

# CHARACTERISTICS AND INTERFERENCES OF EXPERIMENTS IN SCIENCE, THE ARTS AND IN DESIGN RESEARCH

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artworks likewise as experimental – a usage that is often claimed to be metaphorical, since experiments in the arts (including design) lack the essential attributes that define a scientific experiment.

Currently, research in the fields of science studies and literary science has revised these established conceptions as well as the primacy of the scientific experiment. The philosophical approach of New Experimentalism relativizes the deductive conception of hypothesis-testing experiments and argues for a broader view. Studies in literary science and cross-disciplinary comparison between the arts reveal an age-long experimental tradition and also common characteristics of experimental work in these fields. Design researchers should be aware of these developments in order to position, theorize and argue for design experiments accordingly.

film, music, fine arts, and design. Clearly, the “two cultures” (Snow 1964) claim likewise that they conduct experiments, proceed in an experimental manner or produce experimental artefacts. Nonetheless a comparison between the experimental practices and results of the “two cultures” show profound differences. At first glance, there might even be more differences than there are communalities.

Differences and blurred borders can also be found when we examine experiments in design practice and in practice-led design research. In both fields the term “experiment” was and still is often used but poorly defined or interpreted. The multiple uses of the term and its different meanings and connotations in the various fields bear closer examination.

In order to shed light on this subject this paper chooses an approach from the science studies and literary science. During the last decades these disciplines have compiled an extensive body of knowledge about experiments, the interplay between experimental practice, construction of theory and instrument making, characteristics and validity of experiments in the various fields and, last but not least, the social and material contexts of experiments (Kuhn 1976; Schmidt 1978; Gombrich 1980; Hacking 1983; Rheinberger 1997; Berg 2009; Gamper, Wernli and Zimmer 2009, 2010, 2011; Kreuzer 2012)

The paper first, examines the etymological origin of the term “experiment” and early experimental practices in