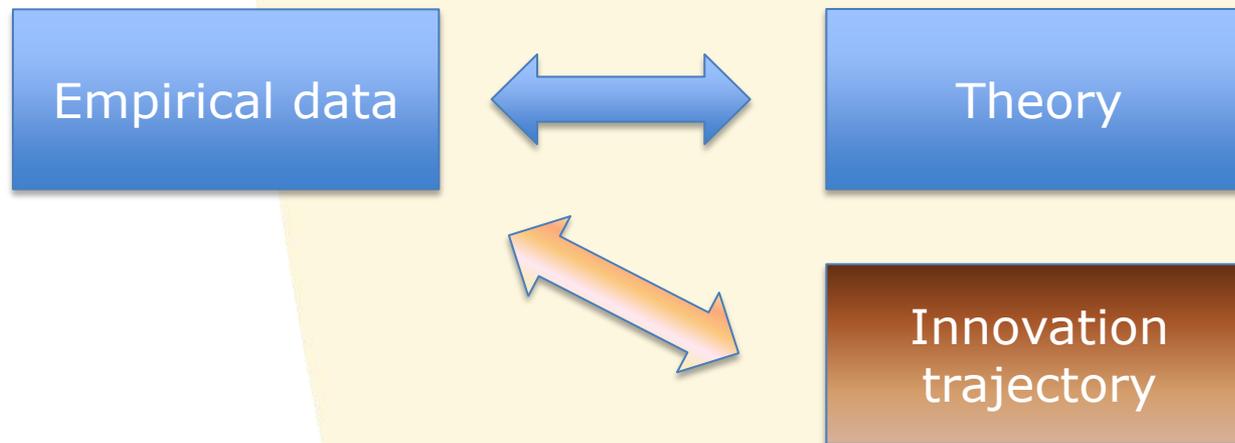
Struggling with the concept

Examples of issues PhD students are struggling with (WTMC Workshop 'What is Responsible innovation', April 2012)

- *How is my research project/my work related to the concept of responsible innovation?*

- *How to operationalize and evaluate responsible innovation?*

- *How is research aiming to contribute to responsible innovation different from research being conducted in the past (i.e. before this program)? Does this constitute new practices?*

- *At what concrete spaces and on what point does responsible innovation take place? Which processes are shaping innovation? Where to look for it? (Policy, regulation, laboratory, company, users?)*

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What do I do?

- Most interventionist/action research focusses on one location (e.g. research program, innovation project, clinical setting)
- My research focus: social and cultural implications
- There are **multiple networks**, actors, that are shaping AD and early diagnostics.
- I am constantly shifting between different settings of AD, ordering practices and the promises of early diagnostics.
- So: I do not relate to just one setting, but **move about** in the Alzheimer field
- I am **a visitor** in different places
- What has been my role up to now?

Example: Alzheimer Café

Example: Health Technology Assessment

Example: Nursing home

Example: valorisation panel

What was my role?

- Dependent on the setting
  - Becoming part of the machinery (e.g. volunteer, two extra hands)
  - As returning a favour (spy)
  - As researcher collection data (interview, facilitator)
  - As facilitating exchange in the AD field (workshop)

- Am I doing interventionist research now? Do I contribute to the ambitions of the NWO-MVI program? Or how should I do that?

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STS experiences

- Tradition of engagement *Handbook STS 3rd ed.*
  - Humbleness: Just one of the actors in a network
  - Balancing *"we seek academic respectability and institutionalization and their accompanying resources (…), yet also strive for change in the service of justice, equity, and freedom. Establishing and holding **the right balance** will be challenging, with the risk of irrelevance and disengagement on the one side and cooptation and loss of prestige and resources on the other."*

Chosing position in ELSA

Self proclaimed roles of ELSA researchers in genomics (Wieser and Radstake, 2011)

- *Collaborator* – partner in genomics research or in translating this to practical applications.
- *Scholar* – keeps a distance while analyzing in an academic manner.
- *Facilitator* – creates a social space for interaction between researchers and others.
- *Advocate* – emphatically takes a stance and tries to accomplish this.

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Measuring outcomes

- Such as 'authentity criterion' (Guba and Lincoln)

Authenticity	Definition
Fairness	Honest representation of different perspectives?
Ontological	Help members to better understand their social setting?
Educative	Help members to appreciate the perspectives of others?
Catalytic	An impulse for members to change their circumstances?
Tactical	Enable members to take steps needed to change their circumstances?

Action research in action

Robinson (2010) and Unpacking Intervention (special issue *Science as Culture* 2007)

- Just the ambition to intervene is not enough
- Working in a heterogeneous landscape – sorting attachments and specificity of situatedness.
  - specificities of the circumstances matter!
- Preconditions for intervention – knowledge of the field and legitimacy/authority.
  - knowledge: by immersion, becoming a member
  - legitimacy: positioning, networking, gaining trust, making connections.
- Difficult to attribute change to your actions

Conclusion

- STS – humbleness and balance
- Evaluation criteria – authenticity
- Unpacking intervention. Insertion: Moving in and out, becoming a member, heterogeneous network, sorting attachments, sensitivity of specificities, uncontrollable processes, difficult attribution of outcomes

For my research:

Does this bring along different problems?

Conclusion

- How to do this for multiple settings?
  - Multiple settings complexifies
    - becoming a member (of multiple settings).
    - sorting attachments

- MVI program:
  - implicit assumption that we should contribute to the technical (beta) researchers?
  - What then is the value of contributions on other locations?

STS research

- Tradition of engagement

  "research in science and technology studies is increasingly engaged with the outside World."

  "… in our time the field of science and technology studies (STS) may be characterized by its engagement with various publics and decision makers, its influence on intellectual directions in cognate fields,…' Handbook of STS (3rd ed.)

  E.g. (c)TA, Gender studies, Action research

- Of course this trend is broadly in science, not only for STS research

STS research

Humbleness

- Aim MVI: results need to be incorporated in innovation trajectories
- E.g. ANT: Just one of the actors in a network

Balancing attachments

- *"We do so with some hesitation and considerable self-reflection because we seek academic respectability and institutionalization and their accompanying resources (…), yet also strive for change in the service of justice, equity, and freedom. Establishing and holding* **the right balance** *will be challenging, with the risk of irrelevance and disengagement on the one side and cooptation and loss of prestige and resources on the other." Handbook STS 3rd ed.*

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Role of a social researcher

- How to be a good action researcher?
- Quality criteria Guba and Lincoln - trustworthiness and **authenticity**. Emphasis on empowering members of social settings

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"Make" perspective

Summarizing STS RI research

- Adding incorporation of results in innovation trajectory – interventionist

- But how do you do this?

- Quick answer: Workshops, interviews, informal relationships, broaden the perspectives, introducing new concepts, being in a position of decision making or designing yourself.

- But how does this work?

Taking position

Self proclaimed roles of ELSA researchers in genomics (Wieser and Radstake, LEV May 2011)

- Collaborator – partner in genomics research or in translating this to practical applications.
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Taking position

Roles of scientific experts in decision making (Pielke Junior)

- Pure scientist – summarizing state of knowledge
- The Science Arbiter – provides detailed answers to specific questions
- The Issue Advocate – reduces the range of options and scope of choices available to decision makers
- The Hones Broker of Policy Options – Seeks to expand the range of options, or clarify the choice available to the decision maker

YC: Andere invalshoek – overbrengen van kennis voor decision making. In hoeverre relevant?

But… what work does intervention entail?

- Based on Chapter six Douglas Robins experiments in interaction thesis – *insertion*

- Based on Special issue Science as culture 'unpacking intervention' – *sorting attachments, ethics of specificity*

Insertion

- Experimenting in real-world interactions
- Good intervention:
  - **Probing** the positions and forcefields in the nanoworld
    - Searching for a **fit** with developing circumstances
    - **Stretching** to braoden innovation trajectories and stimulate reflexive learning
  - For this you **need knowledge** of the dynamics and context of the nanoworld
  - And create some **legitimacy** for the analyst
  - Knowledge can only be gained through '**immersion'** and **formulating diagnoses** of what is happening and what could happen.

Insertion

- Moving in and out – for gaining knowledge and legitimacy
- Positioning yourself as a social scientists within a beta world
  - Not as a service role for the nanoworld
  - But showing you have something interesting to add
  - Arguing and showing your legitimacy and homebase is in social sciences
- A lot of energy, social networking and positioning activities
  - Immersing in the field: participating in meetings, interviews, discussions at posters, lobbying to be able te be at courses, informal conversations during drinks, keeping in touch trough email and phone, presenting yourself, etc.
  - Explicating your position and legitimacy: sending around papers, making products appealing to the nanoworld.

Insertion

- Difficulties to show your outcomes, your influence in the nanoworld.
  - Many forcefields, influences causing changes
  - What changes can be attributed to your interventions?
  - What would have been different if you would not have been there?

Unpacking intervention

- Often it is assumed that interventionist research is social science + practical relevance. And if you try hard enough you are able to intervene in practices.

- But it is not so simple – you are part of transformative practices, need to juggle incompatible attachments to various actors, agendas, institutions and organizations.

- Working in a heterogeneous, hybrid landscape. What are the consequences?
  – Emphasis on sorting attachments with actors (Jensen 2007)
  – Ethics of specificity (Zuiderent-Jerak 2007)

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Unpacking intervention

- Finding frictions/finding time
  - Intervention and transformation are only possible
    - when there is a **connection** between the intervening researcher and the actors in a certain practice
    - When you **find frictions** within the practices to work with
    - Then it is important to find comparable interventions, but this costs **a lot of time** for action research

Unpacking intervention

- You need expertise of the field you work with (Collins and Evans 2002)
  - Interactionist expertise – enough to interact interestingly with participants and carry out analysis
  - Contributory expertise – one needs to become a member of the vary practice you study
  - But how to do this while still 'doing STS'? (balancing? or different options?)
  - Ronald Bal 2007 wonders what it means to become a member. Membership seems to suppose a 'core' in a practice you should belong to, but more often there is heterogeneity and everybody is working in each others periphery.

Unpacking intervention

- Difficult to attribute changes to your actions
  - You do a lot in ways you might not expect
  - In a hybrid space in which many agents constantly negotiate and influence each other to achieve multiple conflicting goals.
  - Intervention is then a mutual betrayal, or artful contamination whereby actors spread their agendas, ideas and aspirations.

Unpacking intervention

- Messy epistemic authority
    - Not be overoptimistic about your capacities
    - Different interventions need different kinds of authority
    - Authority you cannot chose, but needs to be attributed to you.

Unpacking intervention

- Intervention?
  - Not to define or chose
  - No one way causation!
  - Could be troublesome Jensen 2007: What is considered 'useful' in practices with which they interact was not the same as what was valued in STS research. "*While attentiveness to complexity is a major strength of ethnographic approaches it was redefined as the central weakness in communicating results to health practitioners and policy makers.*" It might come with costs on the part of the researcher.

Unpacking intervention

- Ethics of specificity
  - Researchers work situated and in fluctuating circumstances
  - The specificities of the circumstances matters most when you want to make a difference
  - Intervention is risky, complex and only partly controllable
  - The hope for a heightened sensitivity for the interaction of research strategies in practices in a changing field.

Central points

- Not strongly related to theoretical or methodological choices

- Connection with actors in the field you study is a requirement

- Gaining legitimacy, being given authority, needs a lot of effort in knowledge and networking.

- Sorting attachments

- Sensitivity

- Interventions are only controllable, can be different activities than what you would call intervention, and are not easy to define or trace. Changes are difficult to attribute to your activities.