

New Possibilities and Old Inequalities in Academic Careers

First Findings of a Sociological Inquiry in the Cluster of Excellence UniCat

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Research Topics

A cooperation between the Cluster of Excellence UniCat and the Department of Methods of Social Research has generated first findings. Our data tell us something about the innovative nature and enduring problems of scientific careers. The starting point of our sociological analysis is the specific structure of UniCat's research organization which is characterized by interdisciplinary orientation and a tight thematic frame between the projects. In our study, we investigate how these structures on the one hand *shape the production of scientific knowledge* and on the other hand *influence individual researchers' careers*. Beyond these fundamental research questions, we try to explore the multiplex, heterogeneous forms of cooperation and organization between scientists in the cluster.

Data and Methods

In order to answer these questions, we have analyzed social processes in the cluster, using a mix of both, standardized, quantitative and open, qualitative methods of social research. The aim of qualitative forms of data collection is to explore new kinds of thought, routines and so on. The advantages of standardized methods are the comparability of answers and the possibility to represent wider spans of persons. The mixed-methods-design used combines both forms of data collection for a reciprocal correction, extension and validation of the findings.

Qualitative *interviews* leave natural scientists interviewed the possibility to answer the questions beyond given categories. Up to this point, we have conducted more than 40 interviews with scientists involved in different parts within UniCat, as well as a control group outside the cluster in comparison. For monitoring the social processes of the emerging cluster, it is necessary to regularly repeat data collection over time. This is the only possibility to inquire the consequences of UniCat concerning the cooperation between scientists or the production of scientific knowledge.

The first *Online-Survey* with the title ANU (Analysing Networks in UniCat) took place in summer 2010 with an extraordinarily high response rate of 75%. We hope that we will be able to replicate this rate in future studies, as advanced methods of data analysis require high response rates and because missing data generate a strong bias in the interpretation of network-pictures and statistical parameters. The conception and analysis of the survey is shaped by a network-perspective on social processes. Network Analysis therefore models the web of relations within the research projects only for a specific type of relation. An example for a network of reciprocal awareness of the scientists is shown in Figure 1 on the next page. Similar to the interviews, a regular repetition of data collection is necessary for an appropriate interpretation of the consequences of UniCat.

Innovative Processes within the Cluster

First findings give clues to answering the question about the impact of the cluster on the production of new scientific knowledge. Our data show that *acknowledgment of new possibilities through the research association is a driving force for processes of innovation*. Respondents often describe this point as UniCat's main asset, but sometimes also as excessive demand. Mostly they see the structure of the cluster as crucial for possible new directions in research. According to our interviewees, there are manifold new resources for research of the single scientist, like different methods, instruments or probes, provided through cooperation and often described as enhancing the results and quality of outputs. Additional scientific personnel, new contacts to other scientists and new expertise for former unavailable methods or interpretations are other dimensions of this general topic. These possibilities are first of all just noticed and only activated in research activities when needed for concrete problem-solving.

Inequalities in Scientific Careers

In the case of inequalities of specific groups in UniCat, the online-survey shows interesting results. For example, by modeling the web of relationships in selected projects, positions of women and their integration in the cluster can be analyzed. We can see that, compared with their male colleagues, women mostly still take less central positions in core-activities of research. This is in particular also grounded in the lower academic status of women, too. That is what the third finding presented here tells us and refers to the complexity of the situation. But our data show that even in the same status group, such tendencies can be found.

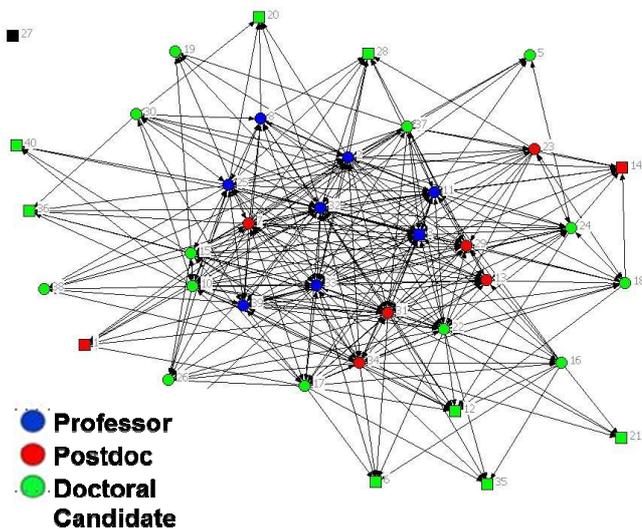


Fig. 1: Network of Mutual Perception

Forms of Organization and Cooperation

The analysis of organizational forms and cooperation in the cluster shows that primary orientation in research-activities is still the classical hierarchy of departments. Figure 1 shows that professors (blue) and post-docs (red) remain the central status groups. Doctoral candidates (green) are less centrally positioned in the network. Status-groups are thereby constituted by both hierarchical positions in the department and qualifications (like the PhD. thesis) as passage points of a scientific career in a scientific discipline. The emerged status of a person then is important for the recognition as central actor in the cluster projects. The interdisciplinary formal structure of UniCat has not

displaced classical orientations in science such as disciplinary and hierarchical ones, yet.

Prospect

These first findings presented in this paper are not intended to give scientific explanations to the described research-questions. Further inquiry is needed especially in the changing structures emerging in and through UniCat. They can only be adequately observed over a long period of time and therefore we would like to continue data collection in the cluster.

Finally we would like to thank the participating scientists inside UniCat and the control-group for the superior recourse and the time they have spent for the interviews, as well as the interest and trust in our sociological research. The described concept implies the chance to gain insights in the manifold processes and the complex social life in such a big and research association. It opens up possibilities to reflect and to get a better understanding of the phenomena for both scientists in the cluster and social researchers. There is the chance not just to learn from each other, but with each other.

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