B-07

Design - between Art and Science
Toward an scientific orientation of design

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Abstract
Looking back to the history of Industrial Design in the 20th century, there have been three major periods in which important contributions have been achieved:

1. During the Bauhaus period (from 1919 - 1933 in Weimar and Dessau) the first attemps have been made, to add to the arts-and-crafts-tradition some scientific fundamentals, e.g. from perception theory, form and colours, space and time etc.

2. During the period of the Ulm Design School (1955-1968) the scientific foundation of Design has been improved, new disciplines like mathematics, theory of science, ergonomics etc. have been integrated into the curriculum. The Ulm Design School was philosophically based on the principles of rationalism.

3. In the 1970's and 1980's there was a shift to more human science based fundamentals of Design, e.g. the "linguistic turn" influenced movements like "Product Language" (Germany) and "Product Semantics (USA). In the 1990's these fundamentals have been succesfully adapted to Interface/Interaction Design and Design Managment/Strategic Design.

Today we can see a strong movement toward the scientific orientation of Design: many Ph.D. programs are in preparation or even yet practised - in different countries. The question is, what should be the disciplinary cernel in the interdisciplinary or even global role of Design.

Keywords
Design Science, Disciplinarity, Empirical Research, Hardware + Software, Interdiscipli-narity, Interface/Interaction Design, Product Language, Product Semantics, Practical Based Ph.D. Design, Strategic Design, Usability

B-08

Reflections on Integration
Exploring interdisciplinary approaches to design

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Abstract
Qualitative research methods are of increasing interest to designers. However, there are no clear means of interpreting or applying their results within design contexts. Anecdotal discussions with designers suggest that connecting such forms of academic research with design practice is problematic. This paper addresses this issue by proposing a theoretical framework within which issues arising from qualitative research and those pertinent to design might be brought together and meaningfully discussed. The paper is based on qualitative data derived from a doctoral research project. This project explores issues of identity and gender in online communities. It uses semi-structured interviews and focus groups to examine Thai women's experience of and response to internet-based communities and considers some of the implications for design.

Keywords
design research, qualitative data, product semantics, gender, the internet.