

# ARCHITECTS' AND NON-ARCHITECTS' PERCEPTION OF EXPOSED CONCRETE AS A BUILDING MATERIAL

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## Background

The perceived quality of the built environment is directly related to feelings of comfort and well-being as well as aesthetic satisfaction. It has often been shown that perception and evaluation of the built environment differ strongly between those who are responsible for its design – architects and planners – on the one hand, and those who use it – laypersons – on the other (Rambow, 2000). It is assumed that discrepancies correlate with different determinants of the viewers' perspective, such as the quality and quantity of individual 'image banks' (Downing, 1992) or the meaning being associated with buildings and architectural details (Hershberger, 1988, Sadalla & Sheets, 1994), resulting from the differing socialisation of architects and laypersons (Wilson, 1996).

Two studies take a close look at perspective differences between architects and laypersons with respect to a specific architectural material: exposed concrete. A multitude of anecdotal evidence highlights the controversial perception and appraisal of exposed concrete by architects and non-architects. The material has been of highest significance in architecture ever since the late 1950s, but never seemed to be accepted by the wider public. Since systematic research is lacking, little is known about the psychological reasons behind this perspective gap.

## Study 1: Laypersons' perception of two examples of Exposed Concrete (EC) architecture

**Method:** Explorative field study. Structured Interviews with passers-by in front of either of two prominent examples of exposed concrete architecture in the governmental district of Berlin. N = 96 persons answered the general questions of part 1, N = 63 the specific questions of part 2 (N = 34 with respect to Building 1, N = 29 with respect to Building 2).



**Building 1:** Paul-Löbe-Haus, Berlin (Government Offices). Architects: Stephan Braunfels, 2001.

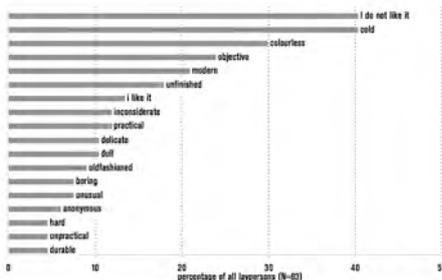


**Building 2:** ARD Headquarters (German State Television), Berlin. Architects: Ortner & Ortner & Hanns-Peter Wulff, 1999.

## Results

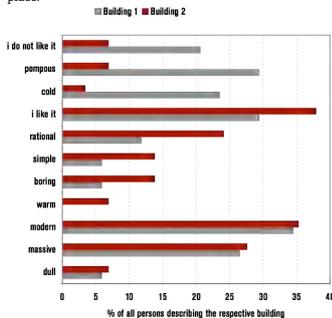
### 1.1 General semantic associations with the material Exposed Concrete

The image of the material among laypersons is rather negative. The lack of warmth and colour play a central role. The material is imagined as practical, modern, and rational, but not as creative or as a



### 1.2 Laypersons' perception and evaluations of specific built examples of EC architecture

While both buildings are experienced as modern, massive, and rational, only Building 1 is perceived as cold and pompous. Almost half of all participants (48%) explicitly referred to the colour of Building 2 to explain their positive evaluation of warmth and character, while only 9% named the colour of Building 1. Obviously the greyish colour of Building 1 is experienced as the 'natural' colour of concrete and is associated with the prototypical qualities of the material like dullness, unfinishedness and a certain brutality. The reddish concrete of Building 2 differs markedly from this prototypical image. A result that is underscored by the observation that almost half of the participants did not identify the material of Building 2 as concrete in the first place.



## Study 2 – A systematic comparison between the perspectives of experts and laypersons

**Method:** Quasiexperimental Design. Questionnaire with a combination of open and closed question formats.

### Participants:

**Laypersons:** Persons with an academic degree, who have no professional relation to either architecture, art, or design. N = 75, 52% male, 48% female; Age: 25-62 years (M = 40.7, SD = 9.9).

**Experts:** Professional architects with a professional degree and at least one year of professional experience. N=65, 62% male, 38% female. Age: 25-68 Years (M = 40.2, SD = 8.8).

### Research Questions:

What commonalities and differences between the perspectives of experts and laypeople can be found with respect to...

I ...semantic connotations of Exposed Concrete?

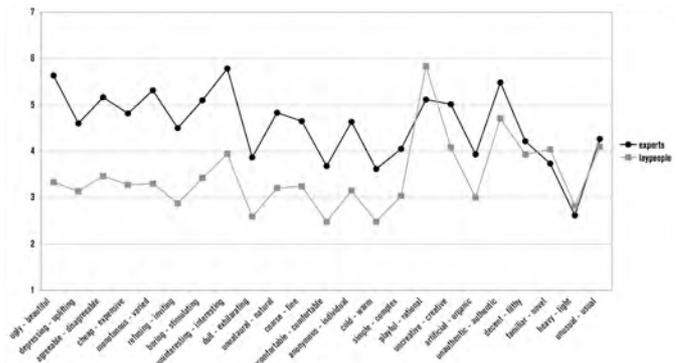
Hypothesis A: The connotative meaning of exposed concrete differs systematically between experts and laypersons.

II ...perceived advantages and disadvantages related to the use of Exposed Concrete in architecture?

## Results

### 2.1 Semantic connotations of Exposed Concrete

In accordance with hypothesis A, connotations vary systematically dependent on expertise  $F(23,109) = 6.01, p < .001^{***}, \eta^2 = .56$  (MANOVA).

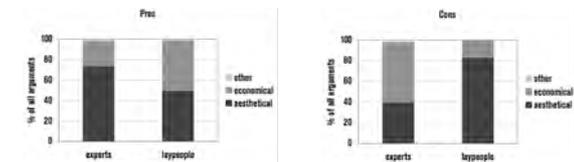


### 2.2A Arguments for and against the use of Exposed Concrete in architecture: Aesthetics vs. Economy

The relation of produced pro and contra-arguments differs depending on expertise,  $t(130) = 4.21, p < .001^{***}$ .

Experts produce more pros than cons, while laypeople produce as many pros as cons.

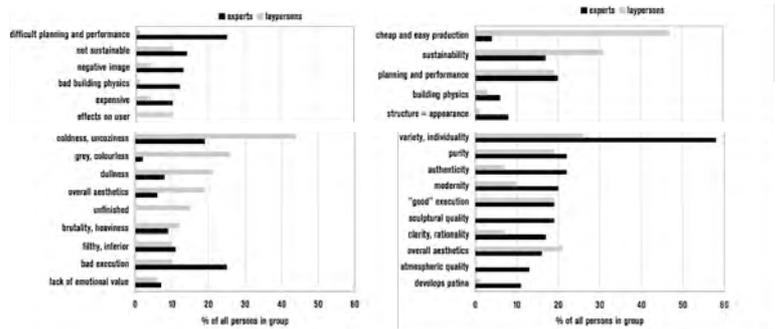
In terms of content of the pro-arguments, the experts mainly produce aesthetic arguments while laypeople produce mainly economical arguments. In the case of the cons, the relation is the other way round.



### 2.2B Arguments for and against the use of Exposed Concrete in architecture: Differences in content

There are some distinct "expert" and "lay" arguments, who almost exclusively are used by one of the groups: Laypeople tend to underestimate the cost and the technical difficulties in the production of EC. Experts value the diversity, the sculpturability, the authenticity, the preparedness to patinate, and the conceptual flexibility and richness of the material.

Experts see the difficulties of execution and the weak public image as contra-arguments, while laypeople focus on practical (e.g. difficult to plug) and atmospherical (dull, saddening) effects on the user and the "unfinished" visual character of EC.



## Discussion

Discrepancies in perception and evaluation of Exposed Concrete are based on experiences of the architect made during professional education and practice, which are not accessible for the layperson: A larger pool of examples in the personal 'image bank', knowledge about technical difficulties and design possibilities and a 'conceptual' approach to the 'language' of the material rooted in the professional discourse of the 20<sup>th</sup> century, highlighting concepts like authenticity or 'honesty' of the material.

The two studies show that the material actually stands eponymous for the enduring conflict between experts and laypersons in architecture. In the laypersons' perception of EC the strong association of material, colour, and form, that has obviously been brought about by an over-generalisation from the extensive use of the material in certain more technical building-types is a recurring pattern. Communicative measures to overcome the perception gap between experts and laypersons need to accept the differences and to focus on misconceptions stemming from over-generalisation to open the eyes for qualities whose perception is depending on precise knowledge and categorisation.

## References

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