

THE DIVIDED BRAIN AND WAYS OF BUILDING THE WORLD: PARALLELS IN THE THOUGHT OF IAIN MCGILCHRIST AND CHRISTOPHER ALEXANDER

Or ETTLINGER*

Faculty of Architecture, University of Ljubljana, Ljubljana, Slovenia

Received 02 February 2023; accepted 09 November 2023

Abstract. What might have led to the fundamental changes in the built environment during the 20th century? While factors such as postwar reconstruction, urbanization, industrialization, shifts in style, or socio-political changes are surely involved, there may be deeper influences that are associated with the structure and dynamics of the human brain. Iain McGilchrist's hemisphere hypothesis proposes that the differences between the left and right hemispheres are not functional but embody opposing approaches to the world: the left sees an atomized world made of things to be controlled and manipulated for survival; the right sees an interconnected world of wholes with which it is deeply related. McGilchrist observes that in recent centuries, there has been an increasing shift in the West towards the left hemisphere's approach. Christopher Alexander's lifelong quest for wholeness in the built world resonates with McGilchrist's observations as applied to the field of architecture. Alexander observed that today's built environment is an expression of our civilization seeing the world as a giant mechanism made of parts rather than an indivisible whole. In response, Alexander developed design methods that approach the world as a unified whole and the building of new places as a further unfolding of that whole.

Keywords: Iain McGilchrist, Christopher Alexander, neurosciences, architecture, the master and his emissary, a pattern language, the matter with things, the nature of order.

Introduction

Why has the built environment – and the way it is being built – changed so much during the 20th century? Is it because of postwar reconstructions and massive urbanization (Angel et al., 2012)? Is it because of the ever-accelerating industrialization of construction (Steffen et al., 2015)? Is it because of the availability of cheap energy and the development of a car-based society (Buchanan, 1963)? Is it because of a stylistic shift within the architectural profession (Hitchcock, 1989)? Is it because of a socio-cultural or political shift in Western societies (Wilk, 2006)?

This article explores the possibility of a deeper explanation, whereby all these factors may be expressions of a much broader development that lies beneath them. Perhaps, as will be suggested here, the answer has to do with the way our civilization has come to see the world, and accordingly, with the way it has come to approach the act of building that world. Moreover, it suggests that this adopted worldview is the expression of a particular way of using the brain, which has led to a wide range of consequences for individuals and society, with the changes in the built environment among the most apparent. To

explore this possibility, the article presents and compares the thought of Iain McGilchrist and Christopher Alexander, two of the most original and insightful thinkers of our time. Their fields of inquiry may initially appear to be unrelated, but their observations are highly complementary, and are relevant to the questions presented here.

The article begins with the work of Iain McGilchrist, a psychiatrist, neuroscience researcher, philosopher, and literary scholar, who revisited and reinterpreted the differences between the two hemispheres of the brain in his book *The Master and His Emissary* (2009), and continued to explore their implications for contemporary civilization in his two-volume work *The Matter With Things* (2021). The article continues with the work of Christopher Alexander, who was an architecture theorist, practitioner, and educator who dedicated his life to finding ways of creating beautiful places in our own time, and is mostly known for books such as *A Pattern Language* (1977) and his four-volume work *The Nature of Order* (2002–2005). The article elucidates Alexander's main ideas in light of McGilchrist's work, and shows how their ideas reinforce each other, resonate with similar observations in other fields, and how they may be applied to choosing the way we build the world.

*Corresponding author. E-mail: or.ettlinger@fa.uni-lj.si

1. Iain McGilchrist's hemisphere hypothesis

In 2009, McGilchrist published his book *The Master and His Emissary*, a culmination of twenty years of research into the differences between the hemispheres of the brain, spanning neuroscience, philosophy, art, and literature. The observation that the two hemispheres are different is not new, yet the essence of their difference has been disputed for many decades. In the 1960s and 1970s, emerging discoveries seemed to suggest that the left hemisphere is central for functions such as language and logic, whereas the right hemisphere is more attuned to visuospatial imagery and emotions. This led to a cartoonish popularization of hemisphere differences, with ideas such as “left-brain people” best suited for engineering and “right-brain people” who are more likely to be artists. But as research proceeded over the decades, various functions of the brain didn't seem to be performed by either hemisphere on its own. Consequently, the idea of hemisphere specialization lost its credibility among most neuroscientists.

McGilchrist's contribution to the question of hemisphere differences came from reframing the very question by which it had previously been addressed. Perhaps, he observed, the reason that science hasn't been able to settle this question is that the difference between the hemispheres isn't in the functions they perform. After all, the notion that the brain is built as a series of “modules” that perform certain “functions” is only a convenient metaphor that scientists use in their attempt to understand the world: imagining it as a machine, where their job is to analyze it and find out how it works. But, McGilchrist suggested, what if instead of thinking about the brain hemispheres as two modules in a machine, we considered them as giving rise to two ways of being in the world, akin to two “personalities”, each contributing another aspect to our perception of the world and our interaction with it? This too would only be a metaphor, but perhaps a more revealing one? With this single step of reframing, thousands of research papers published by scientists over numerous decades suddenly came together in a new way, suggesting

a consistent story about what the difference between the hemispheres might actually be.

By approaching hemisphere differences in terms of ways of being, or “personality”, rather than of function, McGilchrist observed that the core difference between the two is not in *what* they do, but rather in *how* they do it. Both hemispheres are involved in logic, but they approach it differently. Both are involved in emotions, but they are attuned differently. Both are involved in language, but they contribute different aspects to it. And so it is with other functions of the brain: for each function, each hemisphere approaches it in a different way, adding its own value to it.

The essence of the two ways of the hemispheres, McGilchrist suggests, lies in their different *attention* to the world. This is best exemplified in the case of birds, whose brains also have two hemispheres. In order to survive, a bird needs to be able to pay two different kinds of attention. In order to eat, it needs to have a focused, narrow attention so as to identify an edible seed from the gravel around it and grasp it with its beak. Yet in order not to become prey, it also needs to have an open, broad attention so as to recognize a potential predator from wherever it may appear. These two types of attention are so fundamentally different that, physiologically, they require different parts of the brain to perform them – not only because they need to be performed simultaneously, but also because the very wiring of the brain needs to be different for each of them. This difference is further expanded in more complex animals, and reaches its most elaborate form in humans: two differently structured hemispheres, each capable of functioning independently, yet both existing within the same brain and contributing their share to generating an integrated person with a wide range of capabilities.

The following Table 1 captures some of the main differences McGilchrist observed between the left and right hemispheres. These differences are not functional, but better understood in terms of the attitude, way, or approach each hemisphere contributes to whatever function it may be involved in:

Left Hemisphere	Right Hemisphere	Left Hemisphere	Right Hemisphere
Manipulate	Understand	Local short-term view	The bigger picture
Control	Engage	Isolated fragments	Whole, union
Focus and grasp	Breadth and flexibility	Parts make the whole	Wholes make the parts
Fixity and stasis	Change and flow	Predictability	Possibility
Abstraction	Context	Certainty	Ambiguity
Explicit	Implicit	Surface	Depth
Familiar, known	New, unknown	Re-presentation	Presence
The mechanical	The living	Knowledge, analysis	Experience, insight
Things	Relationships	I <i>have</i> a body	I <i>am</i> a body
Tools	Processes	Literal meaning	Metaphor, humor
Classify, categories	Identify, individuals	Either/or	Both/and
Competition, rivalry	Bonding, empathy	Self as conscious will	Self as part of the world

Table 1. Hemispheric differences in approaching and perceiving the world. Adapted from McGilchrist (2009, 2021)

In the case of an individual's personality, both ways of attending to the world combine into a unified person, yet the relative degree to which each hemisphere contributes to shaping that person's character may be different. Some people tend to rely on one hemisphere a little more than on the other, or a little more often, or for a little wider range of tasks or situations. What determines this tendency? Some of it may be an inborn preference, but to a large degree, McGilchrist argues, it's a matter of habit and culture. In other words, people tend to influence each other, strengthening a heavier reliance on one hemisphere over the other. Furthermore, a culture's particular hemispheric preference also influences the way we build the world around us, which, in turn, trains and induces that same hemispheric preference in us even further. Both hemispheres are still deeply involved in constituting who we are, but there is a clear difference between people or cultures that shift a little more towards a reliance on the left hemisphere's way of engaging with the world, and those that shift a little more towards the right hemisphere's way. This determines not only which aspects of the world we are more attuned to, but also our fundamental view of what the very nature of the world is.

Additionally, McGilchrist's prior experience as a scholar of literature, philosophy, and art history provided him with an insight into hemispheric differences throughout history. With this new view of hemispheric differences, he studied past periods in Western civilization and was able to glean from them whether they reflect a cultural tendency to rely more on one hemisphere or the other. Poems, paintings, philosophical writings, as well as historical events, when viewed in large numbers and spanning extended periods, revealed to him certain patterns that suggested the cultural preference of their own place and time as regards the generally dominant way of attending to the world. He identified three civilizations where the right hemisphere was in the lead: Classical Greece, first-century Rome, and Renaissance Italy. All three, however, were followed by a gradual tendency towards left hemisphere dominance, and – in the case of Greece and Rome – that civilization's eventual collapse.

The reason why it matters which hemisphere is dominant is that the two hemispheres have a deep, built-in asymmetry in how they relate to *each other*. By its very nature, the broad perception of the right hemisphere means that it is also aware of its own limitations and always seeks the partnership of the left hemisphere. The right hemisphere's aim is to integrate its own broad perception of the whole with the left hemisphere's focus and discernment of the particulars so as to generate an even bigger picture that includes both. The left hemisphere, on the other hand, isn't aware of what it isn't aware, and tends not to want to cooperate with the right hemisphere. Consequently, there is an inherent difference between cultures that tend towards a dominance of one hemisphere only: where there is right hemisphere dominance, there is also balance between the two, because the right hemisphere by definition

seeks to include the left hemisphere; but where there is left hemisphere dominance, there is also imbalance between them, because the left hemisphere seeks to *exclude* the right hemisphere. As a result, in such a culture, the perception of the world is increasingly skewed towards the perspective of the left hemisphere, and accordingly, the members of such a culture tend to build a world that increasingly reflects the values of the left hemisphere alone. This, in turn, elicits the dominance of the left hemisphere in them even further, in an ever-increasing feedback loop.

Based on his extended historical analysis, McGilchrist argues that the present-day world is the most extremely left-hemisphere-tilted human civilization in history. In line with the preferences of the left hemisphere over the right, we are fascinated with the mechanical at the expense of the living, see the world as made of things rather than relationships, understand it in terms of categories rather than individuals, seek certainty rather than embrace ambiguity, succumb to literal meaning at the expense of humor and metaphor, prefer tools over processes, value concepts over experiences, and attempt to solve our problems with more technology, more systematization, and more regulation – even when technology, systematization, and regulation are the source of these problems.

Although tendencies towards the left hemisphere have occurred in past periods as well, there have always been forces that were able to gradually restore the balance over the course of generations. As McGilchrist identifies, these forces were the natural world, the body, religion, art, and a sense of historical continuity. In our time, however, these forces have been so extremely colonized by the left hemisphere's way of seeing the world that their power to restore balance is not as strongly present in them as it was in previous periods. The natural world is being widely destroyed; the experience of the body is overshadowed by technology's powerful ability to engage the mind; religion, and even spirituality, have largely given way to secularism; art has predominantly shifted to concepts and abstractions; and the sense of historical continuity is becoming replaced with rootless citizens of a self-congratulating present. Therefore, if we are to restore the balance between the hemispheres in our own time, we can no longer rely on these forces to act on our behalf. We need to become aware of the imbalance in ourselves first – both as a culture and as individuals – as well as seek to restore our connection with these forces so they can help us achieve balance again.

In his latest book, *The Matter With Things* (2021), McGilchrist revisits and expands his hemisphere hypothesis, providing an in-depth exposition of the limitations and dangers of the left hemisphere's worldview, and arguing for the truth and necessity of that of the right hemisphere. He makes the case that the left hemisphere isn't as realistic and useful as it presents itself to be: the world isn't really made of "things" as the left hemisphere sees it – things to extract, manipulate, produce, and control so as to ensure our survival. Not only is this untrue, but such

a worldview leads us ever closer to resource depletion, societal fragmentation, widespread mental illness, and the creation of a world that none of us would truly want to live in. In search of an alternative way of understanding the world, the book explores four pathways that have been used at various periods of history to find out what is true: science, reason, intuition, and imagination. And in each of these pathways, McGilchrist shows how it is the right hemisphere, not the left, which makes the major and most crucial contributions. Engaging the right hemisphere's insights, the book goes through neuroscience, philosophy, and physics to reveal how much the world we live in actually exists beyond "things".

2. Christopher Alexander's quest for wholeness

Alexander found the architecture that was emerging in his student years of the late 1950s and early 1960s to be generic and lifeless, and dedicated his life to find a way for it to be developed with attention to human feeling and experience (Grabow, 1983). He was the first recipient of Harvard's doctorate in architecture and became a professor at the University of California at Berkeley. He published his insights in over 15 books and numerous articles, built over 100 projects, and taught hundreds of students over nearly four decades. His most well-known book is *A Pattern Language* (1977), which he developed with a group of students and colleagues for over 10 years. To understand its aim and what the notion of "patterns" is about, McGilchrist's observations provide a helpful perspective and a language with which to articulate it. What Alexander observed is that architecture has become focused on using concepts and abstractions to produce objects that fulfill needs and functions – yet that the places created this way end up fragmented and lifeless. To use McGilchrist's terms even more directly, architecture has become dominated by a left hemisphere way of seeing and building the world, and in response, Alexander tried to develop a viable alternative that would be rooted in the right hemisphere's approach.

Alexander's proposed remedy was to bring architects' and builders' attention away from approaching a project as a collection of "objects" to be built, and instead consider it as made of what he called *patterns*. For example, when making a house entrance, instead of focusing on the specifics of a door or a front porch and how they should look, Alexander suggested paying attention to making a richly-developed "Entrance Transition": what would the entire transition from the street to the house interior be like, what stages would it involve, and how would they be resolved given the particular conditions of each house? The result would probably involve a gate, some steps, a door, and perhaps some potted plants, or even a porch – but the particular design of such objects would emerge from the set of relationships that generate this entrance transition. In similar fashion, *A Pattern Language* laid out hundreds of such patterns that address a wide range of needs and situations in the built environment at various scales. These patterns didn't offer exact design solutions,

but rather a framework for guiding the creation of an appropriate design for each unique situation. In McGilchrist's terms, Alexander's suggested use of patterns was a way of shifting attention away from "things" and more towards "relationships".

A Pattern Language became (and still is) the best-selling architecture book of all time, but as far as Alexander was concerned, it didn't achieve its goal (Grabow, 1983). Numerous people, architects as well as laypeople, applied its principles in their building projects, and some achieved a decent quality, but the general problem of architecture and the built environment remained unresolved: lifeless, fragmented places devoid of beauty were still being created in massive numbers all over the world – and even when his patterns were implemented, the results weren't consistently much better. What was missing? As Alexander realized, his patterns have been predominantly interpreted as providing a "kit-of-parts": a handbook of cool elements that could be placed into a design project like pieces in a puzzle. In McGilchrist's terminology, Alexander's patterns, although rich in relationships internally, were applied as if they themselves were "things": either as concepts to design with, or as parts to be lumped together to hopefully lead to the creation of a whole that never emerges. That is, even though the patterns themselves were right-hemisphere oriented, they were generally implemented with a left hemisphere mindset, which couldn't allow them to truly come together into a coherent whole. Consequently, Alexander entered another round of exploration and experimentation, which culminated twenty-seven years later in his four-volume work *The Nature of Order: An Essay on the Art of Building and the Nature of the Universe* (2002–2005).

Alexander realized that the difficulty in building beautiful, whole places in the present day lies in the very way our current civilization sees the world. The scientific worldview which underlies contemporary civilization is built on an understanding of the world as a mechanism: a giant machine that is made of parts, which themselves are made of smaller parts, all interacting with each other in linear fashion to supposedly build up larger wholes. Within such a worldview, feelings and experiences only belong to the mental realm, which has no place in the mechanistic model of the world. Feelings are considered unpredictable, unique to every individual – and therefore an unreliable and irrelevant factor for making serious decisions. Accordingly, the design of places nowadays is primarily driven by considerations that are functional, economical, structural, conceptual, or formal, but with hardly any attention to the experiential dimension of the people who inhabit them. In McGilchrist's terminology, our civilization has adopted the left hemisphere view of the world, and proceeded to build the physical world to increasingly reflect this worldview, while disregarding the aspects of the world that the right hemisphere responds to.

In *The Nature of Order*, Alexander set out to develop an alternative model for approaching the world, a model built primarily on *relationships* rather than on *things*, and

in which human feeling could find its place alongside scientifically-definable considerations. To do so, Alexander proposed that if we look beyond our culturally-habituated mechanistic worldview, we might realize that the universe is not actually made of things. It is rather made of *wholes*. For example, a tree is not merely a collection of branches and leaves. It is a whole. A landscape is not a collection of hills and valleys, trees and rivers – it is a whole. This is not to say that parts don't exist, but that they don't exist *on their own*, separate from their relation to the whole to which they belong. Furthermore, it is the whole that generates the parts rather than the other way around.

To make his idea of wholeness and what it is made of more accessible, Alexander developed an alternative terminology around the term “center”. Centers are focal points of attention in the whole. Thus, wholes are not made of parts, but rather of centers. For example, in a landscape, a hill is a center, and a valley is a center. If we were to think of the landscape as made of things, and tried to pinpoint a valley as separate from its nearby hill, we would quickly realize it to be impossible – take one away and the other ceases to exist. Yet if we think of them as *centers*, we discover that they complement each other: the hill is defined by the valley, the valley is defined by the hill, and both are defined by the landscape as whole. The hill and the valley are *centers* in the whole that the landscape is, which they give rise to, and which gives rise to them. In terms of McGilchrist's hemisphere hypothesis, Alexander's term “center” provides a clear articulation of the right hemisphere's own view of the relationship between parts and wholes.

To create wholeness in the built world, Alexander proposed that we learn to see the world in terms of wholes and centers, and then seek to increase wholeness by generating ever more centers within it. The more there are interconnected centers in a given place, the more whole it becomes. The more whole it becomes, the more it elicits an experience of wholeness in the people who inhabit it. This cannot be achieved by taking an empty lot and figuring out what “parts” to add to it, or what “things” to build in it. Rather, it is achieved by sensing the wholeness of a place, identifying and cultivating the dormant centers that lie within it, and giving them expression in built form. Practically, such a process isn't achieved by conceptualizing an abstracted “blueprint” in the architect's mind and imposing it onto the site, but rather by a gradual process of unfolding, one step at a time, whereby the design reveals itself through the site, and is continuously refined during its construction. In McGilchrist's terms, it is a design approach that may seem unintelligible or pointless to the left hemisphere, yet which, with some practice, gives the right hemisphere a powerful access to shaping the world in a way that is coherent, whole, and full of life.

What Alexander's theory of wholeness and centers does is to reconcile the rift between the mechanistic worldview and subjective human feeling by being accessible to both. On the one hand, the degree of wholeness in a place is subjectively felt just by being present within it,

while on the other hand, the configuration of centers that constitute that wholeness can be mathematically described and empirically applied. Thus, what makes so many places built before the 20th century enlivening and pleasant to be in is that the know-how of generating wholeness and centers was self-evident in past traditions, even if it wasn't consciously articulated this way. What Alexander formulated is a method for consciously re-developing a right hemisphere approach for building in the contemporary world.

In Alexander's last book, *The Battle for the Life and Beauty of the Earth* (2012), co-authored with his long-term collaborator Hajo Neis and wife Maggie Moore Alexander, he shares his observations from a lifetime of attempts to generate wholeness in the built world. The book revolves around his personal experiences from developing an entire campus for the Eishin high school outside of Tokyo, Japan. The process of designing and constructing such a large-scale project brought Alexander and his colleagues up against major difficulties with the social and institutional structures of the construction industry. Lending banks, construction companies, contractors, regulators, and nearly every aspect of this project were at odds with the wholeness-generating process he sought to implement. As a result, Alexander came to consider the search for wholeness as being more than merely a building process, but as reflecting an entirely separate “world system” from the one that dominates much of contemporary civilization.

Alexander describes “System A”, the one he advocates for, as opposed to “System B”, the institutional structures in which the contemporary world mostly operates. System A prioritizes relationships, wholeness, beauty, feeling, process, and unfolding. In contrast, System B prioritizes things, modularity, efficiency, gain, results, and predictability. Only System A can develop life and wholeness in the built world, but for it to do so, System B would be a worthwhile ally to work with – that is, if it would be willing to play along. Mostly, however, System B doesn't want to cooperate, and considers the approach of System A to be hopelessly naïve, unrealistic, and downright annoying. This clearly reflects McGilchrist's observations about the brain hemispheres as two “personalities” that not only have two different ways of seeing the world, but also give rise to two separate experiential worlds that each of them considers to be the real world we're living in. Additionally, it also reflects how the right hemisphere is aware of its limitations and seeks the partnership of the left hemisphere, while the left hemisphere considers itself to know all there is to know, denying the dangers and limitations of its self-contained approach, all the way to the eventual demise of both.

3. Comparing and discussing the thought of Iain McGilchrist and Christopher Alexander

When considering the thought of McGilchrist and Alexander side by side, it becomes evident that although their standpoints are different, their observations are not only similar, but mutually reinforcing. What they both point to

is the limitation of the reductionist, mechanistic approach that has come to dominate contemporary civilization, and the reality and necessity of an alternative way of thinking that approaches the world as an indivisible, living whole.

Furthermore, their observations resonate with growing insights from leaders in other fields as well, such as David Bohm's quantum theory of wholeness, the implicate order, and the role of consciousness in the unfolding of reality (Bohm, 1980); J. Scott Turner's critique that biology has become so mechanistic that it is no longer a science of life (Turner, 2017); or Stuart Kauffman's study of complexity of biological systems and his call to reinvent the sacred in science (Kauffman, 2008). What McGilchrist and Alexander add to such insights stems from the particular fields from which they arrive at theirs: neuroscience dealing with the neural substrate of *who we are* and how the world arises for us, and architecture dealing with *how we make* that world for ourselves and how it shapes us in return.

From the side of neuroscience, McGilchrist makes it clear that both worldviews – the reductionist and the whole – are equally built into the very structure of the brain. They reflect two existing aspects of the world, as well as two possible ways of experiencing it. Thus, the problems of contemporary civilization are not merely external matters of how society or the economy are organized, but are also *individual*. Consequently, it is up to each and every one of us to choose which of these worldviews will dominate how we see the world, and how we end up acting in and building that world. Despite our limited power to influence social or economic structures, each of us can still consciously nurture within ourselves the world of the right hemisphere, and seek opportunities to choose paths of action that are aligned with it. Since brains have plasticity and adaptability, we can train ourselves to view the world through the right hemisphere – and in doing so, help give rise to such a world.

From the side of architecture, Alexander provides a living demonstration of how the approach of the right hemisphere can be put into action in a particular field of human endeavor. Architecture, and particularly what it has produced over the last century, lays bare the cultural shifts that have occurred during this period's ever-increasing reliance on the left hemisphere, and the architectural crisis this has led to (Buchanan, 2012). In response, Alexander's life work – and of those that carry it further (Salingaros & Mehaffy, 2015; Pontikis & Rofé, 2016) – is a series of attempts to identify the core of this problem and to offer solutions to it with a distinctively right hemisphere approach. The methods and processes Alexander developed are rooted in the right hemisphere, showing how to build in a way that reflects the right hemisphere's world, and such that the resulting places would heal us by invoking and nurturing our right hemispheres.

Conclusions

The work of Iain McGilchrist and Christopher Alexander, taken together, suggests that the fundamental 20th-centu-

ry shift in the way the physical environment has been built is the expression of a long-brewing shift in the balance between brain hemispheres in the West towards left hemisphere dominance. Up-to-date research on hemisphere differences suggests that this means the adoption of an overall approach to the world that is general, mechanistic, utilitarian, disembodied, decontextualized, and ultimately lifeless (McGilchrist, 2021). In the built environment, this would explain the increasing role of concepts and abstractions in architectural design; how the making of places became a series of atomized tasks performed by different professions in separate times and places; the growth of systematization, standardization, and regulation to keep such a disjointed process together; the idolization of money, efficiency, and certainty; why the resulting built world is typically a series of isolated objects in a sterile space; and why people growing up and living in such an environment tend to produce ever more of it.

Nevertheless, despite these overarching trends, individuals and communities can still cultivate their own hemispheric balance and choose paths and methods that are aligned with the right hemisphere – individual, implicit, evolving, interconnected, whole, and living – while valuing the contributions of the left hemisphere, yet without allowing them to dominate. In the field of architecture, the work of Christopher Alexander demonstrates one such set of methods, which provide a contemporary way of building that puts wholeness and human experience as its central aim. Correspondingly, the work of Iain McGilchrist provides a wider perspective for such a way of building as much more than a personal or professional preference, but as part of an overall nurturing stance towards life and the world we all live in.

Acknowledgements

The author would like to thank Iain McGilchrist, Maggie Moore Alexander, Yodan Rofé, and Sergio Porta for generously reviewing the article's manuscript and offering their suggestions for its improvement.

References

- Alexander, C., Ishikawa, S., & Silverstein, M. (1977). *A pattern language: Towns, buildings, construction*. Oxford University Press.
- Alexander, C. (2002–2005). *The nature of order: An essay on the art of building and the nature of the universe* (Book 1–4). Center for Environmental Structure.
- Alexander, C., Neis, H., & Alexander, M. M. (2012). *The battle for the life and beauty of the earth: A struggle between two world-systems*. Center for Environmental Structure.
- Angel, S., Parent, J., Civco, D. L., & Blei, A. M. (2012). *The atlas of urban expansion*. Lincoln Institute of Land Policy.
- Bohm, D. (1980). *Wholeness and the implicate order*. Routledge.
- Buchanan, C. (1963). *Traffic in towns: A study of the long term problems of traffic in urban areas* (The Buchanan report). Great Britain Ministry of Transport.
- Buchanan, P. (2012). The big rethink: Towards a complete architecture. *Architectural Review*. <https://www.architectural-review.com/archive/campaigns/the-big-rethink>

- Grabow, S. (1983). *Christopher Alexander: The search for a new paradigm in architecture*. Routledge Kegan & Paul.
- Hitchcock, H. R. (1989). *Architecture: Nineteenth and twentieth centuries*. Yale University Press.
- Kauffman, S. (2008). *Reinventing the sacred: A new view of science, reason, and religion*. Basic Books.
- McGilchrist, I. (2009). *The master and his emissary: The divided brain and the making of the western world*. Yale University Press.
- McGilchrist, I. (2021). *The matter with things: Our brains, our delusions, and the unmaking of the world*. Perspectiva Press.
- Pontikis, K., & Rofé, Y. Y. (Eds.). (2016). *In pursuit of living architecture: Continuing Christopher Alexander's quest for a humane and sustainable building culture*. Common Ground Research Networks.
<https://doi.org/10.18848/978-1-61229-878-8/CGP>
- Salinas, N., & Mehaffy, M. (2015). *Design for a living planet*. Sustasis Foundation.
- Steffen, W., Broadgate, W., Deutsch, L., Gaffney, O., & Ludwig, C. (2015). The trajectory of the anthropocene: The great acceleration. *The Anthropocene Review*, 2(1), 81–98.
<https://doi.org/10.1177/2053019614564785>
- Turner, J. S. (2017). *Purpose and desire: What makes something alive and why modern Darwinism has failed to explain it*. HarperCollins.
- Wilk, C. (Ed.). (2006). *Modernism 1914-1939: Designing a new world*. V&A Publications.