Encountering “Nanofood”

How Austrian Citizens Appropriate an Emerging Technology in the Field of Food and Nutrition.

Simone Schumann
Department of Social Studies of Science
University of Vienna
simone.schumann@univie.ac.at
http://sciencestudies.univie.ac.at
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To situate this talk…

Part of **my dissertation project** *Citizens' Encounters with "Nanofood" in the Austrian Context. Investigating Individual and Collective Appropriation Work*

Funded by the Austrian Science Fund FWF (P20890)

Principal investigator: Ulrike Felt
Collaborators: Martina Kainrath, Gernot Rieder, Simone Schumann, Claudia Schwarz, Michael Strassnig

“There are so many completely new risks you don’t know, e.g. that they (nanoparticles) can pass the blood-brain barrier. You know that food which originated in the evolution over millions of years is either toxic or good, because many generations made the experience. But this (nano) is completely new, there is no experience with it in the entire humankind …

My personal opinion – that’s my basis for decision-making - therefore I don’t have to know everything in detail!”

Focus of this talk…

Questions:

- How Austrian citizens come to grasp and make sense of a highly unfamiliar and future-oriented technoscientific development in the field of food and nutrition
- How discursive processes of building a position towards the "new" work out in a group setting

Aim:

- characterising and analytically ordering the key discursive practices of laypeople discussing nanofood
- reflecting on how they function in talk

Nanofood as a case

- **Food** as an interesting new **application field of nanotechnology** since it is linked with so many social worlds and contexts
- No wider public debate on it until know → this allows me to investigate people‘s appropriation and sense making processes **„in the making“**
- But nanofood itself rather represents a **“future abstraction”** (Brown et al. 2005) than a material reality.
  The rhetoric circulates around more or less possible future applications in the fields of novel or interactive food

Conceptual approach

- Many studies on laypeople's perceptions of emerging technologies that focus on the What.

  → the way **How** they are developed often remains untouched

My research is inspired by:

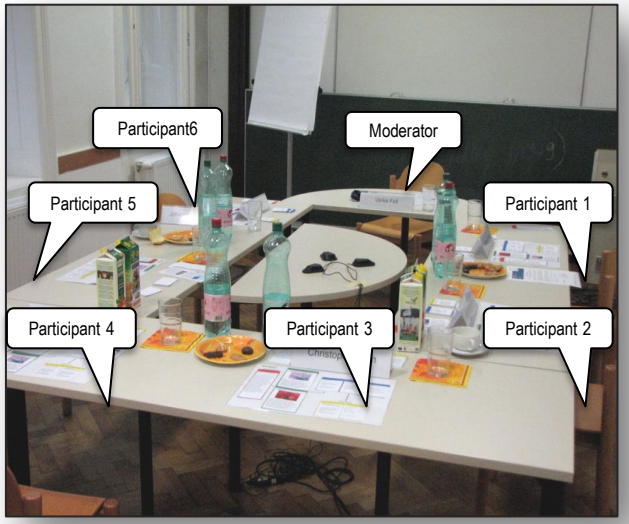
- studies that **emphasize** on **how** laypeople come to **grasp a novel innovation** (e.g. Felt et al. 2012, Felt forthcoming, Schumann/Schwarz forthcoming, Davies 2010, Horlick-Jones et al. 2007)
- literature from discourse analyses and rhetorical approaches in social psychology that work on the dynamic **processes of sense making** and **opinion building through interaction** (Potter&Wetherell 1987, Billig 1987, Meyers 2004)

Conceptual approach

- conceptualizing the processes in which participants make sense of new technologies and articulate as well as form a position on them as **social enactments** (Halkier 2010)
- as permanent work and “doing” and the means used to build them as **discursive practices and resources.**
- **appropriation** (de Certeau [1980] 1988) to grasp the more dynamic and flexible character of the meaning of nanofood.

Material

- **“IMAGINE” Card-based discussion workshop** developed in the FWF-project (P20890): Making futures present. On the co-production of nano and society in the Austrian context
  - to understand how imagination and positioning work is done **interactively**
  - to counteract a **lack of public debate** on nanotechnology in Austria



- Combining group discussions with **interviews** (e.g. Michell 1999)
  - to bring back **less visible positions** (e.g. through social hierarchies in the group) and **rebalance** the **individual and collective** positioning work
  - to better understand certain aspects of **social life** or **biography** of participants

Felt, Ulrike, Schumann, Simone, Schwarz, Claudia and Strassnig, Michael (2012) 'Technology of Imagination. A Card-based Public Engagement Method for Debating Emerging Technologies'. *Qualitative Research, in press*

HOW to appropriate nanofood?

- **Ordering**
- **Experiential framings and expertise**
- **Personal and cultural food practices and values**
- **Testing and concretising**

Ordering

- **Basic categorization**

“totally new”, “no experience with it”, “a technology like every other one - just another method”, “everywhere applicable”

- **References to technological trajectories**

“It was always like that… first everything is great so everybody does it … 10 years later they know that it’s harmful.”
“Some always have to die … that can’t be avoided … we have to live with risk”

- **Distinction and hybridisation work**

“Fish oil does not belong in bread ... Here it already starts”
“A dumpling will stay a dumpling … but enhanced with nanotechnology”

Experiential framings and expertise

- **Everyday life experiences**
  - *the computer* to establish a fast and inevitable progress narrative
  - *a district calendar made in china* to raise the possible problems of a global technology in the future

- **Analogies with other food technologies**

  "Only particular concerns benefit from GM technology, you know that … we don't want to discuss about GM technology but with nanotechnology it will be similar"

Experiential framings and expertise

- **Discourses of expertise**
  - **professional background** as a knowledge resource to argue a position, to underline expertise, to show interest or to justify critique on other opinions.
  - **scientific knowledge** and facts to nail down arguments or close a debate and to perform expertise and authority
  - locally and culturally **shared** and valued knowledge to collectivise a point or to silence other opinions
  - stories of their **suffering or affectedness** from a disease to strengthen their viewpoints
  - **alliances** of expertise that support each other to push through their agendas

Personal and cultural food practices and values

- Personal **eating practices and buying rationales**

  natural, organic, regional, fast, simple, timesaving, cheap, fresh, tasteful, spontaneous

  *"The best would be to easily take **a pill** if I am under **time pressure** … and that's it. On the other hand I just want **to sit** and **eat in silence and peace** and it should taste **good and natural**."*

- **Functions of food and degree of importance in life**

  health maintaining/disease causing; a moral, social and environmental statement; unimportant and functional; ideological and identity building

shared cultural understandings, narratives and repertoires and dominant societal discourses

Testing and Concretising

- **Drawing on "present" catastrophes** (economic crises, Deepwater Horizon, Fukushima)

  "If you had asked me one month ago it could be different, because there was no nuclear disaster"

  - *"25 years ago you had to wipe your shoes and take care what you eat because of radiation … but people forgot it"*
  - *"we are on the wrong way"*
  - *"They say that the highest level of radiation is reached ... and on the same day this Japanese functionary eats strawberries"*

→ to **probe and play through** the possible effects nanofood might have on food and society.

Testing and Concretising

- **Creating fantasy products**
  - 0 calorie schnitzel, tasty healthy food, the banana-apple, pill containing all essential nutrients
  - *The wonder drug* that makes humans *"better, smarter and more beautiful"*
  - *The superpill* that "*includes the food of a whole day*"

→ to test, work and play around with them, in order to be able to grasp, negotiate and evaluate the more **societal and ethical consequences** of an emerging technology

→ to point to some of the most poignant issues of technological change and provide **scope for techno-moral visions**

to conclude …

- Remember that opinions could neither be **collectivised** nor **individualised**
- Categories as analytical separations to sharpen our view on the **complexity** of sense making processes
- Discursive practices and resources as **related with** and **constitutive for** each other
- Sensitivity for interactional processes in micro studies to reveal broader issues concerning the **relationship of technosciences and society** as well as the **power relations** articulated within it.

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Thank you!

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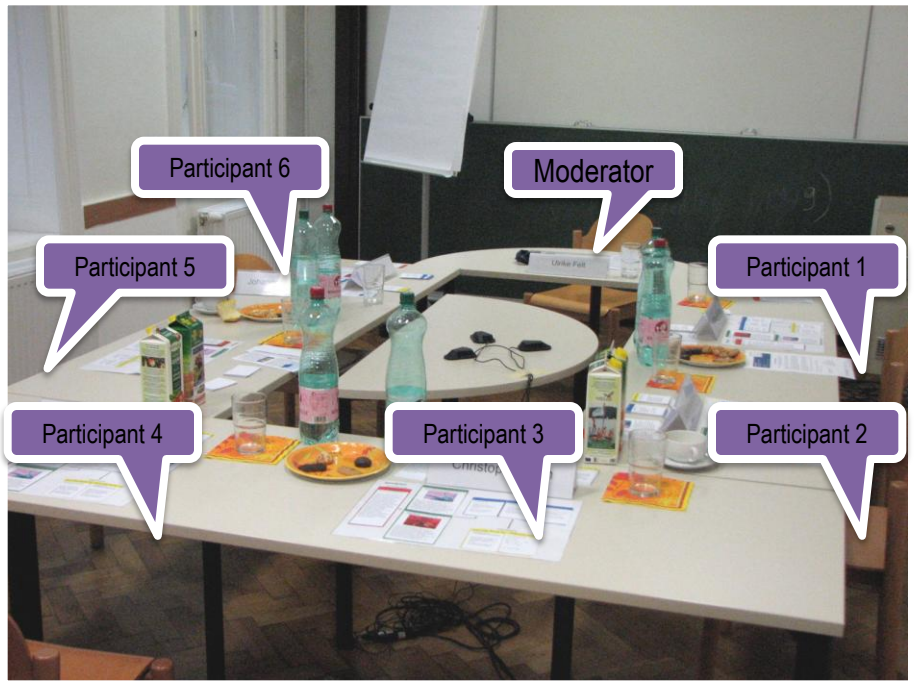
Material & Method

Card-based Group Discussions

Nano & Medicine



Nano & Consumer Products

Nano & Food

Nano & ICTs / Surveillance

- 4 different thematic workshops focusing on different application fields
- 6 citizens (supported by one moderator) discuss for about 4 hours

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Available at http://sciencestudies.univie.ac.at/publications