

## CALL FOR PAPERS

### **Representing scientific results: Forms of knowledge**

Workshop, November 18-19, 2016 - University of Kassel, Germany

Organized by Nina Kranke and Robert Meunier

Investigating the forms as well as epistemic and social roles of scientific representations has been an important part of science studies in the last 30 years. Representations in science are as heterogeneous as science itself. Accordingly, the literature is vast and there is no unique definition, but, at best, some family resemblance between the things we address as representations in science. This workshop takes a more specific look at scientific representations, while remaining open to the variety of formats and media used. It focusses on a specific role of representations: Representing results of research.

#### *Representation in research and representing results of research*

The category of a *result of scientific research* is at the same time the most obvious and a somewhat underappreciated aspect of representation. After the practical turn in science studies, results seem remote from where the action is in science. Furthermore, the focus on results runs the risk of falling back on time worn distinctions like the one between representation and the world represented or the context of discovery and the context of justification. Indeed, observation and experimentation isolate and fabricate phenomena, use material models and generate inscriptions. They abound in representations. These items are mainly presented as methods or as evidence. They can, however, under some circumstances also be used to represent results, posing the question of the difference between evidence and results. Other items such as diagrams are predominantly used to represent results, but they often also play a role in the reasoning processes that accompany research. The differences lie mainly in the role representations play rather than in the formats or media. We suggest to revisit representations of results and ask: What can we learn about knowledge production by focusing on the form of the product?

#### *Forms of knowledge and formats of representation*

Research typically aims at knowledge of a certain type: The composition of an object, causal relations, statistical correlations, a taxonomy, a genealogy, or a network of agents, and possibly many other forms of knowledge. We can identify such forms of knowledge by looking at and abstracting from the representations of results. Representations thus indicate what counts as result in different situations. We can also identify types of representations that are associated with or predominantly used to represent knowledge of a given form (maps, statistical graphs, diagrams of mechanisms, tree diagrams, or network graphs among others, and, of course, various forms of linguistic representation). It seems that no form of knowledge is bound to a single format or medium of representation, but not all knowledge can be represented in every format. Furthermore, formats differ with regard to cognitive accessibility or the amount or dimensionality of information that can be transported.

- What is the relation of forms of knowledge and formats and media of representation?
- How are formats and media chosen and how, and under what circumstances are results translated between formats and media?

### *Working towards results and starting from results*

Focusing on the representations of results shall not imply to ignore research activity. But research activity can be looked at from the perspective of the kind of representations it produces. Additionally, the actual crafting of representations of results is an activity that might include the translation of some forms of representation used in the research process (working models, inscriptions) and the use of specific tools for data visualization. Furthermore, representations of results are no dead ends. A result might be used in further research or in extra scientific projects and its usability might depend on its format as well.

- How does the form of representations of results shape research activities that are meant to lead to representations of that form?
- How are measurements, traces or facts generated in the research process translated into representations of results?
- How does the form of results enable and influence their use in further research?

### *Communicating results and organizing interaction*

Representations of results are used to communicate results to the scientific community or other actors. They are geared towards convincing people, i.e. they have a rhetorical side. This might influence the choice or style of formats used. Furthermore, representations of results are shaped by and organize interaction among individuals and groups in terms of standardization of formats and coordinating collaborative work.

- How do representations of results organize the exchange and interaction between various groups within science and between scientists and other parties involved?

The workshop seeks to bring together papers focusing on case studies concerned with representations of results in various natural and social sciences from the perspective of philosophy of science, history of science, STS, semiotics, cultural and media studies and related fields that address, in one way or another, one or several of the questions raised above.

Confirmed invited speakers are: Rasmus Grønfeldt Winther (UCSC) and Marion Vorms (Birkbeck University, London, Université Paris 1). Evening lecture: Hans-Jörg Rheinberger (MPIWG Berlin)

We invite submissions of abstracts for individual presentations of 30 minutes, followed by 15 minutes of discussion. Abstracts should not exceed 250-300 words. Please submit titles and abstracts by 31 March 2016 to: [nina.kranke@uni-kassel.de](mailto:nina.kranke@uni-kassel.de)

Hotel accommodations for two nights will be provided for those whose papers are accepted.