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# Seeing the Building for the Trees

By SARAH WILLIAMS GOLDHAGEN

A REVOLUTION in cognitive neuroscience is changing the kinds of experiments that scientists conduct, the kinds of questions economists ask and, increasingly, the ways that architects, landscape architects and urban designers shape our built environment.

This revolution reveals that thought is less transparent to the thinker than it appears and that the mind is less rational than we believe and more associative than we know. Many of the associations we make emerge from the fact that we live inside bodies, in a concrete world, and we tend to think in metaphors grounded in that embodiment.

This metaphorical, embodied quality shapes how we relate to abstract concepts, emotions and human activity. Across cultures, “important” is big and “unimportant” is small, just as your caretakers were once much larger than you. Sometimes your head is “in the clouds.” You approach a task “step by step.”

Some architects are catching on to human cognition’s embodied nature. A few are especially intrigued by metaphors that express bodily experience in the world.

Take the visual metaphor of a tree as shelter. Most people live around, use and look at trees. Children climb them. People gather under them. Nearly everyone at some point uses one to escape the sun.

Recently, architects have deployed tree metaphors in many different settings. At the [Kanagawa Institute of Technology](#) in Japan, Junya Ishigami created an elegant “forest” out of slender, white-enameled metal saplings that congregate in clusters and open into clearings of vocational work spaces. In Seville, Spain, a German architect, Jürgen Mayer H., gave definition and shade to the city’s Plaza de la Encarnación with his [Metropol Parasol](#), a litling, waffled construction of laminated timber.

Such projects follow earlier, very different tree-inspired buildings, like Toyo Ito’s well-known [Tod’s](#), a retail store in Tokyo, and the [Mediathèque media library](#), an exhibition space and cinema in Sendai, Japan, which is so well supported by irregular, hollowed-out, sinuous “trunks” (housing elevators and staircases) that it survived the enormous earthquake last March.

Why should tree metaphors appeal to architects? Why should they be useful, even good, for

people? In the Seville project, tree imagery helps construct a distinctive public place that offers shelter and areas to congregate. As under spreading trees, the boundaries defining these spaces are permeable; easy to enter and exit, they offer nature's spatial freedom yet help people to feel more firmly rooted where they are. And tree metaphors, deployed architecturally, simultaneously lament nature's absence and symbolically insert its presence.

Tree metaphors also refer to the experience of living in a body on earth. Trees are static, stable objects. Someone connected to a community is "rooted" there; a psychologically sturdy friend's feet are firmly "planted" on the ground. We use trees to describe human bodies and souls: the area from our neck to pelvis is our "trunk"; someone reliable is "solid as an oak"; someone exploring a new area of inquiry is "branching out."

Buildings aren't nature, of course. Tree metaphors like the branching-out facade of Mr. Ito's Tod's surprise people. But because the surprise comes along with the implied reassurance of structural integrity (they're trees, after all), it prompts us to focus on the built environment, perhaps to reconsider its role in our everyday lives.

Architects may also like tree metaphors because a tree's overall structure is regular, while its fine-grained composition, its tangles of branches, are irregular, an arrangement conducive to the kind of design experimentation offered by new digital technologies.

But the design opportunities that tree metaphors present fail to explain their appearance in such a diverse range of buildings. Trees are familiar. Tree metaphors allow for an architectural inventiveness that stretches people without estranging them.

Trees are just one of the growing number of embodied metaphors used in contemporary architecture: Zaha Hadid builds [riverlike spaces](#), while the Japanese firm Sanaa offers up a habitable mountainscape of a [student center](#) at the École Polytechnique Fédérale in Lausanne, Switzerland.

How many designers are clued in to the ongoing cognitive revolution and its potential for the built environment is unclear. But this collection of architects and projects herald more than just another stylistic or pyrotechnic, technology-driven trend. They point toward how the built environment could — and should — be radically reconceptualized around the fundamental workings of the human mind. We need, and are ever more in a position to create, a richer built environment, grounded in the way people actually experience the world around them.

*Sarah Williams Goldhagen, the architecture critic for The New Republic, is writing a book about how people experience the contemporary built environment.*

