

# INTERDISCIPLINARY METHOD DEVELOPMENT FOR THE OPERATIONALIZATION OF PRODUCT AND BRAND COMMUNICATION

**Manuela LACKUS, Mario KOLAR and Bernhard ROTHBUCHER**

Salzburg University of Applied Sciences

## **ABSTRACT**

Designers tend to explore, understand and solve problems by experimenting with a variety of possible solutions, rather than by theorising about them. However, if any problem can be framed in an appropriate context, the subsequent design process is likely to be more efficient. The BMW student and research project presented here is an attempt to transform abstract values and terms into visual parameters by means of semantic networks and was tested ex post on its effectiveness.

*Keywords: objectification of design, designing complexity, interdisciplinarity in student projects*

## 1 INTRODUCTION

In recent years numerous publications have dealt with the phenomenon of corporate communication. While almost all companies campaign for their outstanding communication activities, hardly any of them has a precise idea of what communication exactly means, leading to an interchangeable use of the terms communication, advertising and corporate design. Reasons therefore can be found in the rather unestablished literature in the field of organizational communication, mainly focussing on communication instruments and information infrastructure. A further issue can be found in the ongoing simplification of corporate communication. Signs of simplification and antitheoretising can also be found in many briefings for education projects. But it is exactly the challenge of dealing with complexity that makes graduates successful in their jobs. Kevin McCullagh describes the current situation as following: „Design as a discipline is driven by social, economic and technological change or increased public awareness of design, globalisation or internet innovations. ... Whether it is a design student grappling with their subject for the first time or a design manager writing a strategic plan, my point is the same – being able to understand design within the context the forces that act on it matters. Designers tend to explore, understand and solve problems by experimenting with a variety of possible solutions, rather than by theorising about them. However, if any problem can be framed in an appropriate context, the subsequent design process is likely to be more efficient... The importance of context becomes even more obvious when there is a strategic component to the project, as the problem has to be situated in relation to a network of inter-related factors“[1].

## 2 FUNDAMENTALS

Corporate communication can be regarded as a constitutive factor of success on multiple corporate levels by initiation of a positive behaviour due to the communication of corporate identity to all intra-corporate (e.g. employees, etc.) and external reference groups (e.g. customers, suppliers, etc.) [2,3]. The main precondition (besides internal communication) for a clear transfer of corporate identity can be found in a clear, consistent and truthful communication policy, aiming at a strategic competitive advantage through precise contouring of the product message, -benefit and -strategy. Clearness of communication and thus emotional concernment calls for an alignment of messages in terms of cognition- and perception logic of people.

Corporate communication in this field needs to develop and use specific “sets of meanings” based upon sustainable and unmistakable messages. The DE|RE|SA research group has identified a fundamental gap between communication impact, transfer of meanings and the use of instruments in a joint student research project with the BMW group in Munich. This project was aiming at a transfer of brand values in concrete 2D-visualizations and 3D-models and to validate the method by means of a well funded methodology.

### 2.1 Development Process

The course of the process for the projects was widely predefined by our cooperation partner the BMW Group, Design Strategy Unit.

The central aim of the presented research project was to investigate and interpret the term “Emotional Addressing” in spaces (1.60 m x 1.50 m x 2.10 m – equalling the size of a medium-sized vehicle) and thus to create a link between the constitutive values of corporate- and design strategy and the visible space and respectively the deduced design elements.

On a more essential level the aim was to translate abstract values and emotions into concrete design by use of a linguistic-visual process. Each group consisted of two students which had to deal with a context in the forefront of the process. Contexts are defined as the semantic periphery of a term. Unlike the pure linguistic collocation- and respectively co-occurrence-terms which are limited to the quantitative link (joint emergence) of words in language use, concept networks were developed, which should guarantee a qualitative offset. The elicitation of the relevant terms at that time was done widely intuitively.

To bridge the abstract term layer to a concrete design level, a multi-stage selection process was used to find ‘visual representatives’ for the terms in 2D (see figure 1). The following image-process was aiming at an identification of elementary visual elements for the given contexts. The resulting essence formed the basis for the transfer of the two-dimensional visual elements into “spatial elements”. The students therefore used various creativity techniques.



Figure 1 Finding ‘visual representatives’ for the linguistic contexts [6]

These works with context-representing pictures eventually lead to a transfer of the above mentioned contexts into 3D by using a specific matrix (see figure 2).

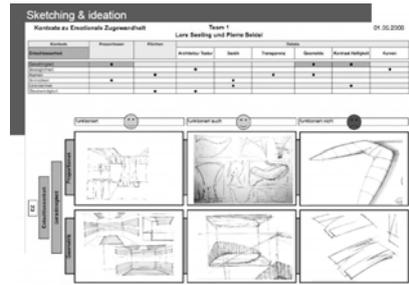
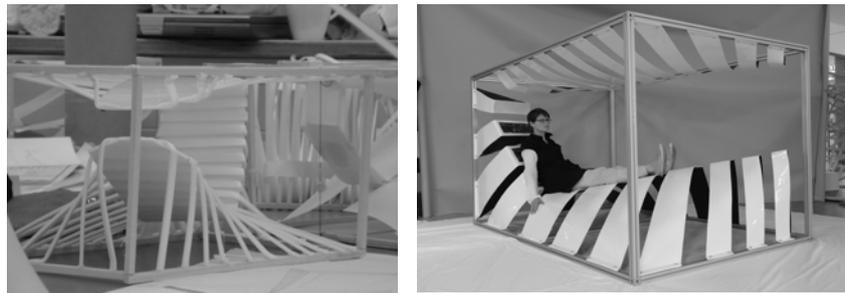


Figure 2 Analysis of design parameters of the 'visual representatives'

The 3D design parameters were deduced in principle from the two-dimensional layer in the course of the process.



Figures 3 & 4 Transfer of the essential design parameters into 3 D (1:4 & 1:1) [6]

An overview of the method can be found in the figure hereafter:

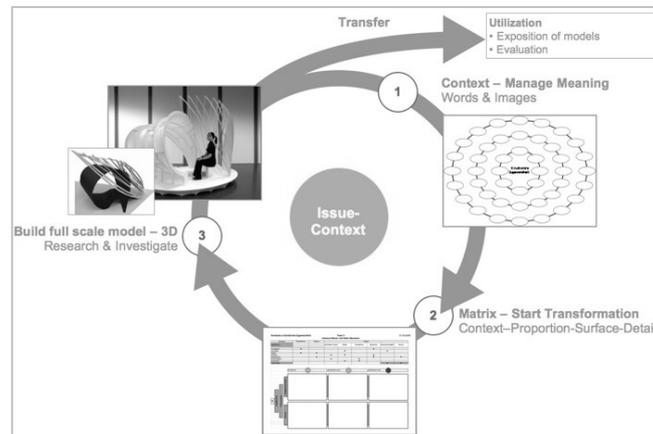


Figure 5 Overview of the three main steps of the research process [6]

## 2.2 Critical evaluation of the development process

The process starting from the wording phase to the point of concrete 3D-designs retrospectively indicated optimisation potential in various forms. The definition of the contexts was widely done at random and without language-theoretic reflection. Thus the conclusiveness of the semantic networks around the specific contexts can not be fully guaranteed. The effect was increased by the random choice of the equivalent 2D-visualisations. Transferred to a practical product development process this would at best mean that conclusive core values of a brand or a product are reduced to their naming undercutting the general plausibility due to a lack of consistency of corporate values and the message of the product. The transfer of design parameters from 2D to 3D did not cause major problems in most cases.

## 3 OBJECTIFICATION OF GUIDED DESIGN PROCESSES

The critical reflection of the pre-defined development process advised a fundamental reconsideration on the theoretical and practical levels. Starting point of the methodological reorientation was on the one hand the process-guiding, on the other hand the evaluation of the effectiveness of the concrete contexts at the end of the design project.

Hypothesis H1 indicated:

In case of a successful transfer of emotions into concrete spaces (by use of abstract terms and design elements), the test persons should be able to recognize the contexts in the 3D-models.

Sub-Hypothesis H1.1 indicated:

Linguistic contexts in form of high-level abstraction are not widely labelled accordingly, because the terms are not in everyday use.

According to this an empirical evaluation of the spatial effects would be impossible due to a lack of evidence concerning their perception. Based upon linguistic approaches, especially the theories of semantic networks, the following can be assumed:

Terms with a high level of abstraction – like all other terms – are parts of semantic networks. These networks consist of various less abstract, widely-used sub terms. In case of an association of a highly abstract term during spatial experience, we can assume that the naming of enough terms out of the semantic network is equivalent to the naming of the core term.

This consideration was the core idea, enabling the check-up of the intended spatial effects. Based upon this the empirical approach was developed and put into practice.

### 3.1 Semantic context analysis

In the first step the students chose highly abstract main contexts (e.g. partnership, urbanity, sovereignty, propensity to discover, sensuality) and determined the semantic networks. Therefore the linguistic standard work of German thesaurus by Dornseiff was  
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used [4]. For every main context each with 18 sub-contexts semantic networks with up to 2000 terms were defined. Here already tendencies concerning the level of notional conclusiveness between sub and main contexts arose. The developed networks formed the base for the adjacent practical empirical approach.

### 3.2 Empirical research

In a second step the spatial impact of the 1:1 modes were tested. In total 17 test persons passed through 6 models in a multi-level approach consisting of free spatial associations, guideline interviews with a quantitative questioning. This empirical approach was chosen due to the complexity of the object of investigation. For the education of design managers this aspect of complexity appears in nearly every project, because usually the briefing includes aesthetic but also brand related needs. Thus the integration of a proper backed design process in the curriculum is of special urgency in this discipline. The authors have introduced their model for an interdisciplinary design education in an earlier EPDE publication [5]. Free experience without direct need to express oneself makes it easier for the test persons, to capture the space as a whole, to let it sink in und to become aware of it. The subsequent (conducted within the models) guided interviews between test persons and researchers aimed at the generation of free associations. This step is considered as the core element of the research approach, because it promises conclusions from widely uninfluenced statements. Based on the socio-linguistically grounded assumption that human beings are capable of showing expression according to their preparatory training, their cultural imprint and their cognitive and affective proposition a part of the quantitative approach was aiming at softening these determining factors. Besides simple appraisal questions for specific spatial elements, for each model an assortment of terms (on average 85 for each model) were given. Each test person was asked to impulsively tick the terms, which they connect to the according spaces.

### 3.3 Research as a basis for argumentation

Referring to the above described research, 102 short interviews (average length ~ 7 minutes) resulted. This content is being analyzed according to the semantic networks as well with a comprehensive data set of more than 12,000 values collected during the quantitative research. These records form the basis for the analysis of the perception of design parameters and back up the content-analytical context definition.

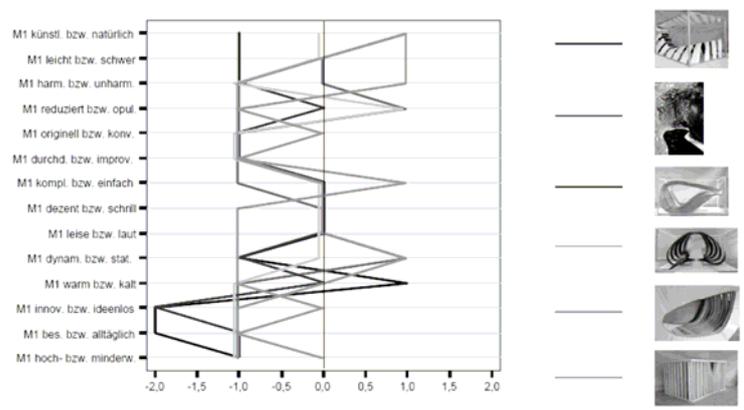


Figure 6 Semantic differentials of spatial perceptions for the evaluation of essential design parameters – Analysis example

The analysis of the free associations in the course of interviews is extremely time and cost-consuming, but revealed interesting tendencies at this point in time. The hypothesis stating that highly abstract terms can not be named as such during spatial experience has proven true. The assumption that test persons think name 'every day' terms out of the semantic networks is true for the projects showing a high semantic conclusiveness. The student projects, which were widely based upon random wording- and image processes (see above), did show a significantly lower hit rate of the intended contexts. Therefore term consistency (in semantic interdependence), as well as the proper translation of these terms in adequate visual elements can be considered as critical. As long as terms and pictures are found on an archaic level (e.g. security, sadness, aggressiveness, etc.) the transfer is easier. Culturally-influenced or otherwise 'loaded' terms and their visualisation on the other hand need a well-reflected process.

#### 4 PRACTICAL IMPLICATIONS

From a pedagogical point of view, the conducted method development contributes to the objectification of design through conclusive argumentation. The method itself can be considered as an instrument to question design decisions, leading to turning away from arbitrary design processes. It also allows a continuous alignment of concrete decisions and strategically relevant (in majority) abstract values of products, brands or a company as a whole during the development process of collegiate as well as industrial projects. The use of qualitative linguistic and socio-scientific methods in combination with quantitative testing methods allows a well-based operationalisation of design impacts. According to this, a sustainable communication of abstract brand values and/or intended abstract effects like emotions through a process of linguistic references transformed into visual design can be guaranteed.

This can be regarded as a contribution in the field of the measurement of design elements, as well as in the field of "idea transfer", as well as a further step in the well-established communication- and argumentation basis between Marketing, Design and Technology in form of a more conscious design- and product strategy.

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MA UZH Manuela LACKUS  
Fachhochschule Salzburg GmbH  
Markt 136a, A-5431 Kuchl/Salzburg

manuela.lackus@fh-salzburg.ac.at  
0043 (0)50 2211 2251