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# The Scope of “Empathy” in Architecture

## From the design process to the user’s experience and back

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### Introduction

The concept of “empathy” has been widely used in the study of the arts (literature, film, painting and music). This is partly because artworks are, like actions, products and expressions of people’s feelings and intentions, and partly because fictional characters may be understood more efficiently via empathetical processes.

What about the study of architecture? It seems that the phenomenon of empathy can be considered at very different levels in architecture, due to the domain’s complexity. In this presentation I am going to review these various levels mainly from **philosophical** and **cognitive** points of view.

First, I will examine several ways of moving beyond the narrow notion of empathy, as a direct affective access to another person’s affective state. Then, I will evaluate the concept of empathy when based on the perception of inanimate objects. Further extensions of the notion of empathy will be explored, depending on the status of the *persona* reached through empathy, and on the perceived representational status of the proxy object. Finally, planning future work, I will examine the relevance of these examples to architecture and claim that defining the scope of “empathy” in this particular context helps us to better understand its potential use.

### Philosophical development of the concept

For the German Romantics, empathy (from “einfühlen”: feeling into) is a general means of knowing. By the end of the 19<sup>th</sup> century, empathy was understood as an important category in philosophical aesthetics.

Developing Visser’s ideas, who was the first (in 1873) to introduce a more technical notion of empathy, Wölfflin (1886) sets out his views on how observation of specific architectural forms engages the beholder’s bodily responses. For Lipps (1903), empathy is to be understood as a psychological resonance phenomenon that is triggered in our perceptual encounter with other persons and objects.

Nowadays, in its narrowest sense, the term “empathy” refers to “an intimate, feeling-based understanding of another’s inner life” (Currie 2011). Empathy in this sense has been defined in terms of four conditions (de Vignemont & Singer 2006): affectivity, isomorphism, causality and ascription. Relaxing one or several of these conditions gives rise to other senses of empathy, which includes empathy for actions.

### What cognitive science has to say

Empathy involves at least “mirror systems” in the brain, either directed towards other’s actions or towards the targets of actions. Experiments in neuroscience show common mechanisms between one’s experiences of actions, bodily sensations or emotions and perceiving those experiences in someone else. For example in the case of:

- **Action:** The perception of another’s goal-directed action elicits neural activity in the pre-motor cortex similar to the activity elicited by the execution of the same type of action (Rizzolatti *et al.* 1988).
- **Sensation:** The perception of another’s pain elicits neural activity mainly in the affective node of the “pain matrix” (Singer *et al.* 2004).
- **Emotion:** The perception of another’s facial expression of disgust elicits neural activity known to be implicated in the experience of being disgusted (Wicker *et al.* 2003).

All these cases are examples of empathy concerning people. They are grounded on the perception of other individuals. Is it possible to extend the scope of empathy towards objects?

### Can we extend the concept of personal empathy?

Along with empathy for persons, or **personal empathy**, there is a form of empathy directly based on the perception of *objects* rather than persons, namely **objectual empathy**. But the notion of personal empathy is conceptually and explanatory prior to the notion of objectual empathy. Thus, objectual empathy is always an *indirect* way of understanding or acquiring knowledge about other (real or hypothesized) human beings. In empathizing with objects, we do imaginatively reach other persons or person-like entities.

### Five types of object-based understanding

**1. Affordances:** The perception of objects can involve a situated understanding of their *possible uses*. In other words, it involves the perception of “affordances” as action-related properties of the objects. A possible neural basis for at least some perceptions of affordances is provided by so-called “canonical neurons” (also in the pre-motor cortex), which fire both when one makes a grasping movement towards an object and when one simply sees the object (Rizzolatti *et al.* 2003, Hurley 2006, Freedberg & Gallese 2007).

**2. Imaginative exploration:** The perception of objects can involve a situated understanding or active simulation of what can be done *with* or *to* them, in ways which can go beyond the perception of the objects’ affordances.

**3. Bodily projection:** The perception of objects can involve the experience of them as quasi- persons or human bodies, i.e., the perceivers *imaginatively project* bodily features onto the objects. A famous example of bodily projection involves the simulation of the sensation of pressure or constriction in the perception of a load bearing column (Wölfflin, Lipps).

**4. Traces of action:** The perception of objects can involve the experience of them as *traces* or *results* of past actions. Through the perception of these objects, we imaginatively reach the actions (and intentions) of their *makers*. For instance, when we perceive hand drawings, we engage in (more or less detailed) motor simulations which re-create the types of hand movements made by the artists, e.g., “fast brushwork” (Freedberg & Gallese 2007).

**5. Traces of emotion:** Through the experience of objects as traces of action, the perceiver can also imaginatively reach the *emotional states* of the makers. Through imaginative imitation of the bodily movements that might have resulted in the perceived objects, the perceiver is led to enjoy an emotional experience similar to that of the simulated maker (Kreitler & Kreitler 1972).

### Are these examples of objectual empathy?

The first two cases of object-based understanding (*Affordances* and *Imaginative exploration*) are not by themselves cases of empathy, insofar as they refer to merely possible actions, but they can be recruited in empathetic tasks, e.g., empathy for the *users* of an architectural building.

The last two cases of object-based understanding (*Traces of action* and *Traces of emotion*) can be seen as cases of *indirect* personal empathy, insofar as they enable the perceiver to reach a (real or hypothesized) person.

Only the case of *Bodily projection* can be seen as a genuine case of empathy *for* objects, insofar as the perceiver imaginatively transforms the latter into *personae*.

### Can we extend the concept of objectual empathy?

**Transfigurations of the maker:** In basic cases of *Traces of action/emotion*, the empathized maker can be identified with a particular person, whether real or hypothesized – for instance, the author of the drawing, painting, or sculpture, the carpenter, etc. A common extension of these cases involves more or less fictionalized *generalizations* of what counts as a maker. A person-like entity is reached through the perception of an object, but it need not be represented as a genuine person. For instance, in the case of architecture, the maker is rarely just one person, but a collective of designers and builders, as well as machines and other automated tools.

**Objects as representations:** A second extension of *Traces of action/emotion* concerns cases in which the perceived objects are themselves experienced as more or less abstract *representations* of other entities. The question is whether we can empathize with a person or an object which is merely represented in the directly perceived object. E.g., one might ask whether the perception of an architectural drawing can involve the same kinds of object-based understanding and empathy that are enabled by the perception of the actual building itself (plan/section vs perspective drawing).

### Educating empathy?

Empathy, like intuition (Hogart 2001), can be educated through experience and teaching. One can *learn* to be more empathetic relative to a kind of person- or object-based understanding. In this respect, the use of images, artworks and other representational media often plays a significant role in the development of empathy. Indeed, it has been argued (e.g., Lopes 2011) that our experience of representations can evoke empathetic responses that our perception of the world beyond representations does not.

Through learning, a high-level cognitive ability can become implicit and spontaneous, even if it was initially explicit and deliberate. This is a process cognitive scientists call “knowledge encapsulation” (Schmidt & Boshuizen 1993). Likewise, effortful and reason-involving empathetic abilities can “routinize” itself, and become part of our “second nature”. This shows that the relationship between empathy and reason is dynamic: our empathetic experiences feed reason, which in turn modifies and augments our empathetic competence.

### Why is this relevant to architecture?

The study of empathy for the architectural object, its makers – designers and builders (the question of the shared mental projection in a collective work should also be addressed) – and even the users opens the way to future significant discoveries.

The question of the representational medium of architecture (traditional drawings but also virtual reality), the architect’s work tool, and its capacity to engage our empathetic abilities would also be of great interest, particularly in the context of architectural education. Further research should concentrate on this question, whether on the side of the designer’s experience (embodied simulation of the future users) or on the user’s (ability to understand the architect’s intentions as a client in a commercial context or, later, as a visitor in an architecture exhibition).

To sum up, the concept of empathy is much more complex than usually acknowledged, and refers to a variety of interconnected mental phenomena. In order to better understand how empathy is involved both in the design process and the user’s experience in architecture, it is crucial to take its multifarious character into account.

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