Conference "The Methodologies of the System"

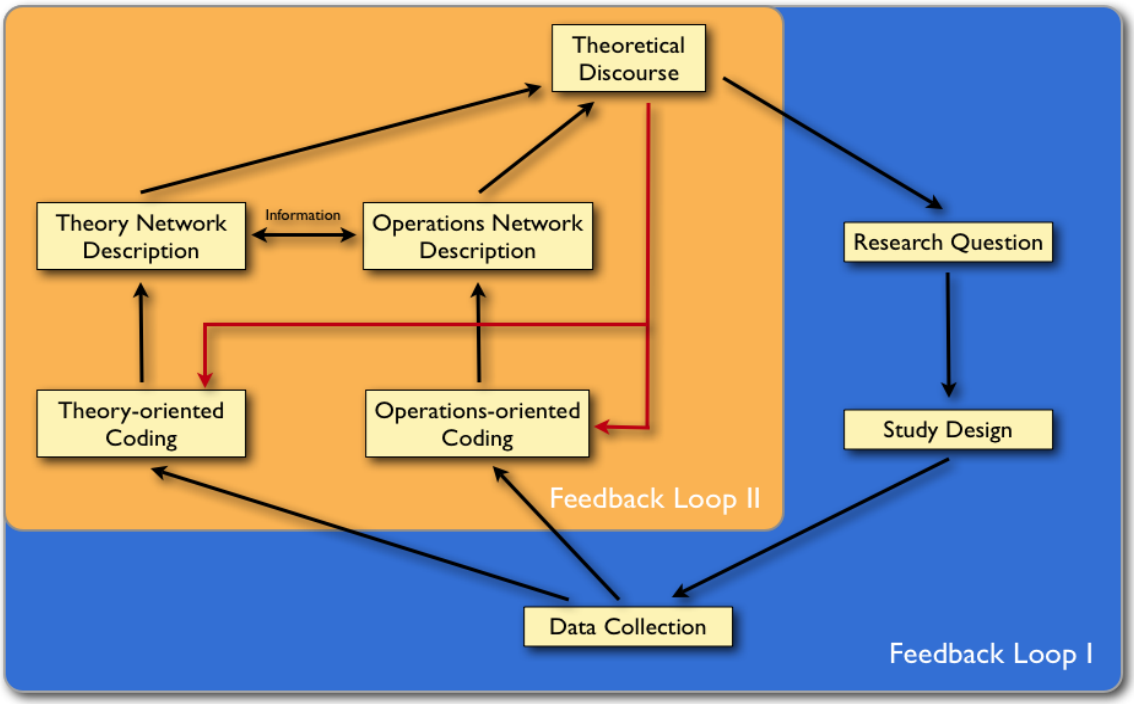
Workshop Contribution

by Florian Grote, Berlin
http://fgrote.wordpress.com

Re-Synthesizing Theory
A Methodological Feedback Loop

Investigating a specific theoretical question by empirical means can lead to research processes that closely resemble a feedback loop. Although it may have twists and turns, the details of the theory are both its departing and its destination ground. Like other feedback loops, such research processes require careful tuning of their parameters - the definitions used for the formulation of questions, the contours of codes introduced during analysis, and finally, the condensation of the findings into both textual and visual representations. The workshop contribution will sketch out the research methods currently used during a study that investigates the role of locality and the difference between space and place in the emergence of social order in a specific network of the electronic music scene.

The project attempts a double-network-synthesis (see block model), with the aim of connecting the semantic realms of the theory and the collected data on working social operations. Two network descriptions are formulated, one representing the identity/control network as observed in the field, the other attempting to approach theoretical proposals concerning the working difference space/place and locality. Both grounded in the same data set, the network descriptions can inform each other through semantic mapping: The empirical occurrences and qualitative relevance of the operational network's elements determine the probability and quality of links and nodes in the theory network, and in turn can help discover hidden wirings among social operations. The identification of elements to be used in the network descriptions is certainly informed by the theoretical background of the researcher, but each implementation of an element into the re-construction of the theoretical network has to co-occur in empirical data.



Simplyfied block model: The Methodological Feedback Loop

The visualization of the network descriptions is realized both as classical network layout and in terms of Spencer-Brown expressions. These expressions allow for detailed analysis of role perspectives and efforts at organizing (controlling) parts of the operational network. Within the theory network description, Spencer-Brown expressions should help to focus on definitional problems in the context of relevant aspects of the theoretical framework.

As a part of this consistency-approach, all data is organized and subsequently analyzed within the software ATLAS.ti (http://www.atlasti.com). This program is designed for social research projects that involve primary material in different media formats, such as text, audio, images, and video. The program incorporates a variety of methodological approaches, most prominently those of Grounded Theory and Network Theory. By no means an advertisement for the program, the workshop contribution will discuss if and how the tools available inside ATLAS.ti can be utilized for empirical research in the context of Systems Theory. While some tools readily lend themselves to the tasks, others are suggested to be misused deliberately.

The Study

The framework of this research project was developed with Prof. Dr. Dirk Baecker. It departs from a theoretical problem: As communication involving computers is less and less dependent on local arrangements to incorporate rich proposals for continuation of communication, how can we describe the empirically evident need for topological semantics to support communication? Why is place still such an important theme in functional systems, while it has continuously lost importance as a precondition for communication since the implementation of writing? This background question – again, a theoretical problem, as practice seems to get on quite well without it – has lead to this empirical study in the field of contemporary music cultures that heavily depend on computers for both their cultural practice and their economic survival. Data was gathered in different situations – interviews, participatory observation, action research, and the collection of publicly available material. This data is now being organized in ATLAS.ti and subjected to analysis that couples the possibilities offered by the software with informed methodological choices that take the theoretical background and the planned direction of the project into account. Thus, sections and fragments in the data set are coded in terms of their theoretical context, thereby taking a “grounding” approach to theoretical work rather than following the strict Grounded Theory paradigm as suggested by the software. Having all data available on the computer makes it possible to code it in detail, which is of course to be expected for text but can be very useful when possible with audio, images, and video as well.

Research on the output of this first iteration of data analysis is then subjected to further research using simple statistical methods in order to detect significant accumulations in co-occurrences of certain codes or patterns in their succession. Some codes are subsumed under new meta codes, and then again subjected to quantitative analysis. At the same time, visual representations of code relations are developed utilizing the so-called “network views” of the software. Codes are represented as nodes and can be linked by introducing relations either from a predefined set or using a custom definition. The predefined set of relations in ATLAS.ti is mostly unsuitable for a network representation based on the terminology of Systems Theory or sociological network theory. Therefore, a set of relations is introduced that ensures both consistency with the theory and usefulness in the context of a network representation of codes used on empirical data.