

## **Course 2**

### **Research Objects in Action**

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Research processes in the arts and sciences start with the desire to understand, develop, or optimize something. Therefore, you create a conceptual and material framework, which is often transformed during the research process in interaction with certain objects. 'Objects' in this case do not refer to the end products of research processes, but rather to all the different tools, instruments, and forms of representation used in opening up a phenomenon for investigation.

In this course, objects – as created and put to use in a scientific or artistic context – play a major role. We invite contributions about research objects in action, understood, in the broadest sense: as things that are first developed and defined in research praxis; as methodological, analytic, and representational tools; as well as more stable, already available objects. We propose a comparative approach, where the same or a highly similar object circulates in and between more than one research context in the arts, design, or the sciences. These contexts are to be chosen in such a way that noteworthy differences or similarities can be shown.

Can different ways of handling such 'research object in action' be discerned in different knowledge cultures? To what extent can these different usages be related to the design of each object and its tangible and graphic qualities? What can be learned in this way about the specificity of the research design? To which degree do the (inner and outer) spaces of investigation, the social context, and further material constellations play an important role, too?

The aim of this course is to discuss, by means of specific case studies, (a) why and how objects are active in particular research contexts; b) how initial questions shift during research because of their being embedded in certain objects; c) how these material things themselves are transformed and further developed during research processes (e.g. through experimental procedures, repetitions, variations, etc.).

For example, by focusing on a prominent example, the camera obscura, multiple comparisons can be made. This device was utilized in various artistic and scientific research practices in the seventeenth century. Jan Vermeer used a new camera obscura technique to create his naturalistic paintings; Johannes Kepler consulted the camera obscura as a heuristic tool to study the working of the eye and the optics of perception; finally, Christoph Scheiner needed it to observe sunspots. The camera obscura was used together with new optical technologies which were still unstable at the time and in constant development, such as the telescope, the microscope, and the magic lantern. These instruments were developed, modified, and combined as part of the artistic and scientific research practices in which they were used.

In other contexts, you could, e.g., come up with the following questions: what role does the use of the living body play in drug experiments (in the fields of pharmacology, psychiatry, or literature)? What aspects of artificially grown cell cultures captivate artist collectives on the one hand and biologists on the other one? And consequently, how do they then direct their research? Given the focus on photograms, wherein do radiologic and surrealist approaches of research differ? Which modifications do instrumentally used diagrams or notations show in varying experimental setups?

Proposing original topics from your own research project is strongly encouraged.

**Course Languages:** German and English

**Concept and direction:** Inge Hinterwaldner, Schirin Kretschmann and Sigrid Leysen

**Guest Lecturer:** Viktoria Tkaczyk

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