

KNOWLEDGE DESIGN

Graphic Design in Science Communication

International Conference
April 6th-8th, 2016
Forum Scientiarum
University of Tübingen

Rhetoric Department
Research Center for
Presentation Competence
PD Dr. Olaf Kramer
Dr. Thomas Susanka

The visual turn has changed science in a fundamental way: Today, scientific findings are not only discovered or calculated but are also in manifold ways graphically formed and designed. Strategies of visualization have affected the scientific community itself, where posters and presentations at conferences have become the predominant device for communicating about one's research. But visual communication has also become central when scientists endeavor to communicate their findings to a non-expert audience. Today, more than ever, scientists are designers of knowledge – there is no communication of science without graphic design.

Graphic design is a form of visual communication: Layout, colors, typography, and visualizations accelerate communication and facilitate the flow of information. Graphic design thus aims at enabling the addressee to build up new structures of knowledge. From a rhetorical perspective, the central question here is how information can become comprehensible by design (*perspicuitas*) and how immediate insight and understanding can be achieved (*evidentia*): How can graphic design render scientific findings comprehensible and clear? Which devices or techniques of graphic communication are persuasive? And in what ways can graphic design become susceptible for manipulation or misinformation?

Graphic design, however, is not only a method of rendering communication more efficient. At the same time, designing information and knowledge also bears an epistemological dimension, as the graphic form crucially determines how we think about concepts and theories (e.g. of different atom models, the

wave-particle duality or the configuration of space through cartographic representations). Since knowledge only exists within the confinements of its semiotic representation, graphic design creates meaning just as much as it communicates meaning. This brings up the more fundamental question in how far the visual turn has not only changed knowledge communication but also knowledge itself.

Hence, the role of graphic design in information and knowledge communication calls for a closer investigation. Several important research contributions are noteworthy in this context: Richard Buchanan has worked extensively at the intersection of rhetoric and design. In Germany, design researcher Gesche Joost has made important contributions to this field. The Cognitive Theory of Multimedia Learning, put forward by Richard E. Mayer, sheds light on how graphic design influences learning processes. In linguistics and sociology, Henning Lobin, Hubert Knoblauch and Jürgen Schnettler have published groundwork in their studies on graphic design and PowerPoint. Incorporating and reflecting existing scholarship, the conference also partakes in the larger project of updating ancient rhetorical models, as the rhetorician Joachim Knape has systematically pursued.

The nexus of graphic design, science, and science communication will be at the center of this interdisciplinary conference, where science, semiotics, design, and rhetoric will enter into dialogue.

The conference proceedings will be published.

Contact

PD Dr. Olaf Kramer
olaf.kramer@uni-tuebingen.de

Dr. Thomas Susanka
thomas.susanka@uni-tuebingen.de

Rhetoric Department
Research Center for Presentation
Competence

Wilhelmstraße 50
72072 Tübingen
Germany

Tel: +49 7071 29 77 99 8