

Affordance structure and identity

By Professor Jan Willem de Graaf

Professor of Brain and Technology, Saxion University of Applied Sciences, Deventer, Netherlands

Architecture, the design of our homes, districts and cities, is vital for how we feel, think and behave. For example, it is decisive whether people are "locked up" in buildings where only the number on the front door refers to identity, or that a building or city is designed to facilitate activity, encounters and solidarity. The scale of a neighbourhood can be based on car mobility, or on walking opportunities, which makes a world of difference. A street in which people live is very different from a road that is only passed by.

If a car is needed to reach anything, this may emphasize the feeling of being trapped (people who are housed in this way often have limited money for transport, with all the consequences). If, on the other hand, there are plenty of opportunities to go to theaters, schools and shops, the meeting will be facilitated. Smart Technology does not help here: being locked up in a gray apartment (urban sprawl) generates at best a desire for the apparent utopias of media such as Facebook and with that even more depressive feelings.

"A building can make a difference. For example it can prevent nursing home residents with dementia from wandering like polar bears in captivity, to just seek and find the encounter. In order to seriously understand the potential impact of architecture, it makes sense to see how we are housed in our own body, how we live organically in our body."

A building can make a difference. For example it can prevent nursing home residents with dementia from wandering like polar bears in captivity, to just seek and find the encounter. In order to seriously understand the potential impact of architecture, it makes sense to see how we are housed in our own body, how we live organically in our body.

Our "construction" starts with an egg cell and a sperm cell that is 83,000 times smaller (in this phase the female is certainly cooperative). The 2 cells double, and double, 47 times (247) resulting in the 140.737 billion (1.4×10^{14}) complex collaborating cells! Every day millions of cells die and the same number is re-formed. Usually we notice little or nothing of this "maintenance". In time, for example, we get hungry, we eat and become saturated, or there is a sense of movement. All essential nutrients and

processes are thus guaranteed. Our body never gets older than 10 years! Every 10 years all cells are replaced at least once (most cells many times more), except for the nervous system. However within the nerve cells all components are also replaced repeatedly. In other words, only the cellular structure of the brain is still about the same after 10 years: the façades and roofs remain, but all interiors and inhabitants are new. Everything - organs, skin, limbs etc. - is continuously rebuilt according to the DNA "prescription". Admittedly, there are mistakes in the process. Recently I saw a picture of myself 35 years ago. As a "resident of my body" I wish I had a little bit more influence!

After 10 years, no molecule in our body is the same. It is baffling that we experience continuity and have flawless access to memory, knowledge and competences of much longer ago. That means that we exist in connection, not in content! The "building" that comes up again and again has an intuitive feel (persuasive technology) that surpasses all man-made technology (even the ball). Where our identity emerges top-down on the scale of culture and development, our body emerges bottom-up through self-organization and evolution.