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Spatial sensibility in architectural education

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**Abstract**

Spatial perception is a vital skill for architects. Architectural pedagogy methods naturally focus on its development, but they rely heavily on abstract notions and exercises. In most schools, thinking in, of and with space – is a geometrically arid, grid-dependent affair. But spaces aren't necessarily places - defined by experiences, memories, individual and collective meanings. Spatial intelligence should be complemented by spatial sensibility, and both should be equally important in architectural education. This paper represents a case study of cultivating these skills in architecture students, through studio projects designed to raise their receptivity to the context and socio-cultural dimensions of the site.

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**1. Introduction**

Of increasing importance in contemporary society, spatial intelligence is the bread and butter of professions such as geophysics, engineering or architecture. Broadly defined, spatial intelligence represents the knowledge, intellectual predispositions and aptitudes which allow the human mind to comprehend and work with the concept of space. Problem solving and decision making based on the application of the aforementioned knowledge and aptitudes can be construed as spatial thinking – the ability to grasp, modify or navigate through the real world, but also that of mentally constructing (through abstract manipulation of the three dimensions) spaces which have yet to become reality. This type of thinking entails the mastery of abstract concepts (space, scale, direction), the ability to work with them using coded means of representation (plans to scale, for instance) and acquirement of reasoning processes, such as the geometric method of finding the volume resulting from the intersection of two cones.

In most architecture universities, however, the cultivation of spatial intelligence, the actual teaching, guidance and supervision of students as they progress from novice to advanced spatial thinkers relies heavily on abstract notions and exercises, and thinking *in, of* and *with* space is a conceptual, geometrically arid, grid-dependent affair. As crucial as it is, spatial intelligence only equips students with the professional knowledge and aptitude to produce spaces which are feasible and sound in a concrete, geometrical way. But *spaces* aren't necessarily *places*, which are defined by sensory experiences, memory, and a host of individual and collective meanings stemming from sources outside the realm of space as intellectual, Cartesian abstraction. Since architecture strives to be much more than the mere physical embodiment of abstract spatial notions – and, indeed, most architects try to create places which

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engage people in meaningful *experiences* – it would seem paradoxical that, in the education of future architects, such emphasis is placed on spatial intelligence alone.

There are multiple reasons for this discrepancy, ranging from the mind-body disconnect which arose during the Enlightenment, when architecture teaching was deeply steeped in the cold logic of geometrical and mathematical notions, and all the way to the disquieting degree to which virtual experiences and web-accessed information have lately supplanted knowledge gained through first-hand experience. When coupled with the alarming pace at which technology and the virtual have begun to displace reality and the immediately physical, it becomes obvious that space-making and architecture have become matters of visual consumption rather than bodily experience.

## **2. Spatial sensibility – a working/tentative definition**

In order to flesh out a set of basic principles which could be applied in architectural education so as to stimulate spatial sensibility in students, we must first define this skill as something not opposed, but rather complementary to spatial intelligence. We would argue that spatial intelligence should be complemented by a spatial awareness and sensibility derived from the experience of the body in space, and that architecture teaching should focus on equally developing both skills, especially at the beginning of the student's education – years 1 to 3 of study.

But what exactly is spatial sensibility? The idea permeates writings coming from multiple fields: philosophy, anthropology, architecture, sociology. For instance, Maurice Merleau-Ponty makes a compelling argument for *embodied experience*, a means of interacting with the world based on knowledge gained through first-hand, bodily experience. "We are also inhabited by space, our bodies filled with dynamic cellular processes and atoms made up almost exclusively of space", he writes in "Eye and mind". Our way of being in the world is a continuous transformative state – we redefine ourselves constantly, in relation to our surroundings, which we in turn create, shape or alter through interaction and experience. When it comes to architecture, embodied experience means that we relate to it with all our senses deployed in motion, so that qualities thought secondary by Cartesian tradition – colour, texture, the sparkle of sunlight on a windowpane, the echo of footsteps – become primary to spatial perception. Then, spatial sensibility can be defined as the unselfconscious awareness of the body in the world, our intersubjective interactions with it, a receptivity to the transient amalgam of sensory cues which make up the sense of a place at a given moment in time.

Before they begin their architectural education, young space-makers work from a place of innate spatial sensibility. They have a gift for immersing themselves completely in the spaces they create, and when they create, they instinctively turn to their own spatial experiences. In "Street corner theology", Charlie Simic perfectly captures this state of creative exploration: "The disorder of the city is sacred. All things are interrelated. As above so below. We are fragments of an unutterable whole. Meaning is always in search of itself. Unsuspected revelations await us around the next corner." But architecture teaching has a dual nature: it is largely practice based, while also requiring the systematic assimilation of a great deal of abstract knowledge. This accumulation of abstract knowledge, oftentimes over-emphasized in both coursework and design studio, leads to the steady erosion of the student's spatial sensibility. Moreover, working almost exclusively with the abstract attributes of space and relying mainly on spatial intelligence can result in a limitation of the creative design process to the formal language of architecture (composition, proportion, geometry) and to the bidimensional world of conventional representation – be it on paper or on the computer screen. Therefore, the teaching of architecture should also take into account developing a strong sense of spatial engagement in architecture students, a capacity to relate to existing and imagined spaces through spatial sensitivity.

The projects discussed below are meant to illustrate an approach to stimulating spatial sensitivity and linking it to spatial intelligence in a coherent whole. While still a work in progress, amended and made better every year with the help of my students, I have applied this method in my design studio at the "Ion Mincu" University of Architecture and Urbanism. Year after year, the students grow more confident in their readings of existing spaces and in fashioning new ones according to their own embodied experiences.

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