THE IMPACT OF ARCHITECTURAL REPRESENTATIONS ON CONVEYING AN INTENT – AN EXPLORATORY STUDY

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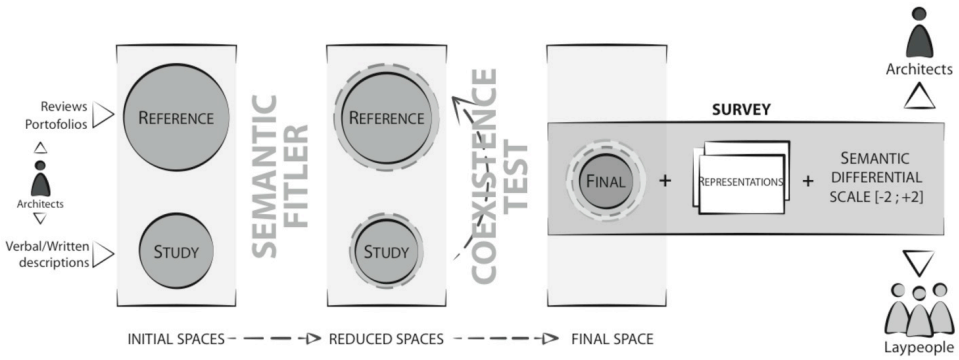
1. Context and Objective

Architects have to express themselves graphically in order to communicate ideas both to clients they need to convince and to themselves. To do that, they appeal to a variety of representations (free-hand drawings, 3D computer rendered images, photomontages, …) supposedly faithfully carrying their initial intent. Research to date has demonstrated how "*experts*" designers and "*non-expert*" public differently perceive, or on the other hand share, visual understanding (Alcantara et al., 2005; Bates-Brkljac, 2007). It is yet unclear how architects *themselves* use different types of representations to express different intentions, and how their expected audience more or less successfully captures those intentions. The purpose of this on-going research is consequently to refine understanding of how differently a non-expert public captures the initial message of an architect, and what role representations (in different formats) do play in this understanding process.

2. Methodology

We design a 5 steps methodology to build a survey that will help us research this question (Fig. 1).

Fig 1. From the initial semantic space to the final semantic space used in the survey.



The first step is to research projects with easy access to the initial architectural intent (the "*Study Space*"). Sixteen architects, from various backgrounds and expertise, provide us each with 3 representations of one of their architectural projects (a free-hand drawing, a 3D computer rendered image and a photomontage, with similar viewpoints), together with a description of their initial intent, either written or verbal when possible. A quick scan reveals that intentions extensively rely on adjectives, such as "*verticality*", "*enclosed*" or "*elegant*", that we consequently gather in a database of 90 adjectives in total. The question of representativeness of these adjectives – and more fundamentally representativeness of these 16 available projects – is naturally also raised.

Second step of our methodology is consequently to search for more examples, even without personal contact with the architects. Magazines and available portfolios provide us with 460 more projects totalizing 287 adjectives, building the "*Reference Space*". The third step is then to submit both study and reference spaces to a "*Semantic Filter*", designed to classify them and to refine the choice of adjectives to finally introduce in our survey (Artacho-Ramirez et al., 2008). Several custom-made criteria are used to refine the list: adjectives conveying architectural intents similar to previous ones are grouped, as well as redundant antonyms, irrelevant value judgments, or description of qualities that are visually absent of available representations. This semantic filter reduces the list to 28 groups for the "*Study Space*", and to 51 for the "*Reference Space*".

The fourth step consists in a simple co-existence test: each adjective of the reduced "*Study Space*" also existing in the reduced "*Reference Space*" is considered as sufficiently representative of a shared architectural vocabulary and goes directly into the "*Final Space*". The 20 groups of adjectives is eventually used to create our fifth step, a survey that will be sent out to architects (the images' producers, as reference point) and to lay people.

3. Next Steps and Expected Outcomes

The survey will soon be sent out to the architects and hundreds of Mechanical Turk© workers who will be randomly presented with three representations, different in style and issued from different projects to avoid any adaptation phenomenon or unconscious comparison. To each representation will be associated a list of randomly picked "final" adjectives, confronted to their linguistic antonym (the "light/dark" pair being this way unmistakable from the "light/heavy" pair), separated by a 5 points rating scale such as the semantic differential scale defined by Osgood et al. (1957).

The results will then be presented in graphs for each representation and project and will help us better understand how architects and lay people respectively generate and capture different architectural intentions when confronted to different types of representations.

References

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