Open Science and Epistemic Cultures

PD Dr. Werner Reichmann
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Citizen Science

Open Innovation

Open Access

Open Data

Open Peer-Review

Open Government

Open Source

[...]
A sociologists’ view:

(1) The Structure(s) of Open Science

- Market Structures
  - Publishing Market
  - Data Market
  - Labor Market
  - Software Market
- Social Structures
- ...
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(1) The Structure(s) of Open Science

- Market Structures
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- ...

(2) Open Science as Epistemic Culture

The doing, enacting and practicing Open Science.
Open Science as Epistemic Culture(s)

What are Epistemic Cultures?
Open Science as Epistemic Culture(s)

What are Epistemic Cultures?

Mike Peyton, *The New Scientist.*

(Source: Knorr Cetina 1981)
Open Science as Epistemic Culture(s)
What are Epistemic Cultures?

„[E]pistemic cultures: those amalgams of arrangements and mechanisms—bonded through affinity, necessity, and historical co-incidence—which, in a given field, make up how we know what we know. Epistemic cultures are cultures that create and warrant knowledge, and the premier knowledge institution throughout the world is, still, science.“
(Knorr Cetina 1999:1; original emphasis)
Open Science as Epistemic Culture(s)

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Epistemic

Truth-related goals
Open Science as Epistemic Culture(s)

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Open Science as Epistemic Culture(s)
Focusing the researchers practices

“Open Science represents a new approach to the scientific **process** based on cooperative **work** and new ways of **diffusing** knowledge by using digital technologies and new collaborative tools. The idea captures a systemic change to the way science and research have been **carried out** for the last fifty years: shifting from the standard **practices** of publishing research results in scientific publications towards **sharing** and **using** all available knowledge at an earlier stage in the research process.“

(European Commission 2016:33, my emphasis)
Cultural Practices of Openness

Cultural Practices of Openness  
(Levin and Leonelli 2016)

- Openness is not a „One-Size-Fits-All“-Concept
- The Performance of Openness is „Mode of Valueing“
- There is a „Dilemma of Openness“
Cultural Practices of Openness
3 empirical examples (Levin and Leonelli 2016)

- **Biological Materials**
  (Transgenic Mice)

- **Research Tools**
  (Software)

- **Common Resources**
  (Database)

When?  
How?  
Who?
Cultural Practices of Openness
1 example from sociology

Qualitative Sociology
(Qualitative Data)

Does sharing make any sense at all?

When?

How?

Who?
Thank you for your attention.

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