Medical Xpress

Study shows where you are is who you are

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Credit: Human Brain Project

A recent study suggests that who we are might be more integrated with where we are than previously thought. Demonstrating how architects and urban planners might take guidance from disciplines like neuroscience, philosophy and psychology, a paper published in *Frontiers in Psychology*, reveals that a good built environment might promote well-being and effect our decisions.

Contrary to the idea that we are separate from what we experience, the study claims that we ought to think about how the environment we create might, in turn, be used to create us. With this in mind, the scientists investigated how the way we interact with space defines how we identify ourselves and our capabilities.

"The built environment can restrict or promote spatial cognition, which can influence one's self-hood," the researchers explain. "Our spatial coordinates and our 'selves' are intertwined."

According to the researchers, we understand our environment differently depending on our experience of it. For example, learning your way through a space using a map gives a different understanding than through learning your own route. In a mapped environment, the tendency is to think of objects in relation to one another, whereas finding your own way might lead to thinking about the space in terms of its relation to you.

"The greater familiarity one has with a place increases the knowledge one has of different perspectives and orientations," they said. Similarly, the amount of time we are in our environments can change our understanding. This also suggests that having unrestricted movement in the space can over time allow us to experience multiple paths and perspectives.

The researchers say social perspectives also change spatial perspectives. An example of this is language. "Our language reveals how social relationships are mapped onto spatial ones—for example a close friend versus a distant relation. This reveals that spatial reference frames are the fundamental way that the locations of objects, people and oneself are understood," they explain.

Envisioning a more inclusive future, the scientists explain that well-built environments are important for well-being. A relationship to the space

we're in is a fundamental human experience and so it is evident that built environments need to address everyone's needs.

"Recently, architects and urban planners have started to consider the abilities and reference frames of those using the space to optimize the design of the built environment," they said.

But it goes beyond creating a building space. The fact that experience can shape individual differences, which in turn can affect the quality of spatial and social cognition a person, suggests that growing up in certain built environments can have detrimental or beneficial effects on their cognitive ability. This brings up questions such as whether raising children in enclosed spaces versus open spaces will result in differences in spatial and social cognition.

More research also needs to be performed on how spaces might affect decision making in town halls and parliaments, and the extent to which these spaces, in interaction with individual differences, can help foster more effective policy making. "Where we are, might mould who we are, but given our ability to shape the environment, we can play an active role in the development of the self," they said.

More information: Michael J. Proulx et al, Where am I? Who am I? The Relation Between Spatial Cognition, Social Cognition and Individual Differences in the Built Environment, *Frontiers in Psychology* (2016). DOI: 10.3389/fpsyg.2016.00064

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