From principles to locality: Bridging the gap from neuroscience to architecture

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1. ABSTRACT
A project - both conceptual as process - grounds, bounds, and frames the design process as such, representing our best present knowledge within a given framework, not an absolute knowledge as it is typically distributed in a system of agents in a community. How to strengthen the bonds between architects and neuroscientists? I must first stress that architecture and the neurosciences have always shared the domain of animal/human agency. This shared domain should be sufficient to suggest cross research, regardless of their different cultures, their diverse methodological principles and practices, and diverse technical and technological constraints.

Science moves from particulars to general principles, while architects operate on a local context - "place building" - and within a large spectrum of social, cultural political constraints. This gap is not always consciously internalized by the arts and the humanities. Architects and neuroscientists must find a common operative ground - animal/human agency - which could encourage mutual contributions.

From "natural" inception, we are gradually constrained by culturally driven commonalities. Ingrained neural activity can be observed on both the agents’ behaviour and on their built environment. From this standpoint, architecture and neurosciences have interweaving histories, even if this is not always evident. Architecture and neurosciences should continue strengthening these threads. Analytical research should reveal the hidden or yet unseen bonds between animal/human animal and their environment. This gap needs to focus on both the agents’ behaviour and on their contingent environment. As a culture-bound practice, it must operate consistently by verifying its principles, and find the path from principles to locality. Architecture and design must gain a fuller insight of the local rules, principles and constraints - e.g. traditions, arts, rituals, whatsoever relevant. To this purpose, architecture and design must use also big data, modelling, information flow and communication. Thus both ethics and aesthetics engage on a rhetoric dialogue - persuasive from ethical, logical and emotionally empathic grounds - that emerges as "as-if-architecture" and "as-if-design". Architecture and design must use also big data, modelling, information flow and communication. Thus both ethics and aesthetics engage on a rhetoric dialogue - persuasive from ethical, logical and emotionally empathic grounds - that emerges as "as-if-architecture" and "as-if-design".

Grounded on my architectural works - although not exclusively - and within the theoretical work in progress - both as architect practitioner/teacher - my Research Program is a follow up of the PhD Research Project, and nowadays intended as particularly focused on strengthening ties with neuroscience’s researchers in order to make explicit the linkages that suggest the indiscernible assumption I’ve taken, and particularly keen to present and discuss links - theoretical and practical - which fit the argument’s goal to consolidate these relations.

2. REFERENCES

3. AUTHOR BIO