

# The End of Sitting



Left: Film still from Jacques Tati's *Playtime*, 1967. Right: RAAAF and Barbara Visser, *The End of Sitting*, 2014.

Humans are addicted to sitting. Chairs seem to suck us in. When we enter a room with a chair in it, we feel the irresistible urge to sit down. Despite a growing body of scientific evidence that asserts that prolonged sitting has adverse health effects (“sitting is the new smoking”) designers are still trying to reinvent the chair. But why this fixation on chairs? What if, rather than thinking through design archetypes, we focus on *activity*?

Only 100 years ago, what we now know as sedentary office work was active work; people shifted positions regularly. In Roman times, *officium*—from which “office” derives—meant “service,” a title given to those who produced official documents in the space of the industrious agora. In the Middle Ages, similar activities were carried out by the chancellors of the king, who wrote charters and other documents for governmental institutions in court. In both scenarios, writing at a desk did not necessarily imply sitting on a chair. Later, Renaissance printing houses combined deskwork with the physical activities of early printing techniques, resulting in a dynamic space with alternation between standing, sitting, leaning, and roaming.

Industrialization ushered in the unhealthy passivity of the workplace. The century of sitting began with the popularization of the typewriter and Taylorism: the drive for efficiency and pro-

ductivity led to a segmented office. The standardized chair and desk became the symbol of job security, and simultaneously the instrument of control and hierarchy. Although many designers tried to loosen these divisions, the chair and desk remained the starting point of 20th-century office design. The widespread use of desktop computers from the 1980s onward further decreased physical activity in the workplace.

## Affordances for the Embodied Mind

Can we imagine a new kind of office that breaks the passivity of sitting, and encourages people to alternate physical positions? Superficial adjustments to standardized furniture elements are not the answer. Rather than updating the chair, the entire office landscape needs to be reconsidered. An explicit awareness of the health risks of sitting is not enough to surmount the irresistible comfort of the chair. As Sean Kelly, Harvard Professor of Philosophy, explains, the typical relation between behavior and our surroundings in everyday life is a “direct bodily inclination to act in a situated, environmental context.”<sup>1</sup> These unreflective inclinations, or states of bodily readiness, are facilitated by relevant affordances—that is, the possibilities for action provided to us by the environment.<sup>2</sup>

Recent work on affordances in the philosophy of embodied cognitive science has defined them more precisely. Erik Rietveld and Julian

*RAAAF [Rietveld Architecture-Art-Affordance]* is an Amsterdam-based, multidisciplinary architecture firm cofounded by Erik and Ronald Rietveld. Together with Arna Mackic, Elke van Waalwijk van Doorn, and Bastiaan Bervoets, they approach design through scientific research, spatial experiments, and strategic interventions.

*Erik Rietveld gratefully acknowledges the support of the Netherlands Organisation for Scientific Research (NWO) in the form of a VIDI grant.*



Kiverstein state: “Affordances are relations between aspects of the material environment and abilities available in a form of life,” which includes sociocultural practices.<sup>3</sup> It should, then, be possible to piggyback on people’s existing abilities for standing, leaning, and hanging to create new affordances for working in all sorts of supported positions. From studies on affordances in dynamic systems theory we know that offering a large variety of affordances can help create an environment that invites roaming within a certain area.<sup>4</sup>

### Landscapes of Affordances

Thinking in terms of afforded activity means approaching office design from an unexplored angle. By conceiving an entire “standing office” rather than a “standing desk,” a range of other postures can be invited into our workspaces. With this new spectrum of *supported* standing affordances, we can uncover possibilities for radical change in the office environment.

Our installation *The End of Sitting* is a sculptural investigation of this philosophy of affordances. A silver-gray rock landscape with excavated spaces accommodates bodies of varying heights and sizes in a range of positions. Most pathways are sloped for optimal foot support while leaning. The installation offers a variety of spots for workers to stand, lean, hang, and even recline. The structure of the work landscape provides niches for concentration,

areas for collaborative work, and settings that invite informal interaction.

To motivate people to switch postures and move through the landscape during the course of the day, the uncompromising materiality of the rock provides only temporary comfort. Paradoxically, it is this *discomfort* that ensures an optimum of activity over time. A study by ecological psychologist Rob Withagen of the University of Groningen suggests that this strategy is beneficial: after working in the rock landscape, people reported that even though their legs felt more tired, they were more energetic than they were after to working in a conventional office setting.

### Spatial-Thinking Models

Affordance-based thinking is important because material context largely determines physical behavior. For this reason it is also important to develop a better understanding of the concept of affordances within architecture and philosophy. As an artistic component of our philosophical research, *The End of Sitting* investigated inviting affordances, or what Kelly calls “solicitations.” The installation is an office landscape that solicits movement. “Without this distinction between affordances and solicitations, architects and human movement scientists interested in designing healthier living environments will not be able to understand why some affordances invite movement and others do not solicit that,” says

Kiverstein.<sup>5</sup> This provides a philosophical framework for investigating how solicitations are not just dependent on the material environment, but also on the dynamically changing personal needs, concerns, and abilities of individuals.

What would the world be like if we were free of this habit of sitting, if we lived by a different set of rules? What could be a new thinking model? And how would *The End of Sitting* function in a more traditional office environment, university building, library, or public space? In order to address the conditions for the world’s increasing numbers of sedentary laborers—assembly-line laborers, call-center employees, information-technology workers—we also have to explore new ways of thinking about working. *The End of Sitting* shows the power of real-life spatial-thinking models that evoke experiment and new perspectives for the future.

<sup>1</sup> Sean Kelly, “Seeing Things in Merleau-Ponty” in *The Cambridge Companion to Merleau-Ponty*, ed. Taylor Carman and Mark B. N. Hansen (Cambridge: Cambridge University Press, 2005), 106.

<sup>2</sup> See Erik Rietveld, “Situating Normativity: The Normative Aspect of Embodied Cognition in Unreflective Action,” *Mind* 117, no. 468 (2008): 973–1001; James J. Gibson, *The Ecological Approach to Visual Perception* (Boston: Houghton Mifflin, 1979).

<sup>3</sup> Erik Rietveld and Julian Kiverstein, “A Rich Landscape of Affordances,” *Ecological Psychology* 26, no. 4 (2014): 335.

<sup>4</sup> Jelle Bruineberg and Erik Rietveld, “Self-Organization, Free Energy Minimization, and Optimal Grip on a Field of Affordances,” *Frontiers in Human Neuroscience* 8, no. 599 (2014): 1–14.

<sup>5</sup> Rietveld and Kiverstein, “A Rich Landscape of Affordances,” 335.