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ANALYTIC PHILOSOPHY AND ARCHITECTURE: APPROACHING THINGS FROM THE OTHER SIDE

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Introduction

Architecture Thinking in a 'Post-truth Era': Recalibrations through Analytic Philosophy

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This issue of *Footprint* has travelled a long road. While our intuitions on the potential role of analytic philosophy began to crystallise in early form some time ago, it was only in beginning to set out the context of architecture in relation to its typical affinity with continental philosophy over the past three decades, that we began to explore some of the fundamental connections between philosophy and architecture. While philosophical approaches might be seen as part and parcel of architecture practice from its most clearly defined beginnings in Vitruvius's well-known *Ten Books on Architecture* (ca 27 BCE), it is particularly in the last decades of the twentieth century that philosophy took centre stage. In the late 1980s, architecture positioned itself as meaningful cultural intervention with reference to many philosophical perspectives on the social and the aesthetic. In this period, numerous studies that would strictly speaking fall outside the realm of architecture were re-engaged. From the ethnographic studies of Lévi-Strauss's *Tristes Tropiques*, to Deleuze and Guattari's intellectual acrobatics in *A Thousand Plateaus*, to the existential questions in Heidegger's *Building Dwelling Thinking*, many explorations of a highly cerebral nature were incorporated in the design premises of projects such as Peter Eisenman's House VI, in Daniel Libeskind's *Micromegas* and even in early work by Steven Holl to name but a few. Philosophy became an almost necessary springboard from which to define a work of architecture. In this period, academics and architects alike embraced ideas emerging from philosophy, particularly through the works of continental philosophers. Remarkably, references to analytic philosophy remained distinctly absent within the primary sources of architecture history and theory.

In essence, one could argue that philosophy and architecture make natural bedfellows, as they seek to understand some of the most fundamental concerns of human existence: the issue of shelter as the first architectural gesture is but a small step away from the ethical question: how do we wish to live, or what is the good life? The desire to house our institutions in purposeful, representative and significant edifices is intimately linked to issues of aesthetic judgment, and the question of how we perceive beauty (or a lack of it). At the same time, philosophy also questions our means of questioning, our means of the very discourse of inquiry through the study of knowledge and logic. The four core branches of philosophy – metaphysics, ethics, logic, and epistemology – have spawned countless further specialisations, which ebb and flow in popularity. While architecture thinking has freely adopted and adapted the continental philosophies of metaphysics and ethics, the domains of logic and epistemology have been less visible. While we acknowledge the limitations of a simplified distinction between two 'camps' of thinking, this issue of *Footprint* sought to open the discussion on what might be offered by the less familiar branches of epistemology and logic that are more prevalent and developed in the analytic tradition.[1]

Simply put, epistemology as it formally emerged with Plato (427–347 BCE), is the study of *how* we know that we know. It examines the justifications of knowledge and why we are able to claim something is true and something else is not, or why we can have a justified true belief.[2] In 2016, the algorithms and lexicographers at Oxford Dictionaries declared 'post-truth' to be the word of the year.[3] Other prominent Anglo-Saxon media groups such as *Forbes*, the *New York Times*, and the *Huffington Post* announced our societal entry into a post-truth era, age, or political arena.[4] As provocative and suggestive as these statements are, however, we can hardly claim to have had an 'era of truth': truth has never been a simple or straightforward thing, but rather a complex narrative of power, perspectives, (scientific) observations, individual interests and political engagements, even in the so-called 'hard' sciences.[5] While areas of continental philosophy such as post-structuralism and deconstruction have helped clarify the discourses of power and identify alternative perspectives, there may in this time of 'post-truth' be a pointed role for the clarifying tools and techniques of analytic philosophy.

Gottlob Frege (1848–1925), G.E. Moore (1873–1958), Bertrand Russell (1872–1970) and to a lesser degree, Rudolf Carnap (1891–1970) are widely considered as central figures in the foundation of analytic philosophy. Frege in particular is generally taken as the grandfather of analytic philosophy, founding the modern logic that would drive Russell's later *Principia Mathematica*, with the two-volume work: *Die Grundlagen der Arithmetik: eine logisch mathematische Untersuchung über den Begriff der Zahl* (*The Foundations of Arithmetic: A Logico-Mathematical Enquiry into the Concept of Number*), published in 1884. Although it should be noted that some have cited Frege's aim of 'demonstration that arithmetic had its foundations in pure logic alone' as reason to reject his influence in founding analytic philosophy.[6] The analytic approach can be explained at a multitude of levels, which would allow scholars to include and exclude people and ideas depending upon priorities of the argument. However, for the purposes of architecture thinking, it is interesting to consider Frege's project in relation to the analytic camp and our current predicament of a post-truth era.

Logic formally emerged in Western culture with the ancient Greeks, and the logical system composed by Aristotle (384–322 BCE) remained dominant in scholastic circles for over a millennium, only changing when Frege developed the modern formal system, which effectively constituted the first 'predicate calculus'.[7] Frege's approach separated statements into function and argument, rather than the more traditional subject and predicate of Aristotle's logic. Predicate calculus helped separate the logical content from the sign through which its function was expressed. As such, a group of statements became possible independent of the content of the signs. Frege's explicative system of language utilisation is the underlying reasoning from which he abstracts two arguments for the indefinability of truth. Frege claims that by employing language, people intend to denote objects that are independent of their own consciousness. These denoted objects are the meaning of these signs, the *Bedeutung*. Here, we adhere to the original German term *Bedeutung* due to its particular ontological status in the work of Frege. As he explains it, by uttering a sentence, we intend to speak about the objective things denoted by the sentence. However, sometimes there are situations in which a person believes one sentence that has a certain *Bedeutung* and not another that has the identical *Bedeutung*. Such situations demonstrate a rift between the sentence and its *Bedeutung*. Consider the following example of John: John believes that the sentence, 'The Evening Star is Venus' is true, but John does not believe that the sentence, 'The Morning Star is Venus' is true. For Frege, both individual words and whole sentences have a *Bedeutung*. The *Bedeutungen* of these two sentences are identical.

Hence, John's belief in the truth of one sentence and not the other shows that language allows the *Bedeutung* to present itself in an additional form. This aspect is what Frege calls the 'sense of the sentence'. Sometimes, but not always, the sense of a sentence is a thought.[8] A sentence with components that assert something expresses a thought.[9] The sense of a sentence is the way in which the sentence is understood or grasped. The sense of a sentence accounts for the discrepancy that language affords between a sentence and its *Bedeutung*. In this case, John understands the *Bedeutung* of both sentences and only the thought of the first sentence.

A sentence may also have a sense and not a *Bedeutung*, e.g. 'In the end, it was Hippolytus's devotion to Artemis that sealed his fate'. Here the sentence has a sense; that Aphrodite will not stand by, while Hippolytus boasts of being chaste in honour of Artemis. However, Hippolytus and Artemis are mere fictions, and cannot denote any object in reality; that is, the words do not assert anything. Therefore, the sentence as a whole does not have a *Bedeutung*. Notice that the sentence has an assertoric form. Sentences that have a sense, but not a *Bedeutung*, do not assert anything about reality; however, due to their assertoric form, a thought is expressed. These types of sentences are employed in poetry, acting, and as the dependent clause of a conditional sentence;[10] in short, when 'we are not speaking seriously'.[11] Because these sentences do not make claims about reality, they are neither true nor false. Hence, truth and falsity are not applicable to fantasy or fiction. Additionally, the sense of the sentence, or in privileged cases, the thought, must be grasped to understand the sentence. It is this structure that grounds Frege's argument for the indefinability of truth. It is within his network of concepts that he finds that some concepts defy definition.

Drawing upon Frege's structuring of language, we find that sentences of the privileged assertoric sentence-form that make serious claims can express a true thought.[12] This is because only an assertion makes a claim about objective reality. The assertion claims a truth about objective reality. An assertoric sentence can express a true thought. Hence, assertions presuppose the concept of truth. Definitions are assertions. Thus the correspondence theory presupposes an understanding of truth, in that it asserts something about reality. Likewise, the redundancy theory draws upon Frege's structuring of language to claim that truth is already presupposed in an assertoric sentence, so any further predication of truth merely repeats the prior assumption.

Frege lays out the following premises to clarify his application of the concept of truth: first, he is concerned with the scientific concept of truth and not the artistic concept of truth. This may be understood as Frege's plea to be taken as within the objective field of reason, as opposed to within the artistic concerns of genuineness or veraciousness.[13] Secondly, truth is only applicable to intentions.[14] The truth that Frege calls into question is the concept of truth, and hence an intentional phenomenon. It is in the sense of objective thought that truth looks like a property of an intentional statement. Something is called true 'only with respect to an intention that the idea should correspond to something'.[15] Thirdly, truth is not a relative term.[16] If truth were a relative term, then the term itself would give some indication of something else to which it was to correspond. However, the term *truth* does not suggest that with which it is intended to correspond.

The importance of establishing the link between language, truth, and something independent in reality (*Bedeutung*) was key to Frege's primary project of establishing an unlimited language that reached logical truths. In other words, Frege was interested in a means of communication that dealt with logical truths. Although Frege's work gave birth

to the philosophy of language, modern logic, and predicate calculus, the fundamental aim of reaching an unconditional logic through the language of mathematics alone was ultimately proven impossible by Russell's Paradox. The paradox disproved Frege's Basic Law V. Frege defines numbers explicitly as extensions of concepts. Frege's explicit definition of numbers states: 'The Number which belongs to the concept F is the extension of the concept "equal to the concept F"'.[17] This attempt to define numbers draws upon the understanding that if given any concept F, then the notion of equinumerosity can be used to define the concept ranging over concepts. That is, 'equal to the concept F' is the concept of equinumerosity that ranges over the concept F and the extension. By these means, Frege collects all of the equinumerous concepts to a given concept F into a single extension. Frege defines 0 as Number x (x ≠ x) and defines 1 as Number x (x = 0), that is, as Number x (x = Number y (y ≠ y)). With these definitions of 0 and 1, Frege utilises mixed identities. With the inclusion of extensions, the paradox arises by considering the set of all sets that are not members of themselves. Such a set appears to be a member of itself if and only if it is not a member of itself, hence the paradox. Some sets, such as the set of all coffee beans, are not members of themselves. Other sets, such as the set of all non-coffee beans, are members of themselves. So if we call the set of all sets that are not members of themselves S, if S is a member of itself, then by definition it must not be a member of itself. Similarly, if S is not a member of itself, then by definition it must be a member of itself. Russell's paradox stems from the notion that any condition may be used as an extension. Therefore, attempts at resolving the paradox have typically concentrated on various means of restricting the principles governing the existence of extensions. Restricting the domain, however, is not a move Frege was ultimately willing to make. Any restriction of the domain would render the method detached from pure logic, therefore becoming an arbitrary model of knowledge – which was an inevitability Frege eventually accepted.[18]

Frege proposed the existence of a logical language that when it was appropriately set up, could be employed to resolve complex philosophical questions. It was a totalising project much akin to what Michel Foucault would later describe as continental philosophy, noting that 'from Hegel to Sartre [continental philosophy] has essentially been a totalising enterprise'. [19] In the end, given Russell's paradox of the set of all sets, Frege conceded that any philosophical language was only valid within the parameters it established. Nevertheless, later analytic philosophers acknowledged the tools that propositional logic provided and set out to establish ways of discussing philosophy issues with the analytic structure and rules but in the more widely accessible language of English. The shortcomings of analytic philosophy were thus immediately visible: an almost historical portrayal of philosophy, arguments abstracted from their lived context, and a necessarily, artificially limited domain (as proven by Russell's Paradox). However the core strength that fuelled its relevance in twentieth century Anglo-Saxon thought was that it provided both a platform and a linear structure to compare diverse and complex philosophical questions.

The strength analytic philosophy offers to architecture is not its capacity to spark originality, creative artworks, or ideas and objects that can live and thrive in the complexities of an ever-emerging world. The power of analytic philosophy is to reduce the challenges of communication to classifiable and manageable boxes that can help us to communicate across the chasms of emotions, circumstances, and pre-determined understandings. As all of us who have witnessed the political shifts in the last year are well aware, the challenge of establishing a functioning cohesion of will, power and ideas that may begin to adequately address the plethora of problems inherent to our shared global society, will not be resolved by labels or witty word play. For example,

the morning after the Brexit referendum, one of the editors of this issue walked to work in a part of the UK which predominately voted 'out'. She is not English and from across the street a man yelled, 'Now you have to go home!' The next day, she flew to Berlin, where Tegel Airport has positioned immigration control stations at each gate. As passengers filed off the short flight from London, each passed a desk to show their passport and have their fingerprints taken. At this gate there were two desks, each with an EU flag over it. Yet when speaking English at the desk, she received an aggressive response: 'you are not part of the EU anymore, this desk is for EU members only'. Other members from the crowd yelled, 'Die Engländer waren niemals Europäer, es ist die Zeit, die sie verlassen haben!' (The English were never European, it is time they left!), another yelled, 'She is still Human, we are all Human'. For context, much of her family lives in Berlin, but in this case, she was travelling on a New Zealand passport. In essence, she was neither English nor German enough to enter without emotions erupting. Returning to the States in February of 2017 was no less of an event. At this temporal junction emotions and 'alternative facts' are driving actions. In order to protect the rights fought for in the last century and currently accepted as default or even universal rights, we must be strategic and not emotional.

For an individual traversing the urban landscape and negotiating political constructs at multiple scales, an immediate issue is not whose truth is 'better'; the issue is how to communicate with the other enough to move through the metaphorical or physical border crossing. To create as architects, one must have an idea of the possible object, yet creation also requires the skill to pass through these checkpoints of convincing the other – the patron who funds the production, the local planning officers who legalise the project, and the contractors who physically constructs the structure – that one's idea of a particular building is valid, is true. In creating an architectural object we generate an idea of what *could* be, and then through sequences of both self-critique and critique by others, amend, adapt, and defend the idea of our object. This issue of *Footprint* sought to focus on this smaller strategic aspect of architecture.

A particular strength of analytic philosophy is its capacity to structure questions and communication such that individuals from radically different backgrounds can find common ground. This methodology is inherently reductive, but affords the possibility of a shared medium. The method is to define a boundary, set, or environment, to establish the rules operating within that environment, and only then to debate. As architects and citizens, this skill of creating an environment for discourse (albeit an ephemeral and artificially limited one) is essential in our current period of claims of truth justified by impassioned emotions. In other words, we cannot pretend that the logical rules that operate in our own way of understanding the world, are shared by others in our society. We cannot remain confused as to why our 'rational' arguments are not convincing the other of our truth. If an aim is to achieve a means of addressing any of the political challenges, we must come to a point where we can project ourselves into the logical environment of the other.

As editors and scholars, we grant the significance that continental philosophy offers the individual creative process of generating architecture, and also the intellectual imperative for understanding the ethical, historical, and political context of our field and practice. Nevertheless, the time is ripe to question if anything from the analytic camp could be brought back into the fold of architecture thinking. Might the architecture debate benefit from the less central traditions of analytic philosophy and of pragmatism, as they offer the means to address finite, localised, and tangible issues within architecture? The field of architecture has developed significantly since Vitruvius first set out the study necessary to the

profession. Might increasing complexities emerging in this field, for example the ethical implications of new materials, the increasing independence of algorithms, or the legal incentive to copyright one's practice, benefit from an approach informed by the finely detailed scholarship of thinkers such as Frege, Wittgenstein, Carnap, and Quine? Might the more recent scholarship of Jackson, Dummett, and Oswald Hanfling offer method, style, and findings to the scrutiny of architectural thinkers? Might the emphasis on rule-based systems, clarity of argument and formal logic in the analytic tradition aid in understanding the conditions within which architecture is realised? As such, this issue of *Footprint* should be taken as the opening of a conversation rather than its definitive statement. As an initial question, it provides a broad span of articles that each takes elements of analytic philosophy, building on the premises of a systematic mode of communication and a mode of inquiry that may provide new insights for the theory and practice of architecture.

This issue begins with Tim Gough's article 'G.E. Moore's Principia Ethica and the Complex of Architecture'. Beyond providing a clear and precise account of analytic philosophy's role and positioning it within the history of ideas, Gough's reading of Moore's *Principia Ethica* provides fresh insight into the concept of an organic whole. The article lays out the complexity of the abstract philosophy issue with great care and in detail, and then applies this analysis of Moore's organic whole and the notion that some concepts are above further scrutiny to the practice of architecture. In so doing, it provides a context for architectural judgments beyond the criteria of contemporaneous style or technical coherence. The limitation of acting in accordance with certain criteria raises the question whether there is another means of analysing good architecture. For those unfamiliar with Moore's final chapter his identification of the two highest forms the good may come as a surprise.

Pauline Lefebvre's 'What Difference Could Pragmatism Have Made? From Architectural Effects to Architecture's Consequences' addresses how a pragmatist critique of architecture may help escape the constraints of market-led architecture. If Gough's article re-establishes the subject of critique, Lefebvre's demonstrates a new means of criticism. Lefebvre's paper interrogates the post-critical period of architecture in the early 2000s and rejects the reductionist simplification that left thinking subjected to the logic of the market. Her careful study of relevant architecture thinking at the time and of philosophical pragmatism offers a fresh form of communal and self-critique for the creative process of producing architecture. Lefebvre's article is a powerful and highly accessible account of what pragmatism can offer, by forcing a wedge between the populist common sense mantra of pragmatism and the rigorous philosophical structure of pragmatism that takes the object as always in-the-making rather than statically complete.

Design processes in architecture and urbanism by their very nature have a strongly defined relation to the legislative and regulatory structures of urban master plans, and architectural and structural building codes. For example, in 2010 when asked how he could build such surreal spaces, architect Terunobu Fujimori replied that in Japan, structures smaller than ten square meters did not require building consent. Analytic philosophy in this case may offer a perspective that grasps these particular interventions as experiments in expanding the role of the architect within a highly constrained field. In this sense, Fujimori's response becomes an example of finding alternate solutions for localised obstacles; for understanding the limits and internal logic of the other and finding a way to traverse its trappings.

In 'The Triumph of Function over Form. The role of analytic philosophy in planning and analysing

modern architecture' Borbála Jász provides a nuanced case study of architecture emerging from twentieth-century central European intellectual culture; a mode of thinking that significantly contributed to and established analytic philosophy. Akin to Japanese regulations setting the boundaries of Fujimori's work, Borbála Jász draws out the implications of the political will on architecture through significant moments of the twentieth century. As such, the article provides a case history of employing an analytic form of criticism to the creation and production of architecture.

Picking up on the contributing philosophers of the Vienna Circle, Andrea Dutto's 'The Mosaic and the Pyramid: Otto Neurath's Encyclopedism as a Critical Model' delves deeply into the details of key players, in particular Otto Neurath and his adaptation of Marxism in city planning and building production, getting down to the technicalities of analytic philosophy language issues.

We each engage the creative process uniquely, yet at some point we must learn how to refine our craft. In teaching others or developing our own perceptive process, we build upon layers of previous learnt skills and means of structuring the world. Pickersgill's '*Possibilia*: Possible Worlds and the Limitless in Architecture' offers another approach to critically understanding the significance of critique for the process of architecture. In the process of creating design there are moments when we inevitably hit a wall; Pickersgill presents how logic and modal logic may help those it resonates with to critique their own work to develop and push the project forward. Pickersgill offers the tools developed in analytic philosophy, particularly logic and modal logic for the use of architectural critique. Architecture is both an individual and shared dialogue, whether it is with oneself at the desk or with students at review sessions, or in journals as reviewers, at its best architectural critique pushes our discipline forward, ever adjusting and adapting to the ever changing bio-political ecosystem within which we work.

Much akin to the study of personal identity, Fabio Bacchini's 'The Persistence of Building and the Context Problem' directs the classic analytical issue of identity over time towards a collection of noteworthy examples of architecture. The identity-over-time question centres on the issue of change, on the question how an object can change yet be the same object before and after the event. In other words, can we observe change in action, and if so, how?[20]

Returning to a philosophy that suggests a fresh bridge between theory and practice, David Macarthur's 'Reflections on Pragmatism as a Philosophy of Architecture' closes the issue. In accordance with Lefebvre's 'What difference could Pragmatism have made? From architectural effects to architecture's consequences', Macarthur points to the significant project of Joan Ockman at the turn of the century. However, Macarthur directs the inquiry to put pragmatism and architectural 'philosophical vampires' into the wider philosophical context reasserting and clarifying the role of philosophy as an orientation towards thinking rather than an ideological theory. The article particularly provides a rereading of the criticality vs post-criticality debate in the light of this nuanced contextual of pragmatism within both the fields of philosophy and the architecture of Rem Koolhaas. In concluding it draws out four relevant ramifications of philosophy for the practice of architecture.

This issue of *Footprint* brings together papers searching for another means of criticality in architecture discourse that are not subjected to personalities, specialist knowledge of individual philosophies, or dependent on presumed operational logic. Rather the various articles attempt to demonstrate that such difference of background assumptions is a common human habit and that

some of the techniques of analytic philosophy may help to leap these chasms between 'alternative facts'. The hope is that this is a start of a larger conversation in architecture theory that has as of yet not begun.

In closing, we would like to pay tribute to Professor Hubert Dreyfus who passed away this spring and is greatly missed. As this issue was in its final stages, his passing signified the loss of a generous and open-minded scholar. Dreyfus was interested in phenomenology and existentialism, via Heidegger, Merleau-Ponty, Foucault, and Kierkegaard. Dreyfus above all else honoured the pursuit of knowledge in order to get at the phenomenon itself. One of Dreyfus's most admirable habits was his ability to take any question, however mundane, and draw from it the most provocative and insightful point, as though his very comportment to the world was an authentic pursuit of knowledge, that engaged the other as a friend. In calling for this issue on analytic philosophy our aim was not to undermine the wealth of knowledge continental philosophy continues to generate; but rather to bring those aspects of analytic philosophy that pursue the same phenomena, back into the fold of our shared history of ideas.

Notes

1. For an overview of the analytic tradition including a brief prehistory, see Hans-Johann Glock, *What is Analytic Philosophy?* (Cambridge: Cambridge University Press, 2008).
2. Matthias Steup, 'Epistemology', *The Stanford Encyclopedia of Philosophy* (Fall 2016 Edition), Edward N. Zalta, ed., https://plato.stanford.edu.
3. 'Word of the Year: frequently asked questions', Oxford University Press, https://en.oxforddictionaries.com, accessed 12 June 2017.
4. Robert Wynne, 'Public Relations In A Post-Factual Fake News World', *Forbes,* https://www.forbes.com, accessed 12 June 2017. William Davies, 'The Age of Post-Truth Politics' *New York Times,* 24 August 2016, https://www.nytimes.com. Samuel C. Spitale, 'Post-Truth Nation", *The Huffington Post,* 18 November 2016, updated 13 December 2016*,* http://www.huffingtonpost.com.
5. Steven Shapin, *Never Pure: Historical Studies of Science as If It Was Produced by People with Bodies, Situated in Time, Space, Culture, and Society, and Struggling for Credibility and Authority* (Baltimore: Johns Hopkins University Press, 2010).
6. P. M. S. Hacker, *Insight and Illusion: Themes in the Philosophy of Wittgenstein* (Oxford: Oxford University Press: 1986), 5.
7. Robin Smith, 'Aristotle's Logic', https://plato.stanford.edu, and Edward N. Zalta, 'Gottlob Frege', https://plato.stanford.edu, both in *The Stanford Encyclopedia of Philosophy* (Spring 2017 Edition), ed. Edward N. Zalta.
8. Michael Beaney, ed., *The Frege Reader* (Oxford: Wiley-Blackwell, 1997), 328.
9. Ibid., 329.
10. Ibid., 323.
11. Ibid., 330.
12. Ibid.
13. Ibid., 326.
14. Ibid.
15. Ibid.
16. Ibid.
17. Gottlob Frege, *The Foundations of Arithmetic*, trans. J. L. Austin (Evanston, IL: Northwestern University Press, 1980 [1884]), §68.
18. Frege, *Foundations of Arithmetic*; Hans Sluga, *Gottlob Frege* (London: Routledge & Kegan Paul, 1980); Michael A. E. Dummett, *Frege: Philosophy of mathematics* (Cambridge, MA: Harvard University Press, 1991); Pierre Bourdieu, *The Logic of Practice* (Stanford: Stanford University Press, 1990); Bob Hale and Crispin JG Wright, *The Reason's Proper Study: Essays towards a Neo-Fregean Philosophy of Mathematics* (Oxford: Oxford University Press, 2001).
19. Michel Foucault, *Technologies of the Self, a seminar with Michael Foucault*, ed. L.H. Martin, H. Gutman and P.H. Hutton (London: Tavistock, 1988), 38.

20. For a clear introduction to the issue, see John Perry, *A Dialogue on Personal Identity and Immortality* (Indianapolis: Hackett Publishing, 1978).

Biography

Karan August is currently on sabbatical completing a monograph provisionally titled: *Building Beauty with Kant, An Aesthetic Rehabilitation*. Since 2007 she has taught philosophy, art history and design studio courses at Plymouth University, Delft University of Technology, and Victoria University, Wellington. Her formative academic training was in philosophy at the University of California, Berkeley.

Lara Schrijver is Professor in Architecture at the University of Antwerp, Faculty of Design Sciences. Earlier, she taught at Delft University of Technology and the Rotterdam Academy of Architecture. She has served as editor for *Footprint* journal and *OASE*. Her work has been published in the *Journal of Architecture*, *Architecture Theory Review*, and *Harvard Design Magazine*. Her book *Radical Games* was published in 2009, and in 2016 she co-edited the volume *Autonomous Architecture in Flanders*.

G.E. Moore's *Principia Ethica* and the Complex of Architecture

Tim Gough

G.E. Moore's *Principia Ethica* of 1903 marks a certain starting point of analytical philosophy.[1] Its concern with analytical propositions, the pushing of analysis to an end point, its rigorous style, the clarity of its arguments and the precise demolition of the less-than-rigorous work of preceding philosophers provided a template for how twentieth century Anglo-Saxon thought might escape Kantian idealism and Hegelian dialectics and forge its own path. It set the scene for a style of philosophy that prioritised good argument above authority. In this, it laid out for itself the whole of philosophy as an almost a-historical source of discussion. Moore was not much interested in the progression of thought, or the idea that a particular thought is tied to a particular culture or realm of ideas specific to a certain time and place. Rather, any idea, from Plato onwards, occupies the same intellectual space and is to be analysed in itself as more or less valid compared to the a-temporal logic of philosophy. Philosophy is posited as valid for all times, since it concerns and uses logical thought, which is a-temporal. Moore already uses the strategy found, for instance, in Bertrand Russell's *History of Western Philosophy* of 1946, where all philosophies are considered on the same plane or the same level, to be compared one with another, and their logic and validity weighed in the balance compared to the position of the writer.[2]

The position of the writer, in turn, is given a particular weight, and the voice of the writing has a particular tone. What distinguishes this tone is a certain security, or sense of assurance of the validity of the position taken, of the logic used to support the arguments. Analytical philosophy tends to be positive in the sense that it is concerned with the clear expression of philosophical thought, starting from sense impressions, and applying ways of thinking that could broadly be called scientific. But it also is positive in the sense that it gives itself a secure and therefore positive position. This contrasts with other philosophical traditions that are more self-reflexive and self-doubting, where the reflection upon the philosopher's own position not only begins to call into question that position in a non-positive manner, but also introduces reflexive complexities into the argument. These reflexive complexities are antithetical to the analytical, positive way of proceeding. They tend to undermine a linear trajectory of thought in the sense that thought will turn back on itself. A proper, analytical mode of though, however, does not turn back on itself – it proceeds in linear fashion.

This tone and method of proceeding characterises *Principia Ethica*. The book is a 'general enquiry into what is good',[3] and that enquiry is to occur by means of analysis. What does it mean to analyse, and what can be analysed? Moore considers analysis to be the breaking down of things into their more simple elements. The task of the philosopher is to take complex things and show what they are made up of. The rigour of Moore's thought is evident in the first pages of the book, where he quickly draws two succinct and apposite conclusions from this. The first is that things are generally complex. In order to

be able to analyse something, that thing must have a degree of complexity to it that allows it to be taken to pieces by philosophy, and its parts put on display. A simple thing is not amenable to analysis. Which in turns means that we must be careful, according to Moore, to ensure that we do *not* try to analyse simple things.

The second conclusion he draws derives from the first and from the nature of analysis. As I noted above, analytical philosophy is positive in the sense that it does not introduce reflexivity into the argument or the method of procedure. There is no turning back of thought upon itself. This is expressed clearly in Russell's theory of types, which he was working out with Alfred North Whitehead at around the same time as Moore was working on *Principia Ethica*, and which forms a central thesis of their *Principia Mathematica*.[4] The theory of types looks at the logical problems that arise when thought circles back on itself and starts to make statements about itself. This is most clearly expressed by the paradox of the person who says, 'I am lying.' Here, the reflexive reference back to oneself allows such paradoxical and illogical phrases to exist. The theory of types introduces a logical hierarchy which outlaws such reflexivity by stating that when a reference is made to the totality of something (the 'I am' in the above phrase), this reference must be made from a *different* logical location in the hierarchy to that of which the statement is made. These different locations in the hierarchy are called types.[5] The paradox of 'I am lying' arises because this theory of types is not adhered to, and a statement is made that refers to the very position from which that statement is uttered. The theory of types therefore encourages a linear procedure of thought by outlawing this sort of reflexivity.

When analysis proceeds in this linear way, starting from complex things and breaking them down into their constituent elements, disallowing any reflexivity, the consequence, for Moore, is that an end-point of the analysis is reached. This end-point is where the analysis reaches something simple; that is, something that is not in turn capable of being analysed or broken down into smaller elements.

I would like here to make two points about this procedure of analysis that delves down to simple things. The first is to relate it to two possible other ways of dealing with what happens when we analyse complex things. One other way of characterising what happens is precisely to ignore Russell's theory of types and to allow that instead of simple things being at the end of the analytical process, what we find is something like the paradox of the one who says 'I am lying.' We could call this a sort of abyssal tactic, a tactic of the *mise en abyme*. One way of contrasting analytical philosophy with certain strands of continental philosophy is to draw this distinction between analysis down to simple elements, and analysis down to the paradox or aporia of the *mise en abyme*. For analytical philosophy, this particular habit of thought found in continental philosophy is unacceptable, and leads to a lack of clarity.

The second way of dealing with what happens when we analyse complex things into their components is that the process never stops. In that case, we would find not a simple thing at the end of the analysis, nor a paradox, but rather an analysis that in principle is infinite. What is found is a nesting within nesting arrangement. What is complex is made up of what is also complex, and that in turn complex, to infinity. We could call this a sort of logic of multiplicities. What is complex is a multiplicity which in turn is made up of other multiplicities, and this nesting of multiplicities goes on to infinity. In comparison with Moore's position, this second possible response to what happens to analysis at the limit is unacceptable, and provides another point of contrast between habits of thought that can be found in continental philosophy and analytical philosophy. But in respect of this distinction, things are more complex. Willard

Van Orman Quine in his 1968 lecture *Ontological Relativity* states, from firmly within the analytical tradition, that all theories rely on a 'background theory', and that this background theory has 'its own primitively adopted and ultimately inscrutable ontology'.[6] The reason the background ontology is inscrutable is that it reaches simple objects that can only be dealt with by 'something like pointing', and this pointing is precisely what, for Quine, limits the 'infinite regress' of analysis.[7] But for Quine this only occurs 'in practice'. In principle, and as the title of his essay implies, there is an inherent relativity amongst multiple theories such that, just as with Einstein's general relativity regards position and velocity, no one theory can be established as absolute, which in turn means that 'it makes no sense to say what the objects of a theory are'.[8] What we see here is an example of how analytical philosophy develops beyond its beginning with Moore, since Quine is here calling into question the reality of Moore's simple unanalysable things.

Leaving aside such future developments, Moore's procedure of an analysis that delves down to simple things – and this is the second of the two points I wish to make, in order also to begin to relate the discussion to architecture – derives ultimately from Aristotle's *Physics*, where he states in the first paragraphs:

> Now what is plain and obvious at first is rather confused masses, the elements and principles of which become known to us later by analysis. Thus we must advance from generalities to particulars; for it is a whole that is best known to sense-perception, and a generality is a kind of whole, comprehending many things within it, like parts.[9]

This Aristotelian principle of advancing from generalities to particulars was invoked early on within architectural theory. As John Onians points out in *Bearers of Meaning*, Francesco di Giorgio, in the much-improved second version of his architectural treatise, splits it 'into seven sections called *trattati*, with the first devoted to "general principles" and the next six to "particular" ones, "following the opinion of Aristotle in the *Physics*, where he instructs us that in the sciences it is necessary to proceed from universals to particulars"'.[10] Francesco di Giorgio is here only making explicit what had guided the earlier theoreticians of architecture – Vitruvius and Leon Battista Alberti – in the structuring of their treatises. It is therefore possible to make a direct connection between the methods and principles of analysis that Moore uses, and the origins of architectural theory. Architectural theory started by proceeding in analytical fashion, splitting, in Aristotle's terms, what is ostensibly 'plain and obvious' but in fact 'confused', into its constituent particular elements. Why are these ostensibly obvious things in fact confused? For two reasons: firstly, because they are 'known to sense-perception', and sense perception is necessarily imprecise and confused; and secondly, because they have not yet been subject to analysis. I noted above that analytical philosophy is positive in its approach. This point can be clarified further by reference to the above quotation from Aristotle. A positive approach to knowledge has the following characteristics: it proceeds *scientifically*; it proceeds from *sense perception*; and it proceeds by means of *analysis*. That this is a scientific approach is clear from the context within the introduction to Aristotle's *Physics*, a book that establishes European science. That it relates to sense perception, as the thing from which one starts, is explicit in the text. As I showed above, Quine follows something like this principle by saying that in *practice* we have to point to something in order to establish a background theory as provisionally effective – that is, we have to invoke sense perception. Moore does the same thing in *Principia Ethica* when he talks about the colour yellow as being one of these simple things which we can only point to but cannot analyse, but in contrast to Quine's later analytical position, he gives an absolute rather than provisional validity to this.[11]

To continue this architectural digression before returning to Moore: certain inherent issues are therefore raised by virtue of this method of creating architectural theories. These inherent issues follow from the character of the method. I outlined above three methods of dealing with the question of the end of analysis. The first of these is Moore's analytical method that I have just pointed to: the analysis reaches a simple thing (such as yellow) beyond which it cannot go. The aim of analysis is to reach such points. The second and third of these methods (although method may not be the correct word here) are alien to Moore's analytical philosophy and take respectively the reflexive *mise en abyme* approach and the infinite nesting, or multiplicity approach. Now it is interesting to note that a common trope of traditional architectural theory is to invoke some simple origin of the discipline. This is evident, for instance, in Vitruvius and Alberti, where the origins of architecture are posited in some primordial situation such as the need to provide shelter, or the gathering of people around a fire.[12] It is evident in Abbé Marc-Antoine Laugier's primitive hut.[13] It is evident in Gottfried Semper's similar invocations of fire and the hearth in *The Four Elements of Architecture*.[14] All these are myths of the origin of architecture; they are attempts to sort out the issue of where it starts, temporally speaking. Equally, where the *analysis* of architecture can stop, logically speaking. They address the problem: if our task is analysis, at what point does that analysis begin or end? Furthermore, the myth has necessarily to invoke a simple or primitive situation. The primitive hut, the primitive situation of the gathering around the fire, the primitive and straightforward need for shelter: these may *appear* to have a historical logic to them, but, of course, they do not, in the sense that there is no possible historical evidence for these myths. Rather, they are fulfilling a logical need that flows from the premise that a discussion of architecture must proceed in an Aristotelian and analytical manner. It is only rarely, and only in late twentieth-century architectural theory, that either of the two other tactics for dealing with the end (or beginning) of analysis make their presence felt within architectural discourse. In that sense, it can be said that architectural theory, on the whole, has a close although largely unthematised relationship with an analytical tradition of thought.

The other issue I wish to raise briefly at this point is the status of analysis in relation to architectural production. The analytical tradition in philosophy, which Moore's *Principia Ethica* exemplifies, starts from complex things that are to be broken down into their elements, until something simple is reached. This is a scientific activity, in the sense that this method is outlined in Aristotle's *Physics* and from there influences the whole development of European science. The task of architectural production is different to this; it is a question not of breaking down complex entities, but rather of making those complex entities in the first place. It is a question of synthesis, not analysis. Or to put it in Aristotelian terms, it is a question of *poesis* – a question which he addresses in the *Poetics*.[15] Of course, the *Poetics* also proceeds by analysis of poetry into various types. But the question of the synthesis which poetic creation requires is addressed by means of the theme of the unity of the plot and the necessity that, just as with other arts, poetry must create a unified whole to which nothing can be added or removed without disturbing its perfection.[16] This organic stipulation is taken up by Alberti in chapter five of Book Nine of *On the Art of Building*, where he references Aristotle and notes that a great work of architecture is one composed like an animal 'following nature's own example' such that nothing can be added and nothing removed without spoiling its perfection.[17] I think it is worthwhile noting in relation to this whole theme of parts, and the perfect and organic wholes into which they must be synthesised by the architect, that the problem of an organic whole perhaps only arises when the premise of an analytical structure to thought has already been accepted. In that

sense, it may be necessary to be wary of the ease with which architectural theory tends to transform an instrument of analysis into an instrument of production.[18] Perhaps the question of the creation of architecture (or anything new) needs to be looked at on its own terms.

I stated above that, for Moore, an end-point of analysis is reached when something simple is found or understood; that is, something that is not in turn capable of being analysed or broken down into smaller elements. He gives the example of yellow as something simple which cannot be further analysed and instead has to be pointed to in order that it be understood. It is central to Moore's argument in *Principia Ethica* that the good is, similarly and essentially, something simple. This is a conclusion that he presents in the first chapter of the book, admitting that this may appear to be a disappointing result in the context of a discussion about ethics. In fact, this point is crucial to an understanding of the nature of ethics, because what Moore wants above all else to falsify is what he calls the 'naturalistic fallacy' about the question of the good:

> a mistake of this simple kind has commonly been made about 'good'. It may be true that all things which are good are *also* something else, just as it is true that all things which are yellow produce a certain kind of vibration in the light. And it is a fact, that Ethics aims at discovering what are those other properties belonging to all things which are good. But far too many philosophers have thought that when they named those other properties they were actually defining good; that these properties, in fact, were simply not 'other', but absolutely and entirely the same with goodness. This view I propose to call the 'naturalistic fallacy'.[19]

The naturalistic fallacy is the habit of believing that something else can be put in the place of the good. In other words, and to look at it from the other direction: a judgment about what is good has to consider simply that very question: is it good? It cannot substitute for that question another question. In that sense, the judgment about what is good is a primitive judgment, and comes at the end of analysis rather than at the beginning. No analysis, strictly speaking, of the good can occur, for the same reason that no analysis of yellow can occur; all analysis will have preceded this point. It becomes apparent that one important aspect of analytical philosophy is that it is and should be conscious of its limitations. This is a characteristic it shares with all positive science, in the sense that a science, properly speaking, defines the limits of its knowledge and agrees not to attempt to go beyond those limits.[20] So, for instance, it can be said that the modern forecasting of weather is a science not only because it is capable of predicting, within certain boundaries, what the weather will be tomorrow, but also because it acknowledges that, as a science, it *cannot* predict what the weather will be like in a month's time. For science, this setting out of limitations is not a negative aspect but rather a positive aspect of its self-understanding.[21] The same goes for Moore's definition of the good as unanalysable; what may appear to be a negative limitation in fact allows Moore to say something important about the nature of ethical judgments – namely, their irreducibility. It is not possible to reduce an ethical judgment to some other criteria. Or rather, this *should not be done*. There is an ethical call here to *avoid* the naturalistic fallacy and therefore to acknowledge, in any judgment about what is good, that this judgment cannot and must not be reduced to other criteria. It does not take very much thought to realise the importance of this point; it represents in abstract, for instance, the distinction between the question of *law* and the question of *justice*. Law is precisely the reduction of questions of the good to sets of normative rules; but beyond that there is always the question of justice, which represents the irreducibility of the good to such rules.

Now this seems to me to raise important issues in relation to architectural judgments. When are

architectural judgments made? They have to be made all the time both in relation to architectural production and in relation to architectural criticism. They have to be made by those who are designing architecture (commonly, architects), by those who then allow architecture to exist (commonly, disciplines such as town planning), and by those who subsequently critique architecture. They have to be made in the academic studio, where judgments have to be made to guide students towards what is good design, and then to assess their work. It is easy to see that there is a whole history to be written of how the question of what is good architecture gets reduced to other criteria. These criteria are commonly stylistic: it is common to find within the history of architectural criticism that good architecture is equated with a certain, often contemporary, style. As commonly, the criteria are technical, not only in the sense that architecture is required to fulfil some overtly technical requirements, but also in the sense that attempts are made to codify what will constitute good architecture – for instance, within planning systems. Often, criteria are implicit rather than explicit: an example of this is the use of photography in architectural criticism, whereby what photographs well and presents a good visual aspect is judged to be good *per se*. Sometimes the criteria are philosophical, as when Alberti states that architecture is something that has an *idea* in the sense that the Aristotelian perfection and wholeness of great architecture (nothing to be added or removed) has to be preconceived and determined in the mind of the architect.[22] For Alberti, an architectural judgment about the good lies behind the very definition of architecture, since this is what distinguishes it from mere building.

What Moore's critique of the naturalistic fallacy implies is that this reduction of what is good in architecture – or what is good architecture, or what *is* architecture – to certain criteria other than the outcome of a judgment about the good, is not to be trusted. It is obvious that for pragmatic reasons it is necessary to give criteria in order that judgments can be made. What Moore is telling us is that, ultimately, the judgment about what is good is a judgment which has to stand alone, unsupported by the scaffolding of rules, styles, or ideas. This implies in turn that to say that a work of architecture is good has, potentially, a validity in itself that is difficult, or impossible *in principle*, to analyse out into other criteria. Yes, we can constructively analyse such matters as the historic and biographic conditions that give rise to a judgment of the good, but in principle the judgment itself stands alone. Looking from the other direction of the production of architecture, we can say that the production of a good work can never be pre-determined by way of rules or criteria, assuming that we acknowledge that a – possibly ongoing – self-critical judgment about what is good is a necessary part of creative production. That is to say, if pre-determined criteria are used in the action of designing architecture, then we can be sure that the best architecture is not being created. Moore expresses this in general terms when he points to the limitations of duty – that is, the limitations of acting in accordance with certain criteria: 'it follows that we never have any reason to suppose that an action is our duty: we can never be sure that any action will produce the greatest value possible'.[23]

Is there perhaps a confusion here between different meanings of the word good? Are we mixing up two different things – good as in a properly ethical judgment, and good as in an aesthetic judgment? One interesting thing about Moore's philosophy is his habit of evening out the implied ontology. He tends to treat all instances of the word good as referring back to one common thing, as if the name has an inherent power. It is as if the things that may be called good are not to be distinguished one amongst the other as regards their ultimate characteristics. They are all of one kind. Thus, in principle, it seems that for Moore ethics treats of *all* aspects of the good, be they moral or aesthetic questions. It does not matter whether we

are asking about the good of something beautiful, or the good of something moral: in both instances, the unreducible thing we are asking about is the same thing, the same good; and this good is an 'unanalysable object of thought'.[24] Perhaps, indeed, its unanalysable quality is what allows it to pass across the boundaries of the beautiful and the moral; perhaps its apparently nominal quality is actually its resistance to analysis.

Principia Ethica ends with an extraordinary chapter on the question of the ideal. This Moore defines as not just the question of what is good (which the whole book addresses), but the question of the *ultimate* good. What, above all else, is ultimately good? Moore's answer revolves around a discussion of the concept of 'unified' or 'organic wholes'. While the good, in itself, is simple and unanalysable, the things that we can judge to be good are inherently complex, and are therefore things that can be analysed in themselves. But because the good is simple and unanalysable, and because there is no recourse to the naturalist fallacy whereby it would be possible to give criteria for the good, the judgment about what is the highest good or what is ultimately good in turn becomes something that can merely be asserted rather than explained. One of the more controversial aspects of the book is that Moore baldly states, in this last chapter, that the two highest forms of good are the enjoyment or contemplation of beautiful objects, and the pleasures of human intercourse.[25] The point I made above holds: he sees no intrinsic difference between moral good and aesthetic good; both are the rightful topic of ethics, and indeed the consciousness and contemplation of the beautiful is ranked above types of moral good that do not consist in the pleasures of human intercourse. And he does not attempt to justify his judgment about these two highest forms of good: indeed he makes the point that this judgment appears so obvious as to run the risk of 'seeming to be a platitude'.[26]

But Moore's uniqueness here lies in the manner in which he defines these ultimate good things. The fact that they are complex is taken to be a matter worthy, in itself, of analysis and philosophical investigation. The nature of this complexity is outlined in the very terms that Moore uses: the *enjoyment or consciousness of* a beautiful object, and the *pleasures of* human intercourse. It is the *intermixture* of the subject who is contemplating the beautiful (or fellow human) *with* the beautiful thing (or human) itself which is of concern to Moore. It is this intermixture that makes up an organic whole, it is this intermixture that is the object of his analysis, and it is this mixture that is, for him, good. The subject, or the beautiful object, are merely *parts* of this unified or organic whole. This means that, in themselves, the subject, or the beautiful object, or any other aspect of these wholes which Moore has identified, are not necessarily good, or at least do not have anywhere near as much good as the whole of which they are a part. This is a resolutely non-objective notion of the goodness of both a moral situation and the goodness of a beautiful thing, because this thing which is beautiful is stripped of its objective qualities (i.e. any quality it has as an object *per se*) and instead given a *relational* reality. As Moore says:

> [the] mere existence of what is beautiful has value, so small as to be negligible, in comparison with that which attaches to the *consciousness* of beauty. This simple truth may, indeed, be said to be universally recognised. What has *not* been recognised is that it is the ultimate and fundamental truth of Moral Philosophy. That it is only for the sake of these things – in order that as much of them as possible may at some time exist – that any one can be justified in performing any public or private duty; that they are the *raison d'être* of virtue; that it is they – these complex wholes *themselves*, and not any constituent or characteristic of them – that form the rational ultimate end of human action and the sole criterion of social progress: these appear to be truths which have been generally overlooked.[27]

Moore follows through the implications of his ethical mereology (the branch of philosophy dealing with the question of parts and wholes) by insisting that the value of the whole is *not* related to the value of the parts in any way. So a whole which is very good can be made up of parts which, of themselves, do not have anything particularly good about them. An example of this is the part that we call material. Moore states that *in itself*, material does not have anything good about it; it is not something about which an ethical judgment would commonly be made. In itself, it is mundane. But in combination with other things, where it helps to make up an organic whole of a certain type, it contributes to the goodness of that whole thing, and indeed without that material quality – in itself of no or little value – the organic whole would not have by any means the same amount of goodness about it. Some parts that individually have little or no value in themselves can and do combine to create something of great value: the material and bodily qualities of things are a vital component of beauty, even though material considered *in itself* does not have any inherent value.[28]

One of the parts of an organic whole that Moore considers is the part called existence. (Again, we see here a sort of flat ontology, whereby things that are usually kept in separate realms of thought are, in Moore, given equal weight. A part of a complex whole can for him be existence itself, or the lack of it; it can be the consciousness which someone has of something; it can be that thing considered only as an object; it can be the material or the colour; or it could be something more ephemeral still such as the memories one has of something, or the history of the object or situation. All these things are potentially and really parts or let us say particles of these larger organic wholes that are given value not because these particles have value, but because their *intermixture* does.) He considers the extent to which the real existence of something contributes to the goodness of the whole of which it is a particle. The example he gives is the representation of a landscape in a painting, as compared to the landscape itself. Both these things, in themselves – in their objecthood – have no or little intrinsic value. So a landscape, in itself, or a painting, in itself, have little value. What is valued is the larger whole which consists of the painting or the landscape in combination with the consciousness which someone has of either of these things. Moore then asks what implication the existence of the landscape has for these organic wholes, since in the instance of the painting the landscape is not in existence, whereas in the instance of the landscape it is. His answer is that although existence *per se* is not something of great value, when existence is added to a good whole of which it may be a part, this addition increases the good of that organic whole. This means that the experience of a landscape is a higher good than an experience of the representation of a landscape.

It is of course possible, from our vantage point, to criticise this logic by pointing out that Moore is not comparing like with like, and that in fact what should be considered in the case of the painting is not the non-existence of landscape it represented, but rather the existence of the painting itself as a work. This however does not affect the point I wish to make here, which is that Moore is valuing organic wholes which consist of the intermixture of a person with an environment or an object in existence more than intermixtures where the contemplated thing is represented rather than really existing. This implies a general depreciation of representational situations relative to non-representational situations.

I wish to argue here that Moore's notion of the organic whole, together with his concern for the goodness of human intercourse (another organic whole, consisting of more than one subject), are potentially inherently *architectural* thoughts with significant implications for the theory and ontology of architecture. Moore's emphasis on the

intermixture of the work and the subject, his interest in the material quality of things, his championing of the apparently mundane if seen within a broader context, his doubts about representational art compared to environmental beauty, and his valuing of the sociability of human intercourse all point to a rich concept of what architecture can be, or can be considered to be. For what, after all, is architecture such that it is something good? What ontology of architecture can lend itself to Moore's question: what, above all else, is ultimately good? And I would wish to take this question in *both* the senses that his notion of the good allows: in a moral sense *and* in the sense of beauty. Both these aspects seem to me to be pertinent to an ethics of architecture.

The first and most important implication for architectural ontology is that if architecture is to be good, then it cannot be of the nature of an object but has to be of the nature of one of these organic wholes which Moore posits. More specifically, it must combine both the object – that is, we could say in the interests of terminological consistency, the building – and the appreciation of that building by those who come to contemplate it. Architecture, in other words, does not have the type of existence that an object has; architecture is something entirely different to a building. Architecture is (I am suggesting, provisionally) the complex whole made up of the building and those who come to contemplate it. This means that ontologies of architecture which take as read that architecture is a subset of buildings or objects, such as those that consider architecture defined in a formal manner, would be seen to be reducing the possibilities of both an ethics of architecture and the ontology of architecture. Architecture, considered as form, and taking into account Moore's theory of complex wholes, is an impoverished thing. Rather, the highest good could only have a chance of taking hold in architecture if it is defined as a complex whole that inherently involves the subject.

Taking this thought further with respect to the question of existence and materiality, I would argue that the complex whole of architecture, in order to aspire to the ultimate good, would need to incorporate into itself particles of these things too. The complex whole of architecture should include the brute and material existence of the object, so that this whole includes not just a contemplation of the building (which would be possible with drawn or otherwise represented projects) but also an inhabitation and material interplay with it. The particles of which the complex whole of architecture consists should include not only the subject who contemplates, the object they are contemplating, and the ideational interplay between them, but also the inhabitation or other material interplay that can occur when the building is built. If we regard architecture in this way – if this is, for us, its ontology, its way of being – then the possible good of architecture is greater than if these particles of existence, matter and interplay did not exist within the complex whole. Again, according to Moore, existence and matter considered in themselves do not necessarily have anything good about them. It is only in their co-existence within the whole that they cause or allow that whole to be better than it might otherwise be.

The fertility of Moore's thought for a rich notion of architecture seems to me to be exemplified by his championing of *two* ultimate goods – the good of the contemplation of the beautiful, and the good of the pleasures of human intercourse. These are regarded as potentially equally good. One criticism that can be made of the last chapter of *Principia Ethica* is that having made this assertion, Moore spends time dealing with the former, but very little time outlining what the implications of the pleasures of human intercourse are. In relation to the complex whole of architecture, however, some clear conclusions can be reached. Yes, architecture is the involvement or implication of various particles such as existence, matter, the building and its

contemplation with the person who comes to inhabit or otherwise engage with them; but we need to go further than this. There is an inherently *social* nature to this architectural complex whole. In other words, in Moore's terms, this complex whole must and should include within it, in order to become as good as it can be, in order to aspire to the highest good, the pleasures of human intercourse. The pleasures of human intercourse is itself a complex whole made up of more than one human being, and this complex whole is perforce of greater value than the individual existence of one human being. In turn, I am arguing that this complex whole should be and commonly is a part of a greater complex whole of architecture. In other words, that architecture includes within it, as a particle helping to make it up, the pleasures of human intercourse as well as the aforementioned other particles such as existence, matter, building, the individual, the contemplation of these things and the material interplay or inhabitation with these things. This returns us to Vitruvius, Alberti, Laugier and Semper: what distinguishes their myths of the origins of architecture is that they refer to the social, to the 'pleasures of human intercourse', to the 'concourse of mankind' (*in eo hominum congressu*) as Vitruvius puts it, around the fire or the hearth or in the act of creating the first shelter.[29] It is as if, in following an analysis of architecture which splits it into parts, architectural theory must then resort to myth and origins in order to invoke what is in fact, according to the ontology I am outlining here, always already and even now a constituent part of it.

What is the possible use of such a conception or ontology of architecture? (What difference, in the end, is there between a *conception* of architecture and an *ontology* of architecture? An ontology is what a thing *is*, the way in which it exists. For us, something exists only for us and in relation to us. Therefore, our conception of a thing determines the ontology of that thing. In other words, we have some potential control over the ontology of something like architecture.) Seen in the light of this traditional architectural-theoretical approach, taking its lead from Aristotle and the progression from generalities to particulars and which therefore analyses complex wholes into their constituent elements, the placing together of these various particles makes little sense. We are at the end of a several thousand-year history of taking things to pieces. This analytical contemplation of things has an effect; specifically it has an *ontological* effect, since architecture has come to be defined within this analytical framework not as a complex whole, but rather as one of the more simple parts of it. This ontology in turn affects the production of architecture, since what is conceived during its production is influenced and underpinned by that ontology, whether that ontology is acknowledged or not. And the less the presuppositions implicit in an ontology are acknowledged and understood, the more powerful and influential those presuppositions are. It matters what is intended when we speak about architecture; it matters what the architect intends when she decides to design. It is a very different thing to intend a building – an object – than to intend a multiplicity, a complex whole of which buildings are a necessary but by no means sufficient part.

As we saw above, Moore's *Principia Ethica* represents, in some sense, the 'birth' of the analytical traditional in philosophy. It is therefore something of a paradox that it is precisely in this book that we find the tool to begin to undo or go beyond what analysis, since Aristotle, has achieved. This simple tool – the thought of complex wholes – together with the raising of two types of complex wholes – the contemplation of the beautiful and the pleasures of human intercourse – to the ultimate good, provide us with a clue to establish not the origins of architecture, but rather its ontology, its character, its mode of existence here and now, and always.

Moore's insights do, however, seem to me to require one point of critique and one instance of

carrying further their implications. The point of critique is in relation to his conception of the nature of these complex wholes. He regards them as being unities in the manner of organic bodies.[30] So, for instance, the ultimate good of the contemplation of something beautiful is a complex whole made up of two parts – the contemplation and the beautiful thing; and this complex whole has the character, for Moore, of an organic entity, a body. The beautiful thing fits with the contemplation of it as, for instance, an arm fits with the rest of a body. The arm and its relation to its body is the example that Moore gives to explain his organic conception of these complex wholes. Now this seems to me to be an intrinsically unlikely comparison to make. What authorises us to characterise the relation between the person contemplating a beautiful thing and that thing itself as like an arm to a body? It seems to me that Moore has not sufficiently thought through the implications of his idea of complex wholes, since the positing of an organic unity is by no means necessary to make them conceptually effective. He has relied upon that old tradition of thought leading directly back to Aristotle's characterisation of poetry as an organic whole and which, as we have seen, Alberti makes specific reference to in relation to the organic quality of architecture. Instead of this traditional organic unity, I wish to posit that these complex entities which Moore has furnished us with, and which provide a clue for a rich architectural ontology, should in no way be thought of as either organic or, indeed, whole.

Ignoring the call of the organic or the whole will then allow us to carry further, in a constructive way, an implication of Moore's nested structure of complex multiplicities. This structure enables us to see two things, or several things, as a multiplicity – a multiple individual thing. If these individuals (for instance buildings, people, the contemplation of buildings, their inhabitation) brought, or seen, together are themselves complex individuals or multiplicities (for they are assuredly not simple things in the manner in which Moore defines them), then nothing prevents that larger multiplicity (which I have called architecture) from being, or being seen as, part of still larger multiplicities. Further, there is nothing to say that this structure only applies at a certain mid-sized scale. It may be that in our common ways of thinking we concentrate on medium-sized things, but in principle this nesting of one complex entity into another goes on to embrace everything. I would like to suggest, as the conclusion to this essay, that architecture can thereby be for us something opening out onto the cosmos as a whole, by virtue of this infinite containing of complex individuals within still broader complex multiplicities – a nesting to infinity that enables us to catch a glimpse of the cosmic ontology of architecture.

Notes

1. George Edward Moore, *Principia Ethica* (Cambridge: Cambridge University Press, 1954).
2. Bertrand Russell, *History of Western Philosophy and its Connection with Political and Social Circumstances from the Earliest Times to the Present Day* (London: George Allen & Unwin, 1961).
3. Moore, *Principia Ethica*, 2.
4. Bertrand Russell and Alfred North Whitehead, *Principia Mathematica,* Volumes 1 to 3 (Cambridge: Cambridge University Press: 1910–1913). The theory was first outlined in Russell's *The Principals of Mathematics*, published in 1903, one year before *Principia Ethica*. Bertrand Russell, *The Principals of Mathematics* (Cambridge: Cambridge University Press, 1903).
5. Bertrand Russell, *My Philosophical Development* (London: Routledge 1959), Chapter 10.
6. Willard Van Orman Quine, 'Ontological Relativity', in *Ontological Relativity and other Essays* (New York: Columbia University Press, 1969), 51.
7. Ibid., 49.
8. Ibid., 50.
9. Aristotle *Physics* I1, 184a22–27, trans. R.P. Hardie and R.K. Gaye. Collected in *The basic Works of Aristotle*, ed. Richard McKeon (New York: Random

House, 2001), 218.

10. John Onians, *Bearers of Meaning – The Classical Orders in Antiquity, the Middle Ages and the Renaissance* (Cambridge: Cambridge University Press, 1988), 176. Onians is quoting, and giving the reference to, Francesco di Giorgio Martini's Magliabecchiano manuscript in the Biblioteca Nationale in Florence. This manuscript has a translation of Vitruvius bound in with it, and Onians notes that it is di Giorgio's exposure both to this new translation and to Alberti's architectural treatise – first published in 1485 – which led to the improvements in this version of his book.
11. Moore, *Principia Ethica*, 7. He confuses things for the reader by indicating that he thinks that oranges (i.e. the fruit) are coloured yellow. This may be a joke; whilst in the history of European colour, oranges were thought to be yellow, or rather the colour yellow encompassed orange as well as what we now call yellow, orange as a colour had been distinguished from yellow already in the early 19th century.
12. Marcus Vitruvius Pollio, *On Architecture*, Book 2, Ch. 1: Vitruvius, *On Architecture*, trans. Frank Granger (Cambridge, MA: Harvard University Press, 1932), 77–79. Leon Battista Alberti, *On The Art of Building in Ten Books*, Book 1, trans. Joseph Rywert, Neil Leach and Robert Tavernor (Cambridge, MA: The MIT Press, 1988), 3.
13. Marc-Antoine Laugier, *An Essay on Architecture*, Ch. 1, trans. Wolfgang and Anni Herman (Los Angeles: Hennessey and Ingles, 1977), 11–12.
14. Gottfried Semper, *The Four Elements of Architecture – A Contribution to the Comparative Study of Architecture*, Ch. 4. Translated and collected in Gottfried Semper, *The Four Elements of Architecture and other writings*, trans. Henry Francis Mallgrave and Wolfgang Herrmann (Cambridge: Cambridge University Press, 2011), 102.
15. Aristotle, *Poetics*, trans. by Ingram Bywater, collected in McKeon, *Basic Works of Aristotle*, 1453ff.
16. Aristotle *Poetics* II8, 1451a30-35. Collected in *Basic Works of Aristotle*, 1463.
17. Alberti, *Art of Building*, 301–304.
18. This point is made by Peter Carl in the preface to *Architecture and Continuity*. Peter Carl and Delibor Vesely, *Architecture and Continuity* (London: Architectural Association, 1982), 5.
19. Moore, *Principia Ethica*, 10.
20. See for instance Carlo Rovelli, *Reality is not what it Seems – the Journey to Quantum Gravity*, trans. Simon Carnell and Erica Segre (London: Allen Lane, 2016), 228–229: 'This acute awareness of our ignorance is the heart of scientific thinking. It is thanks to this awareness of the limits of our knowledge that we have learned so much.'
21. It applies also to philosophical traditions other than analytical philosophy, such as Kantian philosophy where the limits of metaphysics are carefully drawn in order to avoid dogmatism. See the introduction to the first critique: Immanuel Kant, *Critique of Pure Reason*, trans. Norman Kemp Smith (London, Macmillan, 1933), 56–57. Again, Kant has it that this critical philosophy is therefore a science.
22. Alberti, *Art of Building*, 315.
23. Moore, *Principia Ethica*, 149. This question is something which Moore looks at in detail in chapter five of the book, from which this quotation is taken.
24. Ibid., 21.
25. Ibid., 188.
26. Ibid., 188.
27. Ibid., 189.
28. Ibid., 205–207.
29. Marcus Vitruvius Pollio, *On Architecture*, Book 2, Ch. 1, 78–79.
30. Moore, *Principia Ethica*, 31.

Biography

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What Difference Could Pragmatism Have Made? From Architectural Effects to Architecture's Consequences

Pauline Lefebvre

10 November 2000. The auditorium at the MoMA in New York is packed. The audience is patiently waiting for the proceedings to start. On the stage, a long empty table with five chairs and their associated microphones awaits the contributors who will confer. On the screen behind that scene, a projection exhibits the name of the event: 'Things in the Making, Contemporary Architecture and The Pragmatist Imagination'.[1] These two days (and the preliminary seminar that had taken place at Columbia University a few months earlier) were an attempt to introduce Pragmatism – the American philosophy first defined by Peirce, James and Dewey – into architectural discourse.

Joan Ockman – with the help of the philosopher John Rajchman – convened the assembly because she thought Pragmatism provided an opportunity to address the main issue architectural theory had been facing in the last few years: the increased schism between theory and practice, and the recent eagerness to refocus on practice at the expense of theory. This desire for a shift in architectural thinking – less theory, more practice; less discourse, more action; less criticism, more work done – is often labelled a 'post-critical' moment and dated to the first years after the turn of the century.[2] Ockman's initiative attests that such an idea was already flourishing before 2000, but the movement indeed reached its peak after the event. More and more provocative and irreverent contributions were then published, most famously by the American theorists Robert Somol, Sarah Whiting and Michael Speaks, who came to incarnate the post-critical position.[3] In 2000, right before that wave, at 'The Pragmatist Imagination' conference, Pragmatism had appeared convenient to mark, accompany, but also temper this (upcoming) turn. As a 'theory of practice', it could potentially counter the domination of theory upon practice, without dismissing it altogether. It was supposed to help architects refocus on the practical instead of conceptual or discursive effects of their production, while preventing them from falling into the anti-intellectual and politically complicit posture that often characterised such dismissal of former critical legacies. It was indeed critical theory – and the once fruitful connections that architecture had established with Continental philosophy in general – that was held responsible for the unprecedented schism between theory and practice. Pragmatism, the American philosophy, was called to serve as an alternative to that influence.

History – from Continental philosophy to Pragmatism, or not

Since the 1960s, exchanges between architecture and various theories formulated by European intellectuals had been fertile. Structuralism first, but also critical theory from the Frankfurt School or, later, post-structuralism, were highly seductive to architects and architectural theorists, who used their concepts to reflect on architectural form and practice, or to experiment with new design tools. Apart from their general success on the American campus, the very spatial aspect of some of these theories explains architects' direct affinity with

them.[4] In a way, the Deleuzian notion of 'the fold' or the Derridian movement of 'Deconstruction' were offering themselves to straightforward recuperations. But beyond such literal translations, architects found something fascinating, intriguing and guiding in the complicated and provocative language of these philosophers. There was something appealing in the way they were dismissing the old way of practicing philosophy and thinking about the world; in the fluid, the ever-changing, the uncertain, the disruptive, the marginal, which they were bringing in.

But, by the late 1990s, the connection with Continental philosophy seemed to have exhausted architectural theory. Some started to disregard those architects who had got lost in complicated philosophical readings they could not really master. Their understanding was too literal, turning concepts into formal games and emptying them from their political or societal content. Also, architects were distracted from their own prerogatives. Despite the fact that theory had contributed to architecture's definition as a proper discipline, it was at the same time dissolving architecture's specificity. Again, the introduction in architecture of methods, vocabularies, questions, contents coming from other fields of the humanities – literary studies, semiotics, philosophy, feminism, and so on – reached a point where it was considered a threat to architecture's particularity. Among others, Cornel West, a pragmatist philosopher who was invited to 'The Pragmatist Imagination' in 2000, did not hesitate to call this phenomenon an 'invasion' or 'occupation' of architectural criticism, leading to a loss of its identity.[5] In her introduction at the conference, Ockman identified this situation of exhaustion, in order to promote Pragmatism as a useful alternative:

> Partly in reaction to this situation, but also in the climate of a booming economy and plenty of buildings coming out of the ground, a desire to reconceptualise architectural practice in terms of new realities became manifest. […] [Pragmatism] might serve as a lever to pry open some hardened formations in architecture, by now giving signs of having run their course.[6]

Even though it was convenient to present Pragmatism as an alternative, its introduction appears to be more of a continuity than a rupture with the heritage of Continental philosophy. It occurred at the same time as architects' readings of Deleuze and Foucault on the diagram. The main protagonist behind this transition was John Rajchman, the philosopher who co-organised 'The Pragmatist Imagination' with Joan Ockman, and who had also been a major actor in the introduction of Deleuze in architectural theory in the 1990s.[7] He explicitly articulated these two legacies in a paper presented at the 'Any' conference held in Rotterdam in 1997. The paper is entitled 'A New Pragmatism?'. However, in terms of its content, the paper still fully belongs to a scene that preceded 'The Pragmatist Imagination': the latest Deleuzian episode in architectural theory, composed of a series of papers published around 1998 about the possibility of a 'diagrammatic' architecture. Rajchman's paper differentiates itself mostly because it evokes a connection between the Deleuzian/Foucauldian notion of the diagram and the less known philosophical tradition defined by Peirce, James and Dewey.

The discussion around the opportunity of thinking architecture in a diagrammatic way had appeared during the 1990s when some architects started to read the recent English translations of Deleuze, Guattari and Foucault. The diagram can be described as one next step after the success of the fold, or the virtual, among Deleuzian concepts that were sufficiently architectural to be easily consumed by architectural theory. In the last years of the 1990s, publications revolving around the diagram flourished.[8] The notion referred not only to the increased use of a given mode of representation or tool for designing buildings and for taking a

certain amount of data into account. In this specific moment, the diagram turned into a concept, found in Deleuze and Guattari's *A Thousand Plateaus*, but also in Foucault's writings about Bentham's Panopticon.

In Deleuze and Guattari's post-structuralist program, the diagram forms part of an argument about the end of the domination of language, of the 'signifying regime'. Deleuze and Guattari propose to multiply the regimes of signs under consideration and to build up a pragmatics that also considers the transformations among them. The diagram is not a type of sign; it is one kind of transformation between different regimes of signs. It is an 'abstract machine', an operation characterised by the absence of stabilised form and content, instead organising form and content at multiple levels.[9] In architecture, the diagram is then understood as another way to relate to the real than the 'indexical' relation that had been central since the 1970s, in conceptual art and architecture:[10] instead of referring to the real under the form of a trace, a comment or a sign, a diagrammatic architecture would rather deal with the virtual, instigating unforeseen possibilities by working on the level of *effects* to be felt rather than meaning to be read.[11]

Beyond the argument against the domination of semiotics, the diagram also relates to a new form of socio-historic work, as conducted by Foucault about the prison.[12] The way Foucault describes the Panopticon constitutes an example of what Deleuze and Guattari mean when they consider the diagram as an abstract machine. The Panopticon is not just a plan pointing to the construction of a specific prison, nor even just a type of prison, it is also the diagram of the disciplinary society at large. Its functioning permeates all layers of a society, normalising and controlling behaviours. It works not only through its institutions (prison, schools, hospitals); it is also actualised through individual conduct. To draw the diagram of the state of our society in such a way as Foucault did provides awareness of these mechanisms and a chance to intervene among, between, or even against them.

This is what Rajchman insists on in his paper in 1997. The diagram is used as an alternative to the plan or the programme, which were brandished by modern architects as a way to tame contingencies. The diagram is a chance to map the unpredictable, unstable, invisible state of a society at a given moment. It provides awareness about the fact that phenomena permeate many other levels than language: the unsaid, the body, the organisation of space… The diagram gives us clues about how to act and maybe provides a chance to intervene. A step further, Rajchman describes some traits of a 'diagrammatic architecture', characterised by its ability to deal with the uncertain, to instigate unpredictable movements and events, to form new subjectivities, to make sense without referring to something that precedes, and so on.

Despite its deeply theoretical traits, this discussion about the diagram is directly linked to both the post-critical scene and the introduction of Pragmatism in architecture at 'The Pragmatist Imagination'.[13] Rajchman's paper constitutes a major point of overlap between these three episodes, both in terms of content and of the references he uses. He contributes to what will be called a post-critical movement insofar as he sees the notion of the diagram as a chance to revise architects' ways of being critical, which he finds not only in French post-structuralism, but in a larger philosophical tradition, of which American Pragmatism forms part:

> Perhaps in this way the pragmatism of diagram and diagnosis might help transform the sense of what is 'critical' in our thought and our work. It might help move beyond the impasses of older images of negative theology, transgression, or abstract purity and

> introduce a new problem: that of resingularizing environments, of living an indefinite 'complexity', prior to set determinations, which questions the simplicities and generalities of our modes of being and suggests other possibilities.[14]

Rajchman inscribes this movement into a history of philosophy that opposes the critical tradition inherited from Kant to some alternatives, among which the direction taken by Pragmatism.[15] If Rajchman talks about 'a new pragmatism' it is because he attempts to connect the ideas of Deleuze, Guattari and Foucault to those of Peirce, James, and Dewey. He considers the French theories about the diagram as a 'diagrammatic pragmatism', 'a new pragmatism' which continues what had been started by the Pragmatists, but under new conditions. It is in this paper about the diagram that Rajchman first introduces the Jamesian notion of 'things in the making' that would prove central at 'The Pragmatist Imagination' in 2000.[16] Rajchman uses it to insist on the experimental aspect of architectural practice, and the necessity to develop new tools enabling architects to deal with complex and unstable situations.

Pragmatism thus makes its appearance in architecture at the height of the success of French theory in the field, and not after or in opposition to it, as Ockman argued in 2000 when she introduced 'The Pragmatist Imagination'. Actually, the revival of Pragmatism in American philosophy is itself tightly linked to the influence of Continental philosophy.[17] In the late 1970s–early 1980s, American philosophy undertook a 'post-analytical' shift away from the positivistic aims that characterised it for decades; that shift was based on a reconciliation of Pragmatism and Continental philosophy.[18] To understand the revival of Pragmatism, one must first recall the fact that this philosophy – which had been very successful in the United States in the second half of the nineteenth century – had fallen into oblivion after the Second World War. American philosophy had then taken a positivistic turn, due to the influence of the logical positivists of the Vienna Circle who had emigrated to the United States. American philosophy departments were driven away from Pragmatism and began developing analytic philosophy instead. The general aim of analytic philosophy was the logical clarification of thoughts, with the help of formal logic and the analysis of language. It was based on the premise that constructions close to those found in mathematics would help provide definite answers to given questions. This idea stood in sharp contrast with Continental philosophies. Philosophy departments were largely indifferent to – even protective against – the post-structuralist or Marxist waves that washed through American campuses in the 1970s and 80s. At least until some thinkers started to propose a parallel history of philosophy, able to reconcile analytic and continental philosophy, thanks to a third forgotten tradition: Pragmatism. Rorty famously contributed to that programme, and wrote: 'On my view, James and Dewey were not only waiting at the end of the dialectical road which analytic philosophy traveled, but are waiting at the end of the road which, for example, Foucault and Deleuze are currently traveling'.[19] It is that revival only – in the form of what Rajchman and West call a 'post-analytic philosophy' – that led architectural theory to establish connections with American philosophy. Until then, architectural theory had favoured literary (and other fields of) studies, as a means of access to the post-modern, inspiring, subversive theories coming from Europe. This explains, I believe, why, around 2000, architectural theory looked into the original Pragmatism of Peirce, James and Dewey, as an 'alternative' to the influence of Continental theories, instead of adopting analytic philosophy per se.

Architects were eager to diminish the pretensions of theory and to refocus on practice. Architects were seeking a fluid and responsive way of dealing with shifting realities and fast changes. Some of the

questions at stake were the new, computer-based, modes of design; the irruption of media, globalisation and the emergent cities; or the privatisation of public space. Architects were not looking for a more precise, truer, way of defining architecture. They were not interested in building a philosophy of architecture with the help of analytic philosophy, which would give itself the role of defining what architecture *is* in an almost scientific way.[20] This appears very clearly in Stan Allen's words at 'The Pragmatist Imagination':

> I identify myself with those who don't ask themselves *what architecture is* or *means* but only *what it can do.* […] The skepticism for a certain kind of theory is legitimate. The questions were mainly of two kinds for the theory of the 80s, either ontological or semiotic. When the question is ontological, it interrogates the origins, the limits, and the specificities of architecture. When semiotic, the question is that of meaning and representations. […] For my generation, these interrogations were not interesting anymore.[21]

What was at stake in this architectural milieu in the late 1990s was a way to find effective conceptual tools able to accompany the complex task of the architect, who wanted to fully engage in the building of new environments. As with the concept of the diagram, the main expectation from Pragmatism was in shifting how architecture could make itself significant: not by producing a meaningful message but by acting in and on the world, by inducing *effects*, on another level than language. Architectural theory was also to change its questions: neither what architecture means, nor what it fundamentally is, but what it does, what it entails. Formulated in these terms, the move can indeed be characterised as 'pragmatist'.

However, despite Ockman's and Rajchman's ambitious initiative, 'The Pragmatist Imagination' did not manage to push this strand of architectural theory into a pragmatist decade after 2000. The absence of Pragmatism – in the form of a philosophical legacy – in what directly followed the conference constitutes an evident lack of success in that milieu:

> And the 'New Pragmatism'? If only it were so! I can confidently say that if there were such a thing, the able trend-spotting machine of New York architecture culture would have taken it up, and if a critical mass of suitable practitioners could be found – I can think of two – a show would have been put together, a manifesto written, and a catalog published (Two Architects?).[22]

Instead, what followed in this (mostly North-American) context in the first decade after 2000 was the crystallisation of a 'post-critical' moment. The revision of the role of architectural theory in favour of a refocus on practice was conducted in a more and more irreverent and easy way, and with no consistent reference to Pragmatism.[23] The post-critical opted for the anti-intellectual direction that Ockman was precisely trying to avoid when she introduced Pragmatism as an alternative. The post-critical tone was provocative, not only against theory or critique, but also against any form of critical resistance that would tame the free conduct of design practice.

Because of that, the post-critical gave rise to fierce objections. Many feared that such an easy-going rejection of theory *and* criticality would set architects adrift, as they would blindly rush into the pervasive logic of capitalism. Therefore, 'The Pragmatist Imagination' can retrospectively be considered a welcome but unfortunate attempt to consider what Pragmatism could have contributed to that situation. For a couple of years, James, Dewey and Peirce made a few appearances in architectural theory, before they fell back into oblivion, in that particular architectural milieu at least.[24] Maybe Ockman's diagnosis was too optimistic: the architects who were seeking an alternative to the strong

influence of philosophy on the field, were not just opposing Continental philosophy, but philosophy in general. Pragmatism was no exception.

Speculation – So what about Pragmatism?

Instead of lamenting this lack of success, I see it as an opportunity to consider the initiative anew and use it to retroactively make propositions within the discussions about criticality. The second part of this paper will consider some post-critical propositions in more detail, and see what kind of responses Pragmatism might have provided to the objections that were formulated against them. I will focus on an issue that spans from the diagrammatic (around 1998) to the post-critical (around 2002) and through 'The Pragmatist Imagination' (2000). The issue at stake in all three scenes is the need for architecture to overcome the notion of 'representation' or 'meaning' in favour of its 'effects': instead of *representing* its condition, *expressing* its design process, *telling* ideas, *commenting* on the world, the 'diagrammatic' or 'projective' or 'post-critical' architecture 'focuses upon effects', 'is not for reading but for seducing', 'instigating new events and behaviors'.[25]

The above-mentioned qualities of a 'projective' architecture are found in the famous 'Notes around the Doppler Effect and Other Moods of Modernism' published by Robert Somol and Sarah Whiting in 2002, which is often used to mark the advent of a post-critical stage in architecture. Ahead of that co-authored – and now seminal – paper, Somol had already been building on the architecture of WW, Whiting's practice, to describe the turn from meaning to effect, which is at stake in what he was then calling a turn towards the 'diagrammatic' in architecture: '[it is] not an architecture to pay attention to (not about its meaning), but an environment for acting in, for instigating new events and traits'.[26] In their design for a community centre in Kentucky, developed in the late 1990s, WW attempted to blur the boundary between the inside and the outside, and between different programmes on each floor, by implementing a series of curved 'brackets' across the plan of an otherwise simple box with three floors. These 'figures' imply that the surface of the façade sometimes ribbons towards the inside and that the definition of the rooms on each floor is slightly disturbed. Somol insists on the fact that 'the effects of the IntraCenter are aimed not toward the production of critical exegesis or uncanny self-reflection, but strictly toward the generation of anomalous ecstasy'.[27] They are not meant to be interpreted but to generate new subjectivities. Somol does not fully reject the critical aspect of architecture – the fact that architectural form is imbued with meaning that can be interpreted – but he believes that the critical has been given too much importance: it repressed other ways in which architecture matters and inhibited other possibilities for architectural experimentation.

The diagrammatic and the post-critical programme overlap as they both invite architects to move from meaning to effects. The notion of effects is here articulated with that of *affects*. It is understood in terms of 'seduction', 'atmosphere' or even 'ecstasy'. This is also true of other architects who participated in the discussion around a diagrammatic architecture. UNStudio, the Dutch firm who edited issue 23 of *ANY Magazine* about the diagram in 1998, published a volume entitled *Effects* in their monograph *Move* just one year after. They explain that 'effects are felt, but cannot be grasped […] Being active as sensation, effects are not standardized and categorized but remain an agitated, undefined mass in the territory of the unconscious'.[28] The characteristic of effects is that they do not look like what provokes them. Therefore, they escape the notion of 'representation'.

This 'post-representational' (and 'post-critical') attitude, which spread in architecture in the late 1990s, provoked a series of objections. Some authors feared that such a posture would entail an unabashed formalism. Among these, Roemer Van

Toorn's critique is particularly severe. In 2004, he considers this trend to be 'the degree zero of the political':

> This [projective architecture] is a strategy without political ideas, without political or socio-historical awareness, that is in danger of becoming the victim of a dictatorship of aesthetics, technology and the pragmatism of the blindly onrushing economy. Instead of taking responsibility for the design, instead of having the courage to steer flows in a certain direction, the ethical and political *consequences* arising from the design decisions are left to the market and the architect retreats into the givens of his discipline.[29]

Focused on *effects*, these architects run the risk of neglecting the larger *consequences* of their design. It is in this sense that, in another paper published that same year, Van Toorn criticises UNStudio's project for La Defense office complex in Almere. The architects designed a series of volumes characterised by the changing colour of their façades; Van Toorn explains that this architecture does not want to *express* any meaning, to *signal* any content, to *communicate* any message, which it would have done by *representing* the identity of the company that commissioned the complex for instance. Instead, the skin of the building acts as a cosmetic layer, 'a hypnotic seducer': it organises emotional or sensational effects. Van Toorn criticises this sort of architecture, because he believes that the effects produced are gadget-like, that they serve as mere decoration. Therefore, they 'elicit a committed response [in favour of] an intimate experience', and prevent architects from 'contribut[ing] to certain pressing social tasks'.[30]

The problem lies in the restrictive scope of the effects that are considered by these architects: instead of looking at the broad consequences of their design and the situation in which it takes place, architects narrow down their interest to material, visual, sensual effects. The movement away from an autonomous architecture – considered as mere wordplay or representation – could have led to a more conscious architecture, aware of its social, political, economical, cultural consequences. In 'Doppler Effect', Somol and Whiting seem to know that risk, when they defensively conclude that 'setting out this projective program does not necessarily entail a capitulation to market forces, but actually respects or reorganises multiple economies, ecologies, information systems, and social groups'.[31] However, that line of defence proved to be too weak to prevent the wave of criticism that followed. This so-called 'new architectural pragmatism' was soon accused of being complicit with the market economy as it was giving up critical resistance in favour of a posture of acceptance.[32]

Despite the fact that these projective or post-critical propositions have eventually been qualified as 'a new architectural pragmatism' and that most of their authors were at 'The Pragmatist Imagination' in 2000, American Pragmatism was almost completely absent from the discussion. Only a common sense 'pragmatism' remained: the idea that theory had to be rejected in favour of practice and that utopias or any form of ideals could be discarded in favour of an unleashed realism. My hypothesis is that Pragmatism – not in its common sense but as a full-fledged philosophical body of knowledge – could have helped in avoiding the reductive appeal to effects that was at stake in the 'new architectural pragmatism'. However, the aim is not to imply that the post-critical architects were pragmatists who just never acknowledged that legacy. The aim is to measure affinities as much as contrasts between that specific trend in architectural discourse and the philosophy with which it did not align at that point. The proposition is thus more of a speculation: *what if these architects had chosen to read Pragmatism? What differences would it have made?*

I believe that an alliance with Pragmatism would allow a retroactive consideration of the objections to

the post-critical along two lines: (1) to insist on architecture's practical effects does not mean that theory and discourse need to be dismissed altogether; (2) instead of just 'practical effects', Pragmatism is a philosophy that encourages us to take into account *consequences* on a much larger (and thus very demanding) scope. I thus intend to establish a contrast between 'effects' and 'consequences' parallel to the distinction between common-sense pragmatism and what the philosophy of Pragmatism invites us to consider. Despite the fact that these two pairs of terms are respectively synonymous and homonymous, it seems to me that widening the interstice between them opens up an interesting space for reflection.

I will explore the way in which the first definitions of Pragmatism by Peirce, James and Dewey were characterised by a similar spectrum, proceeding from effects to consequences. Their respective definitions of Pragmatism are known to be increasingly moral and political, as they pass from Peirce's notion of the practical bearings of ideas to James's concern for their particular consequences and Dewey's ideas about their role in the adaptation of individuals to their (social) environment.

It is often said that James took over Peirce's Pragmatism and added a moral dimension to it, by using what was at first a method to eventually choose among various philosophical conceptions (for example, between monism and pluralism). It is also clear that Dewey is the most political among the pragmatist philosophers, as he was a convinced liberal and democrat who thought that the role of philosophy was to help social improvement. Also, the pragmatist philosophers had to react against accusations of instrumentalism, utilitarianism, anti-intellectualism and even mercantilism. Their own writings thus contain lines of defence against these claims, which echo the controversies around the 'new architectural pragmatism'.

Pragmatism was first defined in the late 1870s by Charles Sanders Peirce in a two-part paper entitled *The Logic of Science*. This is where Peirce lays out the basis on which Pragmatism is founded: the meaning of an idea is found in its 'practical bearings' or 'sensible effects'. Peirce reaches this conclusion after he explains that research or reasoning always starts with a lively doubt that needs to be overcome. The aim of any research, of any inquiry, is the fixation of a belief: doubts need to be tempered, as they interrupt the course of actions. For Peirce, the aim of thought is thus to assure the conduct of an action, the establishment of habits. The meaning of an idea thus depends on the habits it produces, on the actions it entails, more generally on its 'sensible effects'. As a method to 'make our ideas clear', Peirce proposes the following rule, which would soon become the Pragmatist method: 'consider what effects, which might conceivably have practical bearings, we conceive the object of our conception to have. Then, our conception of these effects is the whole of our conception of the object'.[33]

Twenty years later, William James took this maxim and popularised it under the name *Pragmatism*. In 1898, he gave a talk entitled 'Philosophical Conceptions and Practical Results' in which he affirmed that philosophy should deal with metaphysical alternatives only if the competing terms differ regarding their practical results. If two options do not make an actual difference, then the alternative is vain and deserves no consideration. Pragmatism is thus first a method to escape useless metaphysical debates. More generally, it invites us to concentrate our thoughts on effects rather than causal or essential explanations.

> It is astonishing to see how many philosophical disputes collapse into insignificance the moment you subject them to this simple test of tracing a concrete consequence. There can be no difference anywhere that doesn't make a difference elsewhere – no difference in abstract truth that doesn't express itself in a

> difference in concrete fact and in conduct consequent upon that fact, imposed on somebody, somehow, somewhere and somewhen. The whole function of philosophy ought to be to find out what definite difference it will make to you and me, at definite instants of our life, if this world-formula or that world-formula be the true one.[34]

For James, ideas or facts count as far as they make differences in our particular existences, as far as they result in different behaviours and experiences for each of us. It is not merely that ideas have practical effects *in general* but, more dramatically, that they have 'particular consequences'. As a philosopher, he addresses the differences between, for instance, theism and materialism, or monism and pluralism. He considers them first as a matter of preference based on personal temperament, but then develops their respective practical and particular consequences, and describes the very different world that each of these metaphysical options brings about. This might first appear as a relativist utilitarianism: everyone freely chooses what hypothesis suits them best. But, by insisting on the world produced by each term of the alternative, James ends always opting for the one that is the most inclusive. As a result, he shows how demanding the pragmatist method is:

> You must bring out of each word its practical cash-value, set it at work within the stream of your experience. It [the pragmatic method] appears less as a solution, then, than as a program for more work, and more particularly as an indication of the ways in which existing realities may be *changed*.[35]

James's Pragmatism is thus also deeply melioristic. As he himself says, 'Pragmatism [is] far from keeping her eyes bent on the immediate practical foreground, as she is accused of doing.'[36] Instead, Pragmatism adds to our responsibilities the task of bringing into existence the long and intricate series of consequences, not only of deeds and facts, but also of ideas, however remote, abstract or metaphysical they may be. Therefore, James is far from dismissing theory or philosophy. Instead, by insisting on their practical bearing, he reaffirms their importance. Moreover, far from focusing only on direct effects, he insists on further consequences, showing what a different world distinct ideas or deeds can imply.

James's Pragmatism brings to light the contrast between 'effects' and 'consequences'. Dewey's Pragmatism, even more than James's, is focused on particular situations and, more precisely, on the interactions that define them. Consequences, with Dewey, are thus considered less on a particular or individual level than on a social and political one. Dewey underscores Pragmatism's meliorism. He adds to James's Pragmatism, when he affirms that Pragmatism should not only be a philosophical tool to choose among different options, but also to propose new ones:

> [James] wished to force the general public to realize that certain problems, certain philosophical debates have a real importance for mankind, because the beliefs which they bring into play lead to very different modes of conduct […] Such a statement implies that the world formulas have already all been made, and that the necessary work of producing them has already been finished.[37]

Dewey argues that Pragmatism cannot be reduced to a method, because it has important metaphysical implications. The fact that Pragmatism obliges us to take future consequences into consideration leads to a conception of a universe that is unfinished, made of 'things in the making', rather than things made. Philosophy should thus not only be anchored within experience, but also enrich it.

When James defined *Pragmatism* in his famous essay in 1907, he did not only look into Peirce's method but also into Dewey's logic, his

'instrumentalism'. Influenced, like his peers, by Darwinism and the theory of evolution, Dewey understood ideas as tools used by organisms to adapt to their environment. An idea is true only insofar as it satisfies the individual, which means that it makes his or her relationships to the environment more fruitful, the experience more fluid. Ideas are instruments of adaptation or adjustment. Their meaning depends on their ability to meet the conditions involved in a specific situation.

Dewey thus insists – like Peirce and James, but in other terms – on the continuity between ideas and facts. The distinction between the two is purely instrumental: they each play their role in the process of establishing knowledge. More importantly, Dewey believes ideas should never be considered separately from their role in a particular experience; abstractions are problematic only as far as they are disconnected from the situation in which they emerge and from their consequences upon that situation.

> From its [the instrumental type of logic's] point of view, an attempt to discuss the antecedents, data, forms, and objective of thought, apart from reference to particular position occupied, and particular part played in the growth of experience is to reach results which are not so much either true or false as they are radically meaningless because they are considered apart from limits. Its results are not only abstractions (for all theorizing ends in abstractions), but abstractions without possible reference or bearing.[38]

Dewey thus encourages the adoption of a method with which 'thought would be connected with the possibility of action, and every mode of action would be reviewed to see its bearing upon the habits and ideas from which it sprang'.[39]

From Peirce to James and Dewey, Pragmatism thus not only invites us to consider the practical bearings and sensible effects of our actions *and* ideas. It emphasises their broader consequences as well, and thereby encourages us to face the very different worlds our choices are unfolding. With Dewey especially, Pragmatism also insists on the importance of the situations we are necessarily part of, and on the necessity to take all their intricacies into consideration.[40]

To conclude, I would like to demonstrate how these definitions of Pragmatism can retroactively (speculatively) intervene along two lines in the debate about criticality: (1) What is the role of theory and its relation to practice? (2) Can we look at architecture's effects without being mesmerised to such extent that we forget about architects' political and social role?

Pragmatism is particularly interesting in dealing with the problematic relationship between theory and practice, in part because of its ambiguity. Common sense makes us think that 'pragmatism' favours practice over theory, concrete facts and deeds over discourse and abstractions. However, contrary to what would then be expected of Pragmatism, it has nothing to do with a rejection of theoretical knowledge in favour of practice. Instead, it invites one to consider abstract conceptions in the light of the practical differences they make. Pragmatism – unlike most post-critical architects – does not put practice *against* theory, but displaces the distinction itself. It proposes an instrumental continuum between the two, where theories and practices (thoughts and deeds) complete each other to reach a given objective. While insisting on the practical differences they both make, Pragmatism emphasises the importance of conceptual distinctions. They do not diverge only on an intellectual level, but they also produce very different worlds, some of which are more desirable than others. Pragmatism points to these worlds that our conceptions and actions bring into existence. By giving importance to these worlds, Pragmatism restores the role of both theory and practice. There is no need to dismiss theory, the

production of discourse, the practice of research. Pragmatism rather encourages us to interrogate what they produce and judge them against their consequences.

A Pragmatist approach can also amend the somewhat reductive focus on architectural effects. Since post-critical architecture focuses on how architecture acts on the level of effects instead of meaning, architects run the risk of losing an important critical tool. Being satisfied with material and atmospheric effects, with the seductive appearance of their architecture, leads architects to neglect the broader consequences of architecture, on the site, on the users, on the economy, and so on.

Against that reductive account of effects versus meanings, Pragmatism addresses both effects *and* consequences, of both material *and* discursive matters. This is how, for instance, the architect Stan Allen interprets James's notion of Pragmatism at 'The Pragmatist Imagination', and in an essay he published that same year: 'This necessitates a close attention to the material effects and worldly consequences of *all* of architecture's matter – semantic *and* material – while maintaining a strict indifference to the origin of those effects'.[41]

The way Stan Allen built on Pragmatism to expand on his late 1990s writings about the diagram is useful for the speculation I am conducting here: he is among the few in the 'post-critical' debate who seized upon Pragmatism as an opportunity to emphasise architects' responsibility regarding the consequences of their practice. The diagram is for him a tool to 'engage with the real', in all its contingencies. In the aforementioned essay, Allen does not dismiss theory but the notion of conformity to norms, which are established ahead and independently of any experimentation. Instead, he prefers for increased attention to be paid to the consequences. He thus accepts the fact that architects 'compromise', because conformity is not the issue; what matters is the result. But he insists that turning decisively towards the result does not lead to the political and moral dissolution of architecture. Instead, it forces architects to think of their public role. In a Pragmatist fashion, Allen explains that meaning is always the result of interactions:

> Meaning happens during the encounter of the public with the building, not during its design. It is most urgent to move away from the private world of the architects designing and focus our preoccupations on architecture's performance in the public sphere.[42]

If I use Allen's discourse in the context of this speculative exercise, it is because Pragmatism leads him to propose a posture for architects that better takes into account the contingencies of their practice. Architecture is constrained from the outside: architects react to demands and their practice is necessarily contingent because it negotiates with realities that are complex and uncertain. Architecture needs to be 'agile and responsive' in order to confront these realities. In this sense, Pragmatism contributes to the idea that constraints are not obstacles against creativity, but opportunities.

This is precisely where I believe Pragmatism might propose a double line of response: Pragmatism does not suggest the abolishment of theory nor does it imply a focus on architecture's practical effects in a narrow sense: its forms, its materiality… Interrogating consequences (rather than mere effects) situates architecture in all the intricacies that characterise it: elements of context, demands to which it has to answer, new elements it brings to existence, and so on. The entire world is included in the 'consequences' that Pragmatism brings to the fore. In my view, Pragmatism thus constitutes a highly demanding stance, as it constantly requires us to ask: what is the world that our design choices bring into being, and how can it be better than the one we have now?

Notes

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1. *Things in the Making: Contemporary Architecture and the Pragmatist Imagination* (New York: MoMA Archives, 2000), video recordings 2001. 26a–27d.
2. The most-often cited description of the situation is: Georges Baird, '"Criticality" and Its Discontents', *Harvard Design Magazine* 21 (2004): 16–21. Since then, anthologies started to integrate this episode: A. Krista Sykes, *Constructing a New Agenda: Architectural Theory 1993–2009* (New York: Princeton Architectural Press, 2010); Harry Francis Mallgrave, 'Pragmatism and Post-Criticality', in *Introduction to Architectural Theory: 1968 to the Present* (Malden, MA: Wiley-Blackwell, 2011), 177–93; Ole W. Fischer, 'Architecture, Capitalism and Criticality', in *The SAGE Handbook of Architectural Theory* (London, Los Angeles, New Delhi, Singapore: Sage Publications, 2012), 56–69. However, the notion of a post-critical turn in architectural theory was already explicit before the first years of 2000s, for instance in K. Michael Hays and Alicia Kennedy, 'After All, or the End of "The End of"', *Assemblage*, no. 41 (1 April 2000): 6–7.
3. Robert E. Somol and Sarah Whiting, 'Notes around the Doppler Effect and Other Moods of Modernism', *Perspecta* 33 (2002): 72–77; Michael Speaks, 'Design Intelligence and the New Economy,' *Architectural Record* 190, no. 1 (January 2002): 72–75.
4. François Cusset, *French Theory: How Foucault, Derrida, Deleuze, & Co. Transformed the Intellectual Life of the United States* (Minneapolis: University of Minnesota Press, 2008 [2005]).
5. Cornel West, 'A Note on Race and Architec*ture', in Keeping Faith: Philosophy and Race* in America, (New York, London: Routledge, 1993); Cornel West and Rem Koolhaas, 'Critical Mass: Urban Philosophies', *AV Monographs*, no. 91 (2001): 15–33.
6. Joan Ockman, *The Pragmatist Imagination. Thinking about 'Things in the Making'* (New York: Princeton Architectural Press, 2000), 17.
7. In 1990 at the first of the ten conferences organised annually by Anyone Corporation, John Rajchman explained that he had been invited to introduce Deleuze in architecture. This philosophy was supposed to provide a useful alternative to the former success of Derrida on the field, which by then was already exhausted since it had proved its limits at accompanying architectural practice. (John Rajchman, 'On Not Being Any One', in *Anyone* (New York: Anyone Corporation, 1991), 100–111; Simone Brott and John Rajchman, 'An Interview with John Rajchman, Department of Art History, Columbia University, on Architecture, Deleuze and Foucault', *Subjectivizations: Deleuze and Architecture (Masters Thesis)*, 2003, http://eprints.qut.edu.au) The shift from Derrida to Deleuze in 1990 curiously echos a similar shift from Continental philosophy to Pragmatism seen at 'The Pragmatist Imagination' in 2000. The Deleuzian 1990s were to follow the Derridian 1980s, before they were themselves replaced by Pragmatism in 2000.
8. Between 1998 and 2000, three journals dedicated an issue to the diagram: Caroline Bos and Ben Van Berkel, eds., 'Diagram Work: Data Mechanics for a Topological Age', *ANY*, no. 23 (June 1998); Like Bijlsma, Udo Garritzman, and Wouter Deen, eds., *Diagrams*, OASE 48 (Sun Publishers, 1998); *Daidalos – Diagrammania*, vol. 74 (Berlin, 2000). In 1999 alone, three monographs were published in which the diagram played a central role: Stan Allen, *Points + Lines: Diagrams and Projects for the City* (New York: Princeton Architectural Press, 1999); Ben van Berkel and Caroline Bos, *Move* (Amsterdam: UNStudio & Goose Press, 1999); Peter Eisenman, *Peter Eisenman: Diagram Diaries* (New York: Universe Publishing, 1999).
9. Gilles Deleuze and Félix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia* (Bloomsbury Publishing, 1988 [1980]).
10. About the role of the index in the description of conceptual art, see: Rosalind Krauss, 'Notes on the Index: Seventies Art in America', *October* 3 (1977): 68–81.
11. Beside Rajchman's contribution at *Anyhow*, several

contributions in *ANY 23* are explicit about this contrast, among which: Stan Allen, 'Diagrams Matter', *ANY*, no. 23 (1998): 16–19; Robert E. Somol, 'The Diagrams of Matter', *ANY*, no. 23 (1998): 23–26. Somol keeps insisting on a shift 'from index to diagram', most notably in: Somol and Whiting, 'Notes around the Doppler Effect.'

12. Michel Foucault, *Discipline and Punish: The Birth of the Prison* (New York: Pantheon Books, 1978 [1975]).
13. Many of the authors contributing to *ANY 23* about the diagram in 1998 – UNStudio, Stan Allen, Peter Eisenman, Robert Somol – will also be invited to 'The Pragmatist Imagination' *t*wo years later. They outline the same argument there as they did about the diagram, and as some of them would later do in the post-critical controversy.
14. John Rajchman, 'A New Pragmatism?' in *Anyhow*, ed. Cynthia D. Davidson (Cambridge, MA: The MIT Press, 1998), 217.
15. Actually, this idea was not new in 1997. Rajchman had proposed the same philosophical lineage as an alternative to Kant in his first intervention at the ANY series of conferences, in 1990 (see note 7). While introducing how Deleuze could appeal to architects, he was already establishing a connection with Nietzsche and Peirce.
16. James himself uses this notion in an essay about Henry Bergson, which reinforces the connections established by Rajchman between American Pragmatism and French philosophy: William James, 'Bergson and His Critique of Intellectualism', in *A Pluralistic Universe* (Cambridge, MA: Harvard University Press, 1977 [1908]), 223–74.
17. Morris Dickstein, *The Revival of Pragmatism: New Essays on Social Thought, Law, and Culture* (Durham, NC: Duke University Press, 1998).
18. John Rajchman and Cornel West, *Post-Analytic Philosophy* (New York: Columbia University Press, 1985).
19. Richard Rorty, *Consequences of Pragmatism: Essays, 1972–1980* (Minneapolis: University of Minnesota Press, 1982), xviii.
20. Let's consider Saul Fisher's words, in a lecture on analytic philosophy of architecture, when he explains the type of question that this field of inquiry would address: 'What are the necessary and sufficient conditions for being an architectural work? What are the essential hallmarks of a given individual architectural work, such that we can identify (a) when some x is a work of architecture (and not anything else, e.g. sculpture) and (b) when some x is a particular work of architecture (and not any other)?' (Saul Fisher, 'Analytic Philosophy of Architecture: A Course', *American Society For Aesthetics*, accessed May 9, 2016, http://aesthetics-online.org.
21. Stan Allen at *Things in the Making*.
22. Philip Nobel, 'What Pragmatism Ain't,' *Metropolismag.com*, July 2001, http://www.metropolismag.com.
23. Ironically enough, it is Michael Speaks among the major 'post-critical' authors who refers most explicitly to Pragmatism and to Ockman's initiative. See: Michael Speaks, 'Design Intelligence and the New Economy', in *Architectural Record* 190, no. 1 (January 2002): 72–75.
24. It is important to mention that the story told here is focused on the discussions around 'a new architectural pragmatism', which occurred among a very limited group of architectural theorists. This narrow perspective is maintained for the purpose of the speculative exercise, which is interesting in reopening unexplored opportunities in that specific controversy. However, it is necessary to acknowledge other areas of architectural thinking where strands of Pragmatism were actually considered, often via other sources. I think, for example, of the recent ethnographies of architectural practice conducted in the prolongation of similar works in Science and Technology Studies and as an application of the Actor-Network Theory. But I should also quickly mention the few 'turns' that architectural theories recently followed: the 'practice-', 'affective-' or 'material-' turn, to name just a few recent engagements of architecture with authors and currents whose affinities with Pragmatism could be traced.
25. Somol and Whiting, 'Notes around the Doppler Effect', 75.
26. Robert E. Somol, 'The Seduction of the Similar',

Assemblage, no. 40 (1999): 75.

27. Ibid.
28. Van Berkel and Bos, 'Volume 3: Effects. Radiant Synthetic', in *Move*, 15.
29. Roemer Van Toorn, 'No More Dreams? The Passion of Reality in Dutch Architecture... and Its Limitations', *Harvard Design Magazine*, no. 21 (2004): 22–31. My emphasis.
30. Roemer Van Toorn, 'From Representation to Presentation and Back', in *Architecture in the Netherlands Yearbook 2004–2005*, ed. Anne Hoogewoning, Roemer Van Toorn, and Arthur Wortmann (Rotterdam: nai010 publishers, 2005).
31. Somol and Whiting, 'Notes around the Doppler Effect', 77.
32. William S. Saunders, 'Accept, Resist, or Inflect? Architecture and Contemporary Capitalism', in *The New Architectural Pragmatism* (Minneapolis: University of Minnesota Press, 2007).
33. Charles Sanders Peirce, 'How To Make Our Ideas Clear', *Popular Science Monthly* 12 (January 1878): 293.
34. William James, *Pragmatism* (New York: Dover Publications, 1995 [1907]), 20.
35. Ibid., 21.
36. Ibid., 47.
37. John Dewey, 'The Development of American Pragmatism', in *The Essential Dewey*, vol. 1, 'Pragmatism, Education, Democracy' (Bloomington: Indiana University Press, 1998 [1925]): 5–6.
38. John Dewey, ed., *Studies in Logical Theory* (Chicago: The University of Chicago Press, 1903), 8.
39. John Dewey, *Liberalism and Social Action*, 1935, 46–47.
40. Beyond Pragmatism's insistence on 'consequences', I believe the emphasis on situations and the interactions from which they result is another reason why Pragmatism constitutes a fruitful source to think anew our political and moral engagements. For such an argument, see for instance: Emilie Hache, *Ce à Quoi Nous Tenons : Propositions Pour Une écologie Pragmatique*, (Paris: Les Empêcheurs de Penser en Rond, 2011) ; Jane Bennett, *Vibrant Matter. A Political Ecology of Things* (Durham and London: Duke University Press, 2010); or my own reading of these authors in a similar speculation as the one conducted here: Pauline Lefebvre, 'From Autonomy To Pragmatism: Objects Made Moral', *Architecture Philosophy* 2, no. 1 (2016): 23–37.
41. Stan Allen, *Practice: Architecture, Technique and Representation* (London and New York: Routledge, 2000), xviii.
42. Stan Allen in *Things in the Making*.

Biography:

Pauline Lefebvre is an architect and architectural theorist born in Brussels. She graduated from La Cambre in 2010. After working as an architect for two years, she was granted a FRS–FNRS fellowship and obtained her PhD in architecture from the *Faculté d'Architecture de l'ULB* in 2016, with a dissertation entitled *Tracing Pragmatism in Architecture (1990–2010). Thinking Architects' Engagement Within the Real*. In 2011–12, she participated in the programme of experimentation in arts and politics directed by Bruno Latour and Valérie Pihet at Sciences Po Paris. In the wake of that experience, she started an independent research agency named Æ. She is now conducting post-doctoral research as a BAEF Fellow and visiting scholar at Columbia University (2016–17).

The Triumph of Function over Form: The Role of Analytic Philosophy in Planning and Analysing Modern Architecture

Borbála Jász

Introduction

The first appearance of connections between analytic philosophy and modern architecture was after the First World War, especially in the work of Le Corbusier, the Bauhaus and the professional framework provided by the CIAM (*Congrès International d'Architecture Moderne*).[1] These antecedents would prove to be important in the later history of architecture, because they served as a reference for the most dominant architects.

In order to understand tendencies in socialist architecture in the second half of the twentieth century in eastern Central Europe, it is necessary to study the early analytic philosophy of the 1920s.[2] Historical architectural ornaments returned to the language of architecture with the appearance of the classicism of the Marxian Socialist realism, but the Khrushchevian architectural turn in the 1960s grounded a new way of architectural thinking, with an emphasis on social responsibility. This was the age of house factories and house blocks, and it was based on scientific planning and the fight against individualism. The ground of these changes was found in Le Corbusier's architectural theories, specifically his structural plan for the Dom-Ino house (1915).[3] In architectural terms, one could find in these Dom-Ino elements a reference to Wittgensteinian language games. In his *Philosophical Investigations,* Wittgenstein emphasised the context-sensitivity of the language.[4] His famous duck-rabbit example shows how we may perceive the very same form either as a duck or as a rabbit, depending on our perspective. *Domus* means house in Latin; dominoes are units designed as a common industrial module that can fit into one another precisely. Le Corbusier's Dom-Ino is a house and a game of dominoes at the same time, depending on our perspective. This double perceptability is inherent in the design of both Wittgenstein's duck-rabbit and in Le Corbusier's Dom-Ino. All the elements of a house of cast concrete are mass-produced, therefore, it already inherently owns an appropriate system of proportions.[5] Here we can most plainly observe that object-type, foreseen by Adolf Loos: a reinforced concrete structure suitable for mass production.[6] Houses, mega-structures and complete vertical cities could be built from these Dom-Ino elements. This kind of planning applies the criteria of the Vienna Circle: house blocks are perspicuous, transparent and calculable systems.[7]

There are many similarities between the city of the first machine age and the socialist house block system. Le Corbusier's 'machinised city' is called Ville Radieuse, where both the districts and use of the buildings were inscribed in the plans. The ideal block house was a type of Unité d'Habitation, leading in turn to the New Brutalist style, resulting in functional and objective socialist house blocks. The term New Brutalism was first applied to Le Corbusier's post-1930 style by the English architects Peter and Alison Smithson in 1954.[8] The rooms in a house were scientifically calculated according

to their use. It is important to note that habitants were called ‘users’ and their lifestyle constituted adequate use: a method.

In the twentieth century, modernist architecture tendencies were dominant in the entire territory of Europe. But after the Second World War, a break with this trend appeared, especially in the countries of eastern Central Europe. The era of socialist realism in art, design and planning was dominant there in the 1950s only. After that, a new age emerged: the era of house blocks. In this article I will argue that the ideology of house factories constitutes exactly the return to the science-based modernist architecture theory trends of the interwar period.

The restructured power relations in this region after the Second World War also left their mark on architecture. After the modernism of the interwar period, historical forms returned to the language of architecture. The Soviet worldview was the dominant ideological system, summed up in Stalin’s maxim: ‘socialist by content, national by form’. It resulted in an architectural neoclassicism renewed with decorative elements borrowed from Russian folk or nation-specific traditions. In Hungary, architects chose the original classicist architecture, gently mixing it with the modernist approach of the interwar period. A specific type of building of the era was the neoclassical façade, with a modernist structure ‘below the surface’: party houses, university buildings and complete Potemkin cities were built in this way; the trend is called façadism. One of the most important projects of the era of dogmatism was the building of People’s Stadium by Karoly David in Budapest. David had worked in the office of Le Corbusier, and after his return to Hungary he started to orient his architectural practice toward the ideologist and dogmatist atmosphere dominating Hungarian architecture at the time.[9]

The end of the Social Realist era is bound to Nikita Khrushchev’s 1954 speech: building with bricks was expensive and slow, thus the new way of architecture was thought to be the wall block system.[10] The Khrushchevian architectural turn with its house block systems signals the renewal of modernist architecture theory, based on a scientific method of building. The experimental housing estates were built explicitly involving science. This was a common approach of the age internationally. For example in 1964 the city centre of the heavy industrial Hungarian city Salgotarjan was built, inspired by the late ferro-concrete architecture of Le Corbusier; at around the same time, the buildings for the Tokyo Olympic Games by Kenzo Tange were realsed as well. Both plans entailed a renewal of the international character of the modernist era, the use of exposed concrete as a construction method and referred to intellectual heritage of the CIAM.

Between form and function – grounding the architecture theory of the twentieth century

The starting point of the debate between form and function that resulted in the polemic in the whole twentieth century was the canonical trope once expressed by Vitruvius and later renewed by the American architect Louis Sullivan in the following words, first printed in 1896:

> Whether it be the sweeping eagle in his flight, or the open apple-blossom, the toiling work-horse, the blithe swan, the branching oak, the winding stream at its base, the drifting clouds, over all the coursing sun, form ever follows function, and this is the law. Where function does not change, form does not change. The granite rocks, the ever-brooding hills, remain for ages; the lightning lives, comes into shape, and dies, in a twinkling.

It is the pervading law of all things organic and inorganic, of all things physical and metaphysical, of all things human and all things superhuman, of all true manifestations of the head, of the heart, of the soul, that the life is recognizable in its expression, that

form ever follows function. This is the law.[11]

It was manifested first of all in the opposition of ornamentation and functionality. The historic preference was questioned as early as the 1890s by Adolf Loos:[12] 'Since ornament is no longer organically linked with our culture, it is also no longer the expression of our culture.'[13] In his lecture *Ornament and Crime* of 1913 he turned against the aesthetic principles of the Vienna Secession. Loos's most important argument against the use of ornamentation was its wastefulness, squandering both labour and material, leading to the enslavement of the craftsmen, which he condemned as a crime. He criticised the use of ornament on both ethical and aesthetic grounds. Loos said that 'the evolution of culture is synonymous with the removal of ornament from utilitarian objects'.[14]

After the First World War, advancements in science had a pronounced influence on art and architecture. In the architectural schools operating at the time, especially the Bauhaus, it was felt that the response to the fundamental changes after World War I needed to be a revolutionary movement. Tension as a result of the emptiness of old values, demanded reforms; the new needs (building a new kind of cheap and utilitarian flats for workers instead of large and imposing appartments for the former middle classes) could not unfold as there was no appropriately constructed environment. The view of environmental determinism entailed that architects aimed at changing lifestyle by transforming the living environment of the inhabitants. The emerge of this new architecture gave rise to a modern, unified material culture and novel style of a new era. The most important features of these were cosmopolitism and scientific objectivity.

After World War I – the first connection between analytic philosophy and modern architecture

After World War I, in the Europe of the 1920s, a common intellectual, scientific worldview seemed to develop, influencing thought as a whole. Due to these common roots, several points of similarity may appear between architecture and philosophy. From the worldview of the era, a movement was unfolding with the mission to improve society. For expressing such ambitious objectives, the manifesto or proclamation is the characteristic medium. Among the manifestos, we can count Le Corbusier's *Towards a New Architecture* and Rudolf Carnap's *The Scientific Conception of the World: The Vienna Circle,* both of which reacted to the problems of society and intended to cure them. As Carnap puts it in 1929 in his manifesto:

> We witness the spirit of the scientific world-conception penetrating in growing measure the forms of personal and public life, in education, upbringing, architecture, and the shaping of economic and social life according to rational principles. The scientific world-conception serves life, and life receives it.[15]

One of the core ideas of the Vienna Circle is verification. In modern architecture, several understandings of science can be distinguished, but a common attribute among them is the use of the method of verification. One approach is attached to the name of Le Corbusier. In his *Towards a New Architecture* he unveiled his thoughts about verification and language, together with the five points of modern architecture. In Le Corbusier's writings, the aesthetic of the machine is based on an analogy with ships and automobiles. He held that a house should function as a perfect machine, serving its user. In this view the house was interpreted as the basic unit of architecture that must be constructed scientifically.

Le Corbusier used the automobile to illustrate the new aesthetic of the machine age. With the cessation of decoration, a new idea would control contemporary architecture and systems of thought, namely machinism.[16] In order to achieve a concept,

norms regulated by strict principles are required. According to Le Corbusier, the problem of a house should be approached in a similar way to that of an automobile, which has the virtue of standardisation.[17] The automobile is the top achievement of the aesthetics of engineering, the direct Le Corbusierian analogue of which is Maison Citrohan.[18]

In Le Corbusier's vision, the plan of Maison Citrohan would accurately define the criteria of a modern house.[19] Using a car brand name, the architect wishes to indicate that the house needs to be as standardised as an automobile. The house that is regarded as a tool is opposed to old concepts of a house, which according to Le Corbusier used space in an inappropriate way. An automobile or a ship cabin would be the ideal model for a house in both the planning and the building process. The means of technical and industrial development would have to be applied, by virtue of which outdated ways of thinking could also be changed. According to the architect, it was no longer ornamentation but instead the proportions that carried beauty which would be present in each part of the building, shaped by modules.[20] This resulted in 'the house [that] is a machine for living'.[21]

A more detailed explanation of the machine paradigm can be found in the third chapter of Le Corbusier's *The City of To-morrow and Its Planning*. According to Le Corbusier, the coming of machines in great numbers induces moral changes. Ships, automobiles and planes do not only change our aesthetics but they also change our rhythm of life. Industrial development and the mass influx of materials eliminate manual production methods.[22] Le Corbusier's reaction to the development of scientific technique is analogous to the scientific concept of the Vienna Circle.

Another approach came into being at the functionalist school of the Bauhaus. In the Bauhaus, led by Hannes Meyer, Rudolf Carnap's direct influence dominated by virtue of emphasising scientific criteria, while denying the *raison d'être* of the aesthetic at its very ground.[23] The major difference between the two approaches is that while Hannes Meyer rejects all forms of aesthetics, Le Corbusier attempts to unite engineering and artistic approaches since, in his opinion, an architect is pursuing artistic activities. In my essay I will focus on Le Corbusier's theory, because science-based machine aesthetics and social responsibility work together in his work; and this way of architectural thinking can be considered a precedent for the socialist house block systems after WWII all over central Europe.

The scientific-technological view appears in such a way that automatism and operationalism influence the architecture of Le Corbusier, too. The engineer's view is dominated by mass production and industry. This needs the development of scientific criteria with which generally valid answers can be given. Thus the architect's activity becomes similar to that of a scientist working in a technological laboratory, in that the method of verification originates from the quantitative methods of natural sciences.

Le Corbusier's *Towards a New Architecture* has to be interpreted within this social-scientific context.[24] At the start of the book, Le Corbusier contrasts architecture with the aesthetics of the engineer; the latter is thought to hold true by virtue of its analytical method. According to his view the architect creates a world, relying on the laws of nature. His task is to find the line of force and the directional vectors of a form based on pure geometry. It is the engineer who is creating the means of our era in the spirit of thrift, sanity, sturdiness, usefulness, morality and harmony.[25] Therefore, the role of the architect is changing: no longer are the artistic products, the satisfaction of visual desires and the questions of emotional phenomena merely the standard. It becomes increasingly necessary to arrange more primary forms, the dominant contemporary genre of painting according to geometrical rules, and to

apply simple mass and town planning based on it.[26]

In her monograph on Le Corbusier, Christine Boyer describes the main objective of his work as the development of a language of modern architecture and urbanism; its result is the well-known five points of modern architecture. The main issue is how an architect should shape a house so that it can be like any other machine designed for transportation such as an automobile, a plane and an ocean liner. It is known that Le Corbusier had read two of Loos's significant essays (*Ornament and Crime* and *On Architecture*), and that they had a great impact on him.[27] In his theory of the machine age, Le Corbusier further improved the 'Loos paradox' according to which modern ornamentation no longer included ornaments, so that we can speak of the aesthetic of the engineer based on scientific criteria.[28]

Boyer enriches the research with a new aspect, since she also analyses what writing meant for Le Corbusier. In writing, as a way of thinking, the architect's work can be compared to that of a scientist working in a laboratory: they both carry out research, justify it and finally fit the findings into their system of thinking.

I claim that a need for scientific foundations in architecture reappear after World War II, just as they had after World War I. There are three reasons for this: (1) social housing, (2) happiness for the greatest number, and (3) scientific criteria in planning, because architects were faced with the problem of building houses as quickly and cheaply as possible and for everyone. The same process started after both world wars, thus the role of analytic philosophy in house and city planning was equally great in both periods. In eastern Central Europe, the revival of modernism was interrupted by socialist realism.

The Marxist worldview in architecture and the Khrushchevian architectural turn

The architecture of Marxism combined gigantism with a neoclassical style – columns, arches, and decorative façades on an enormous scale. There were four criteria for the architectural design: it must be (1) understood by workers; (2) realistic; (3) revolutionary and (4) it must find its theme is scenes from the everyday lives of ordinary people.[29] The socialist realism fight against the clarity of modernism was expressed in figurative illustration, for instance in realistic worker-scenes, and in ornamentation, where motifs from national folklore and from ancient Roman culture were emphasised. A visual memento of the founders of the socialist worldview was always desirable. This glamourous architectural language appears in the Moscow subway stations, but in the Stalinist baroque-style skyscrapers and the urban design as well.

In eastern Central Europe, socialist realism was dominant in the 1950s only. There are lots of differences in the architecture of this era and the original Soviet version of the new style. In Hungary, Czechoslovakia and Poland, a colourful version of socialist realism emerged – of course within a given framework – which is different from the megalomania of the Stalinist baroque in Moscow. The new style was evolved by the modernist architects of the interwar period, but they were under pressure: they were not allowed to plan what they really wanted.

Complete districts and whole cities were built in this renewed historical style, but not consistently. The core structures of the houses and the cities were built on a classical modernist plan, but the architects had to use the required historical ornaments. Thus this tendency, called façadism, resulted in the building of socialist realist Potemkin cities across eastern Central Europe. [Fig. 1]

The end of the era of socialist realism was bound to an exact day: 31 December, 1954. On that day

Nikita Khrushchev held his famous speech at the Conference of Construction in Moscow. There was a housing shortage in the Soviet Union, thus to solve the demand for cheap housing was the most urgent problem. Building with bricks was very expensive and slow, thus the new way of architecture was thought to be the wall block system.[30] This is why, in the Soviet Union, the focus shifted from form-based socialist realist architecture (*Stilarchitektur*) to the function-based late or Soviet modern planning method.

> Extensive expansion of manufacture of prefabricated reinforced-concrete structures and parts will give enormous economic benefits. Our builders know that until recently there was debate over which of two paths we should take in construction – use of prefabricated structures or monolithic concrete. We shall not name names or reproach those workers who tried to direct our construction industry towards use of monolithic concrete. I believe these comrades now realise themselves that the position they adopted was wrong. Now, though, it's clear to everyone, it seems, that we must proceed along the more progressive path – the path of using prefabricated reinforced-concrete structures and parts.[31]

It is necessary to distinguish socialist realist architecture from late modern on the one hand, and façadism from standardisation on the other hand.[32] This constituted a paradigm shift in the nature of architecture theory in eastern Central Europe in 1954. This paradigm shift could be represented by a case study: the socialist realist building R and late modernist building E of Budapest University of Technology and Economics in Hungary.

The university campus is divided into three parts: the old part with historicist-style buildings, the modern, postwar block and the newest part, built in a contemporary style. The buildings R, T, H and E are located in the middle block. Their names are thought to be abbreviations of the following Hungarian words: R from the name of the Communist Party leader Matyas Rakosi, T from knowledge (*tudás*), H from progress (*haladás*), E from 'go ahead' (*előre*). According to another explanation, the names came from the appellation of the departments and institutes in the building.

Building R is situated on the riverside. It was built in 1951–1955 by Gyula Rimanoczy and Janos Kleineisel. [Fig. 1] The building (as well as the others mentioned) were located parallel to the river Danube and connected to one another by a covered walkway. The two rear blocks, built in late modern style, were not decorated, but the main façade was decorated in the required neoclassical style. Brick-covered walls can be seen, with a tent roof and pronounced classicist decorations. It creates an interesting unity with the late modern block buildings and the late modern cupola of the training reactor. [Fig. 2]

The main goal of building this socialist realist university block was to create a counter pole to the central building, which was built in historic style. These two buildings dominate the river bank, between two bridges of the Danube. The front of building R shows the influence of Scandinavian design, in contrast with the interior, where the characteristics of the Stalinist style are dominant. Several films have been recorded there, because this is one of the authentic socialist realist buildings in the Hungarian capital.

After the architectural paradigm shift, building E was built in the 1960s. The white, steel frame building with a flat roof has two parts: the tower and the section of enormous lecture halls. In style, it signals a return to Le Corbusier's modernism. In accordance with Le Corbusier's five points, reinforced concrete columns, horizontal windows and a flat roof are used in the building.

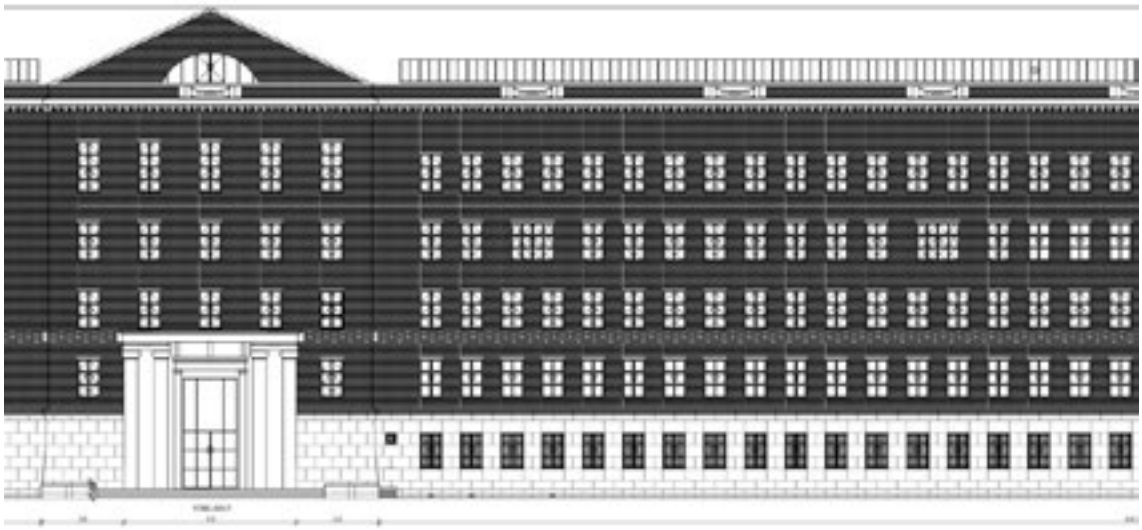

Fig. 1: Façade of Building R, Budapest University of Technology and Economics (detail). Plan: Plan Archive of Budapest Technology and Economics.

Fig. 2: The new campus and the façade of the training reactor, Budapest University of Technology and Economics. Source: www.reak.bme.hu

These two university buildings, which are landmarks on the river bank, largely determined the cityscape; therefore, the difference between socialist realism and late modernism is clearly visible. In the collective consciousness, these two styles are often confused; laymen (and sometimes experts too) do not make the distinction: although there was a change of style, the political regime, socialism, had not changed. The architectural paradigm shift was not realised, because there was no paradigm shift in the government. [Fig. 3]

Renewing the machine age in city planning

After the Second World War, the most dominant problem in Europe was a housing shortage due to damage caused by the war and the social transformation that followed. In Hungary, the 1950s was characterised by the style of the Matyas Rakosi regime: socialist realism. The way of official, officially sanctioned socialist realism proved impracticable, therefore the housing issue had to be reinterpreted in a new way. An architectural change happened at the end of the 1950s, after the death of Stalin and the fall of the Rakosi regime. The housing estate in Obuda was built at this time, when a new ideological system emerged: the era of Janos Kadar.[33] In the meantime, the issue of housing recurred as an important theme.

City planning, too, followed the socialist realist pattern. Although Budapest avoided the total socialist reconstruction of other East-European capitals like Moscow, East-Berlin, Warsaw and Sofia, new, socialist cities appeared in Hungary, for example Stalin City (*Sztálinváros*) in 1952, as a parallel to Stalingrad in the USSR. First the city was planned in modern style by Tibor Weiner, a former Bauhaus student during Hannes Meyer's directorate. Because of the architectural paradigm shift, the whole city was built with grand avenues and row houses.[34] After the Khrushchevian turn, new trends inevitably arose in city planning as well: the return of modern elements from Le Corbusier's theory and practice signalled the start of the second machine age began.

> From Marxism and semiotics to psychoanalysis and rhizomatics, architecture theory has freely and contentiously set about opening up architecture to what is thinkable and sayable in other codes, and, in turn, rewriting systems of thought assumed to be properly extrinsic or irrelevant into architecture's own idiolect. And while it is correct to point out that today there still remain vestiges of older, "philosophical" criticisms that simply apply various philosophical systems to architecture in occasional and opportunistic ways, architecture theory has been, in part, a displacement of traditional problems of philosophy ("truth", "quality", and the like) in favour of attention to distinctly and irreducibly architectural ideas, and an attempt to dismantle the whole machinery of master texts, methods, and applications, putting in its place concepts and codes that interpret, disrupt, and transform one other.[35]

So begins K. Michael Hays' book entitled *Architecture Theory since 1968*. This work continues where Harry Francis Mallgrave's *Modern Architectural Theory: A Historical Survey, 1673–1968* left off. Both works develop a theory behind the history of modern architecture including the influence of Marxism in the utopian planning method. Socialist Realist architecture emerges as a new paradigm (1951–54) between the two phases of post-WWII modernism.

In the public awareness, there is a false idea about socialist realism: people used to think that socialist realism is merely something that is somehow connected to concrete and is thus unnatural, cold and simplistic. In fact, people confuse socialist realism with the late modern style. I have found that people prefer socialist realism, because it uses elements from classical architecture. There is a conceptual confusion because there was an architectural shift, but there were no changes in the political system: the ideology survived the

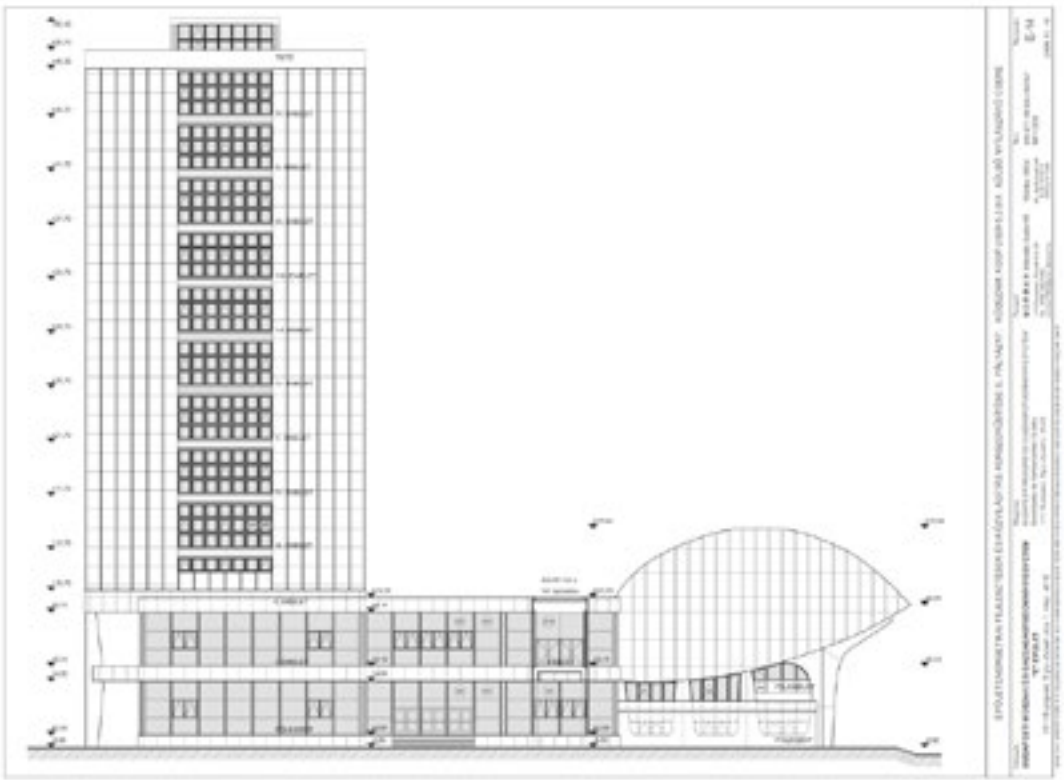

Fig. 3: Façade of Building E, Budapest University of Technology and Economics. Plan: Plan Archive of Budapest Technology and Economics.

architectural transformation. The complex house block systems could almost be classified as brutalist: because of their raw concrete surfaces, the type of housing they provide, the artificial environment they create, and their planning method – from the air.

After a break from socialist realism for a few years, the science-based idea of the house machine returned to architectural thinking in Hungary with the birth of the experimental housing estate in Obuda.[36] Like after the First World War, the principles of Le Corbusier dominated in the building of houses and in urban planning as well; thus the short triumph of the decorative socialist realist was succeeded by a Le Corbusier-style, science-based, analytic architecture. [Fig. 4]

Obuda is a part of Budapest. Aquincum, the capital of province Pannonia province, was built by the Romans and on this Roman architectural base, one-storey baroque private houses were built. This way of building determines the typical network of roads in Obuda, which was retained in the era of wall block system building.

After World War II, circumstances were similar to those after the First World War: new houses had to be built in the spirit of expediency, utility and rapidity. The difference with the period after the Great War was the interstitial socialist realism. The new style of housing (wall block systems) generated the same reactions as in the period after World War I: increased propagandistic advertising of the new lifestyle in the new housing estates in print media, films, and exhibitions. Under these conditions, an interesting episode of the history of Hungarian architecture was built: the experimental housing estate in Obuda, which provided a modern architecture alternative to wall block houses.

The Hungarian Ministry of Residential Construction organised an architectural competition in 1958 that promoted the new style of architecture. Prefabricated wall segments, raw concrete and a clear construction style would be used. This new estate in Obuda was one of the most significant experimental projects where new prototypes of flats were tested. The main goals of the construction were dual: to try out the viability of the designed flats, including new building materials and furniture, and to demonstrate the ideological message of a new, modern way of life.[37]

There was a call for designers, listing the following criteria:

> small, well equipped flats of six kinds, in brick-built buildings of two and four storeys. This was called Plan C, a program of housing construction and development. The flats were to have built-in kitchen furniture and a built-in wardrobe of 60x60 cm designed in previous competitions, as the prescribed floor areas were tiny, averaging only 43 square meters.[38]

With the experimental program in Obuda, 21 houses were built and a National Flat Furniture Design Competition was held in 1959 to make furniture for the new type of flats. The exhibition of the estate worked like the housing exhibitions of the *Werkbund* after the First World War.

The result of this experiment was a commitment to house block building in Obuda and in the whole of Hungary. The old baroque houses were demolished and Le Corbusier-type complex house blocks were built in the name of the new lifestyle. A renewed concept of vertical cities was created, based on the approach of the neopositivist philosophy, like it had been after the First World War. [Fig. 5]

In Hungary, block house systems were built from the 1960s until the change of the regime in 1989. In the Socialist Bloc, a lot of propaganda films were made to show the correct method of using these flats in the name of the new way of life. It is no coincidence that life in the house block was also a

Fig. 4: The experimental housing estate in Obuda, photo from the 1960s. Source: Fortepan Archive (18458).

Fig. 5: The new house block system under construction in Obuda in the 1970s. Source: Fortepan Archive (47357).

Fig. 6: Life in the house block with the washing machine – poster for *The Prefab People*, film by Bela Tarr, 1982.

popular topic in films and television series. In 1982, the internationally known Hungarian film director, Bela Tarr, made a film entitled *The Prefab People* about the special life forms in block houses.

After the change of the regime in 1989, a huge rehabilitation programme started, to make the milieu of the house block systems liveable, for instance by installing insulation. The main goals of this 'panel program' other than modernisation were the elimination of the raw concrete surfaces, and to make the city liveable and enjoyable by using colours, planting trees and constructing parks. [Fig. 6]

Conclusion

In this essay I have reviewed the dominant twentieth century dialectical succession of architectural thinking between form and function. The latter of these two modern ways of architectural thinking is based on the results of Carnapian Neopositivism, and I have also identified later elements from the Popperian and Kuhnian philosophy of science. I used the conceptual tools of analytic philosophy not only in analysing architecture, but for analysing buildings as well.

The first stage of the form-function debate manifested by the end of the First World War, when historical forms were replaced by the new, scientific objectivity-based architecture. In the era between the two world wars, a common intellectual, scientific worldview was dominant. This interdisciplinary effect was important to analyse, because my preconception is that the need for scientific foundations in architecture reappeared after the Second World War just as it appeared after the WWI. This phenomenon was especially apparent in eastern Central Europe. The main reason for this is that architects realised the problem of building houses as quickly and as cost effectively as possible and for everyone.

It is important to distinguish the façadism of socialist realist architecture from both late and Soviet modernism. This signaled a paradigm shift in the nature of architecture theory in eastern Central Europe in 1954: the Marxist worldview in architecture and the Khrushchevian architectural turn. After the socialist realist break, the science-based idea of house-machine returned to the architectural thinking in eastern Central Europe. The main goal of architecture after both WWI and WWII was to work out a programme for existence minimum housing. This was interrupted by the glamour architecture of socialist realism.

This essay presented a case study of how architecture and to some extent urbanism was influenced by early analytic philosophical ideas. I have argued that these ideas served as a foundation to both post-WWI and -WWII developments in architecture and urban planning.

Notes

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14. Ibid., 20.
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25. Ibid., 256.
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27. M. Christine Boyer, *Le Corbusier, Homme de Lettres* (New York: Princeton Architectural Press, 2011), 347.
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Biography

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The Pyramid and the Mosaic: Otto Neurath's Encyclopedism as a Critical Model

Andrea Alberto Dutto

From analysis to praxis. Neurath's *Encyclopedia of Unified Sciences*

Otto Neurath (1882–1945) was one of the leading figures of the Vienna Circle, an association of neopositivist philosophers and scientists with common interests in modern logic. The circle's main focus was the role of language as a key point not only in philosophy but also in science. Particularly, language was assumed to be the most effective tool to ascertain the reliability of a philosophical statement, therefore to engage with metaphysical and nonverifiable dogmas. However, instead of unanimous agreement, the members of the circle were divided in different theoretical factions. Among these, Neurath stood among the more 'operative' faction, for whom the debate on language could not avoid a practical concern with social and political issues. This position countered the more 'neutral' side of the circle, among whom stood Rudolf Carnap, who was interested in the creation of an 'ideal language'. Neurath was critical towards this search for an 'ideal' and firmly argued that the degree of knowledge about formal language, discussed at the circle, was still detached from the way science was practiced. For this reason, throughout his life Neurath worked on a series of practical tools and experimental techniques aimed at developing science in relation to the social and political domains. For instance, Neurath is still mainly known today as the author of Isotype (International System of Typographic Picture Education), a method of 'visual education' used to popularise scientific knowledge, conceived in collaboration with the graphic designer Gerd Arntz between 1926 and 1936.[1] In parallel with Isotype, during the thirties, Neurath invested a substantial effort in the development of an *Encyclopedia of Unified Sciences*, which represented the main cultural palimpsest of his philosophical thinking. This work showed an innovative direction, which Neurath believed promising for Logical Empiricism. Indeed, the encyclopedia not only established a continuity with the scientific project of the Enlightenment, but claimed an innovative position for the philosopher as orchestrator of scientific discourses.

Neurath argued that philosophical problems and 'problems of life' are mutually related because the scientific community operates within a social and political apparatus from which it is inevitably conditioned.[2] Therefore, for Neurath, the scientist should acknowledge his political status and commit himself to the domain of *Praxis des Lebens* (praxis of life). Neurath's demand for commitment was influenced by his political militancy in the Viennese social democracy. Indeed, in his early career, between 1921 and 1925, he was appointed Secretary of the Austrian Association for Settlements and the Allotment Gardens (*Verband für Siedlungs-und Kleingartenwesen*).[3] This institutional role required a rigorous organisation applied to real productive conditions. As Nader Vossoughian describes:

> Neurath wanted to develop approaches to city planning and housing reform that were interactive in nature. […] In 1920 he established the Research

> Institute for Gemeinwirtschaft, which hosted lectures, published policy papers and organized meetings with workers' groups and cooperatives. Its mission was to develop an economic plan for Austria in order to see what could be achieved for domestic production and foreign trade through the cooperation of all forces.[4]

Neurath's operative use of analysis as a political tool can be related to his adhesion to Marxism.[5] Particularly, Carnap noticed that 'in a series of private discussions with [some younger members of the circle, Neurath] explained the basic ideas of Marxism and showed their relevance to a better understanding of the sociological function of philosophy'.[6] For Neurath, Marx's theory of value represented an example of 'empirical sociology' aimed at predicting future social developments through a precise account of the relations of production among social actors. However, Neurath undertook a slight change from the orthodoxy of Marxist doctrine. Indeed, while for Marx the analysis of social classes was based on economic laws, for Neurath the analysis was supposed to comprehend the broad domain of empirical facts, among which linguistic facts appeared particularly eloquent. This difference concerned two key concepts in particular.[7] The first is that of 'mode of production', about which Marx had observed that no economical relationship is permanent but rather relative to historical conditions. Similarly, Neurath thought that language is supposed to change over time in relation to unpredictable events.[8] The second concept implies the pair 'structure and superstructure', through which Marx distinguished the economic base (forces and relations of production) from the cultural domain (institutional and political apparatuses), where the 'structure' always determines the 'superstructure'. This relationship inspired Neurath to connect the empirical use of language with the material foundation of society. From this perspective, the search for an ideal language (such as Carnap's) appears related purely to the superstructure rather than the structure, and thus constitutes a pathetic expression of false consciousness. No ideal language is possible for Neurath; only a language applied to the problem of life, namely to the relations of production, could express an operative effect in empirical reality.

However, it should be remarked that Neurath understood language in the logical empiricist sense. Indeed, in his view, language has the same hierarchical value as any empirical fact. This point is crucial to understand the difference between his approach and that of linguistic structuralism, which appears similar at first glance. Particularly, the difference becomes evident in Roman Jakobson's (1896–1982) wide spectrum of writings on language. Starting with his initial studies on phonology, Jakobson approached the discipline of linguistics with a certain determinism, which inevitably ended up feeding the emergent theory of structuralism. Although a description of this process might exceed the scientific aim of this essay, it is important to note that Jakobson's intention was to confer on language a certain primacy, as the prominent factor from which a social structure can be deduced.[9] By contrast, Neurath avoided the structuralist approach, and instead opts for an empiricist approach. Indeed, rather than developing a theory of language itself, he attempted to restrict the use of language to the domain of empirical reality. For Neurath, language was a fact like any other fact, without any primacy among them, without a hierarchy. In his view, all facts were related on the same empirical plane and the logical empiricist's aim was to highlight this equality.

Neurath considered language an empirical fact, therefore as something subject to the laws of physics. In his view, physical science was not really dominant over other disciplinary fields, but rather *per via negativa*, that is, useful in order to avoid metaphysics and to strictly adhere to empiricism. For this reason, he defined his theory as physicalism, although he avoided the jargon of physicists

in favour of an 'improved everyday language'.[10] Ostensibly, such a theory was not really new, but rather an improvement of both Marx's dialectical materialism and the Vienna Circle's neopositivism. Indeed, as Carnap notes: '[Neurath] believed that […] physicalism was an improved non-metaphysical and logically unobjectionable version [of Marxism] which superseded both the mechanistic and dialectical forms of nineteenth-century materialism'.[11] Therefore, physicalism was a way to reduce ideas to phenomena, and linguistic facts to empirical facts.

In order to ascertain the empirical consistency of facts, Neurath adopted a rigorous linguistic device, which he defined as 'protocol statement'.[12] As described by Nikola Nottelmann: 'Neurath's protocol sentence structure [was] meant as an analysis of claims of experience or observation, in instituzionalized science as well as everyday life'.[13] Through the protocol statement the feelings of the observer were reproduced as a sequence of simple and reliable events as could be exemplified in this sequence: protocol [at a specific time]: [at a specific time] X perceived a spatio-temporal fact, X being a human individual. If any one step of the protocol statement was contradictory then the entire statement was discarded. Indeed, Neurath argued that:

> when a new statement is presented to us we compare it with the system at our disposal and check whether the new statement is in contradiction with the system or not. If the new statement is in contradiction with the system, we can discard this statement as unusable ('false').[14]

Then, in relation to the committed errors, it is also possible to clarify the specific category of the erroneous statement at stake, whether it was: a 'lie', a 'hallucination', or a 'dream'.[15]

The protocol statement was not something imposed by the philosopher, but rather something negotiated among the members of the scientific community, with the aim to work on a common basis.[16] Therefore, if the protocol statement appeared as a possible common ground of sciences, this ground was inevitably political, because its rules were negotiated over time, and no 'definitive' rules could have been established *a priori*. Indeed, since judgment criteria were related to historical and ideological implications, they were supposed to change over time, their logical structure was thus intimately political.

Instead of a language, Neurath conceived a 'slang', specifically: a 'universal empiricist slang'.[17] With this definition he underlined his detachment from any search for an 'ideal', or rather 'original' language of science. Indeed, as Neurath says,

> we cannot find an absolute immutable basis for science; and our various discussions can only determine whether scientific statements are accepted by a more or less determinate number of scientists and other men. New ideas may be compared with those historically accepted by the sciences, but not with an unalterable standard of truth.[18]

Such 'slang' is an informal jargon, an impure language including both everyday and scientific terms as well as negotiations and social conflicts occurring simultaneously in reality. Moreover, it embodies the multiplicity of scientific modes of representation, either written or drawn. In this sense, the empirical slang seemingly synthesises Neurath's eclectic research interests and relentless curiosity to investigate a comprehensive spectrum of disciplines, from formal logic to infographics. Indeed, he argues that '[the] Encyclopedia will tend towards the unification of not only the scientific language, but also graphic representation. Curves and other figures are also instruments of scientific expression'.[19] Similarly to Wittgenstein's 'language games', Neurath refuses to make a distinction between pictures and statements. The

problem at stake is not related to the nature of representation but rather to the verification of its empirical consistency.[20]

Neurath addresses the concept of 'encyclopedism' as an innovative scientific concept for which 'the march of science progresses from encyclopedias to encyclopedias'.[21] Particularly, in the essay entitled 'Encyclopedia as a model' (1936), he identifies a series of concepts that are strictly related to 'encyclopedism', namely: 'certainty', 'stability', 'protocol statements', 'systematisation'. Several of these concepts are drawn directly from physicalism, of which encyclopedism represents the continuation and the physical materialisation. However, what really differentiates the proposal of encyclopedism from Neurath's previous theories is the emphasis on contradictions and the science's inevitable shortcomings. In this sense, no 'systematisation', no 'certainty', and no 'stability' can be established in science. No original truth and no *tabula rasa* can be established as a point of departure, because 'truth' can only be negotiated among scientists and will inevitably change over time. For Neurath, the main task of science is to organise the totality of knowledge, therefore to integrate the contradictions as constitutive parts of the scientific discourse as well as of the social apparatus to which scientists belong. Indeed, Neurath argues that '[the] "Encyclopedia" is nothing but a preliminary assemblage of knowledge, not something still incomplete, but the totality of scientific knowledge'.[22]

Furthermore, in order to clarify the concept of encyclopedism, Neurath adopts the metaphor of the mosaic against the pyramid.[23] In his view, the pyramid symbolises Auguste Comte's positivist approach, in which the philosopher stands at the top of the scientific edifice. By contrast, the mosaic represents the encyclopedia itself, namely the mosaic of empirical science.[24] Neurath avoids describing a hierarchical organisation among the scientific disciplines and instead focuses on the possibility of establishing 'cross connections' among them.[25] However, the basic condition of the unified science is a shared agreement among the scientists about the degree of scientific development in relation to which a specific guiding principle can be established from time to time. For Neurath, advances in a specific field of science also determines advances in other fields. In this sense, the domain of unified science allows for the short-term prediction of trends of development. Thus, the weaving of the 'cross-connections' is supposed to be the main task of a scientific community, and a field characterised by particular affinities can temporarily establish systematised clusters of knowledge.[26]

From a wider perspective, encyclopedism is subjected to the same principles of contrasts and sympathies as a social apparatus. In this sense, it is not a parallel universe or an alternative scenario to reality since it does not need to be planned from scratch like a *tabula rasa,* since no certainties can be assumed as foundational elements. Encyclopedism is an attitude, or rather, as Neurath would say, a behavioural tendency of science, therefore its evolution is as 'unpredictable' as reality. Indeed, due to historical contingencies the direction of its development could not be predicted at the beginning: the steps and direction of development were left open.[27] Therefore, the notion of 'chance' had a fundamental role in Neurath's thinking, which did not allow a deterministic approach to be implemented in science. In his view, the edifice of science was a mutant organism characterised by rules of development that reacted in the same way to the unpredictable events of life.

As is widely known, encyclopaedic attempts have been undertaken by representatives of different disciplines and at various times in history. In particular, Neurath claimed Diderot and d'Alembert's *Encyclopédie* (1751–65) as the forerunner of his

project, although it appeared not collective enough to fulfil his own expectation of scientific fraternity in the domain of unified science. He argued that:

> the representatives of logical empiricism in some way continue the work that d'Alembert, with his aversion to systems, originated. But they are 'encyclopedists' much more consciously, and in a sense much more rigorous than their great forerunners. The encyclopedia can thus become the symbol of a developed scientific cooperation, of the unity of the sciences, and of the fraternity between the new encyclopedists.[28]

Neurath saw the *Encyclopédie* as an initial attempt at a collaborative platform between scientific and technical domains.[29] More specifically, it established the possibility for a common 'grammar' shared by different contributors belonging to the industrious community of technicians, specialists, craftsmen, and scientists. In order to represent what could not be communicated through texts, the *Encyclopédie* made innovative use of graphic language, a hybrid of images and texts. Thanks to this innovative language, suddenly technical knowledge achieved a representation that we still recognise as the expression of a great collective effort, rather than the exclusive aristocratic privilege that science had been before. This collective outcome corresponded with Neurath's ambition, and with his '*neue Enzyklopädie'* he attempted to continue the comprehensive efforts of the *Encyclopédie*.

Moreover, Jean-Baptiste D'Alembert's introductory essay (*Discourse préliminaire*) identified three fundamental rules of orchestration, namely: cooperation between 'men of talent', the exclusion of abstract and very general ideas, and the unification of languages as a necessary precondition to the unification of science.[30] Such rules were prophetic in relation to Neurath's project and somehow established the fundamental principles of encyclopedism. Particularly, since there was no master of the encyclopedia, Neurath proposed the ambiguous figure of the 'orchestrator'. Rather than a specific subject, the orchestrator represents the attitude of the scientist, therefore a way of practising science with the aim to coordinate and connect different scientific discourses and to situate his own analytical work within a collective target, namely unified science.

Starting in 1936 until his death in 1945, Neurath dedicated most of his writings to the subject of encyclopedism in science, and to the *International Encyclopedia of Unified Sciences* published as a collection of three 'foundational' volumes. In fact, Neurath wrote three essays that postulated the fundamental features of the encyclopedia. The first, entitled 'An International Encyclopedia of Unified Science'(1936), was both a summary of Neurath's encyclopedism and an overview on the main features of physicalism. The other essays, entitled 'Unified Science and its Encyclopedia' (1937) and 'The new Encyclopedia of scientific empiricism' (1937), described the main managerial features of this endeavour, material and economic issues, as well as a schedule of international meetings and conferences related to its development. During these meetings individual contributors were asked to present their outcomes to the overall scientific community in order to achieve a shared consciousness in scientific development and to implement the universal empiricist slang. From this point of view, Neurath's encyclopedia was more like a cultural project than a conventional publication.

The project of a unified science (*Einheitswissenschaft*) was accomplished in 1937, when Neurath established the International Institute for the Unity of Science in the Hague. Neurath provides a summary of the four main methodological issues of unified science in the essay entitled 'The departmentalization of unified science' (1937). The first point concerns 'the principle only to select scientific

units of a relatively well-circumscribed character [although] an overlapping of certain disciplines is at first not avoided'.[31] In this way, the unified science avoids the 'main divisions of traditional systems [which] anticipated the acceptance of and the objections to a great many scientific decisions, for instance to the application of particular scientific procedures to certain disciplines'.[32] The second point of concern is the logical order of development, from simple to complex. Indeed, Neurath argues that 'the analysing scientist might progress from smaller fields to wider fields and find out manifold intercorrelations and combinations forming a very rich logical pattern'.[33] Therefore, the initial objects of analysis are 'neutral' and avoid hierarchical organisation of facts and disciplines. For this reason, Neurath argues that 'the smaller those initial scientific units, the less changes [are] necessary in the scientific descriptions'.[34] The third topic recalls the primacy of everyday language, namely that the scientific statements of all disciplines should be formulated 'by means of the terms of a universal slang composed of ordinary terms of everyday language'.[35] A fourth point remarks on the 'flat' ground of encyclopedism, namely a plane that avoids any hierarchy among disciplines. For Neurath, encyclopedism concerns 'the fact that the vast mass of the group of statements […] are in one plane [because] there is no symmetrically pyramidal edifice'.[36] No arrogant statement can provide a solid ground for the unified science because no statement out of a discussion among scientists can be verified.

This list provides all the general principles necessary for the project. All questions about the legitimacy of these rules supposedly already form part of the scientific endeavor. However, in the concluding paragraph of this fundamental essay, Neurath makes the most categorical statement of his philosophical papers, namely: 'what can be achieved by means of this unpretentious integrating programme which avoids all bumptiousness in scientism? One cannot anticipate this by means of explanations, it can only be proved by the work itself'.[37]

One among the possible encyclopedias. Mario Ridolfi and the *Manuale dell'architetto CNR* (1945)

Generally speaking, architecture never had a prominent position among the topics of encyclopedias. Ancient encyclopedias, such as Isidore of Seville's *Etymologiae* (600–25), concerned architecture as a metaphorical term, namely as an edifice of universal knowledge, or rather as an allegorical representation of metaphysical values. In Diderot and d'Alembert's *Encyclopédie* the item 'Architecture', edited by J.F. Blondel, related this discipline mostly to the domain of the arts with a specific focus on the fundamental institution of the classical orders. Two centuries later, Neurath's *Neue Enzyklopädie* did not even mention architecture among the topics of the unified science.

Likewise, it should be acknowledged that architects manifesting a particular involvement in encyclopedism are rare, and those who consider encyclopedism as a possible philosophical foundation of architectural design are even rarer. In this scenario, Mario Ridolfi (1904–1984) represents an exceptional case of an architect who intends design as the orchestration of technical knowledge, and therefore architecture as an encyclopedic practice. He is mainly known as the principal editor of the construction handbook *Manuale dell'architetto CNR* (1946), a great collective work aimed at gathering and organising construction practices in view of a vast reconstruction programme of the Italian settlements damaged during the Second World War.[38] After the handbook experience, Ridolfi continued his encyclopedic commitment through his professional activity mainly related to the design of small houses and facilities in the Italian countryside.

Therefore, in the second part of this article Ridolfi's work is held up as an example of encyclopedism

applied to architecture, more precisely as an attempt to describe the art of construction as a praxis of negotiation among technicians specialised in different fields of building science.

Ridolfi is improperly considered an exponent of 'regionalism'. Although his designs look vernacular, he in fact avoided an aesthetic ideology. From the point of view of architectural styles, Ridolfi was an atheist. Indeed, his aim was not the invention of a new architectural style, nor an ideal architecture, but rather an architecture that provided answers to real problems and reflected the culture in which it was located, namely the economic structure, either artisanal or industrial. The final shape of his design resulted from negotiations with builders and craftsmen, with whom he maintained close relationships.

Therefore, 'realism' is probably the best expression to understand Ridolfi's attempt to ground himself in the productive reality of the place where he worked. Ridolfi raised architectural design to the same level as technical manufacturing, which he indefatigably analysed by means of careful redrawing procedures and classifications. Paolo Portoghesi defines Ridolfi as a 'realist' who 'highlighted the relationship between architecture and collective life, that was generally lacking in modern developments, [with] special attention to daily reality, human relationships, and community spirit'.[39]

His work rose to prominence in Italy after the Second World War, when an extensive campaign of urban re-development was undertaken.[40] The resources available for the reconstruction were discouraging, both in intellectual and material terms. Therefore, the reconstruction presented an occasion to undertake the mass education of unskilled workers, as well as a way to coordinate the alignment of productive forces and social apparatuses. An ethical value was conferred to the activities that led and supervised the construction process, as well as to 'neo-realist' literary and cinematographic works that documented the 'problems of life' in which the same process of reconstruction took place.[41] Ridolfi's expertise was unanimously recognised as an important contribution, thanks particularly to the research on building normalisation he undertook continuously between 1935 and 1953.[42-43]

In this context of reconstruction, Ridolfi is charged as editor-in-chief (and draftsman of 60 plates out of 264) of the *Manuale dell'architetto CNR*, conceived as a handbook for architects and engineers.[44] Its publication in 1946 was economically supported by an agreement between the National Research Council (CNR), which funded the editorial staff, and the USIS (United States Information Service) charged with the publishing cost. Started in June 1945, the editing phase required ten months of intense work, after which 25,000 copies were published and distributed free of charge to engineers and architects across the country. Its main target was to achieve an operative platform that could gather different sectors and levels of expertise, including spontaneous construction practices.[45] While experimental tendencies related to modernist settlement and architectural styles were kept out, the underdeveloped technology of available building practices became the starting point for the *Manuale CNR,* which tried to interconnect them as a unified building science.[46]

In this sense, the most relevant predecessor of the *Manuale CNR* was Gustav Adolf Breymann's *Allgemeine Baukonstruktionslehre* (1884) that still at the time represented a reliable source of construction details as well as a comprehensive overview of the main construction techniques related to different building materials, such as wood, steel, bricks, and so on.[47] Actually, Ridolfi thought that an updated version of Breymann's handbook was needed, since most of his details were no longer suitable to modern building practices.[48] Moreover, unlike Ernst Neufert's *Bauentwurfslehre* (1936),

Ridolfi's *Manuale CNR* abstained from providing either a repertoire of floor plans ready to be reproduced or a classification of modern functional typologies.

Mainly, *Manuale CNR* focused on traditional building methods. This choice was undoubtedly influenced by Ridolfi, who saw in the Italian building tradition the presence of a dialogue between architects and builders that modern industrial manufacturers were not able to provide. In his view, work phases as well as the contributions of individual craftsmen were only supposed to be improved and definitely not overcome in favour of industrial methods. Unlike industrial prefabrication, traditional building methods allowed a broad set of customisation techniques that could respond to different environmental conditions as well as to individual dwelling requirements. Indeed, Ridolfi considered dwellers as fundamental interlocutors rather than the generic individuals hypothesised on statistical parameters by the manufacturing industry. For Ridolfi, in order to produce good architecture, the inhabitants were supposed to actively participate and assume a position with regard to construction choices and planning strategies. However, there was a practical reason behind this otherwise seemingly ethical choice. Indeed, in the eyes of institutions, such emphasis on traditional techniques appeared a smart way to implement national directives into local areas where the available resources were largely related to traditional building methods. Traditional architecture, albeit characterised by evident underdeveloped technological conditions, seemed to be the starting point for a comprehensive programme of innovation and modernisation as well as an alternative to industrial prefabrication. In this sense, Ridolfi underlined both the collective nature of the reconstruction work and the participative effort required in the overall technical practices operating in Italy, each within the limits of its own local requirements and specific skills.

The handbook is conceived as a mosaic of scientific contributions. The table of contents is subdivided into eight thematic sections: 'Norms', 'Urban planning', 'Building materials', 'Statics', 'Structural elements', 'Finishings', 'Technological devices', 'Ergonomics and Typical dimensions'. However, the organisation of each thematic section is substantially different from the others. At a glance the different levels of evolution and upgrade speeds among the main sectors of building science is evident. For example, the 'Structural elements' section requires more plates than the 'Urban planning' section, mirroring the moment of uncertainty about urban policies, animated by contrasts between supporters of self-sufficient neighbourhoods and orthodox rationalist planners. Likewise, the 'Finishings' section, edited by Mario Ridolfi, is much more developed compared to the 'Technological devices' section which provides a very brief overview of the main heating and supply technologies available at the time. Therefore, the handbook presents a straightforward portrait of the Italian cultural and economical scene, which lacked an overall coordination among technical sectors.

The layout of the *Manuale CNR* was strictly influenced by the normalisation process started in 1928 by the UNI (Italian National Unification) association. The graphic layout of the plates is based on the UNI A4 (21 x 29.7cm). Three punched holes allow for the progressive gathering into binders, so that the handbook could be updated over time. The content is indicated through a code marked on the top corners of the plates. The first letter indicates the thematic section (eg. 'F' stood for 'Finishings') and is followed by a number related to a specific subject within that section (eg. 4 / Window fixtures) coupled with a letter, indicating its progression (eg. g / Roller shutter). Moreover, the building elements are also related to the UNI measurements. For instance, the normalised dimension of the brick (UNI Brick: 12 x 25 x 5.5cm) establishes a proportional relation between the single element and the size of the

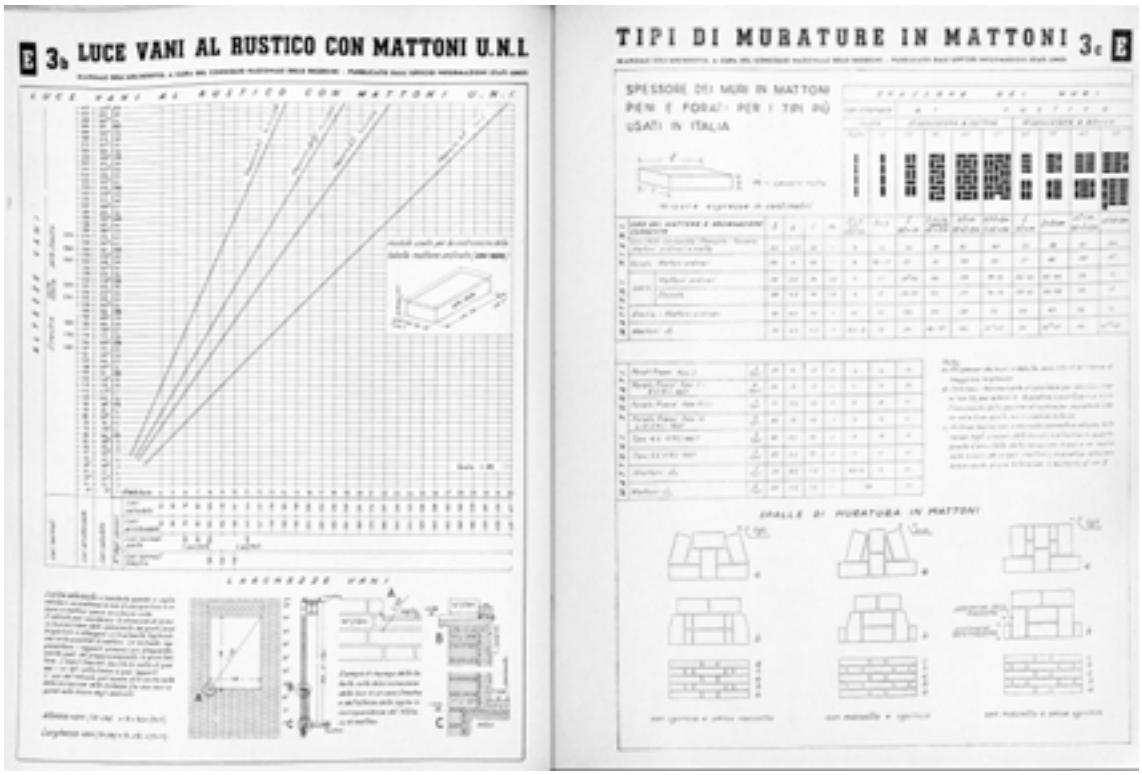

Fig. 1: Brick normalization. Source: Cino Calcaprina, Aldo Cardelli, Mario Fiorentino, and Mario Ridolfi, eds., *Manuale dell'architetto* (Rome: CNR–USIS, 1946).

openings which are then automatically subjected to the normalisation process. [Fig. 1] The normalisation of the brick became a way to address modern standardisation through a process of updating traditional building materials.

Rather than plans and sections, the content is represented by the means of diagrams, technical charts, charts and other techniques that until that moment were used mainly by scientists rather than architects. Unlike previous construction handbooks such as the aforementioned Breymann's *Allgemeine Baukonstruktionslehre*, where details are simply isolated and reproduced on a larger scale, the *Manuale CNR* displays an in-depth scientific analysis of the intrinsic features of building elements, such as their performance and combinatorial possibilities.

The 'performance' of building elements is represented by means of diagrams and charts, as is well exemplified in the sections related to 'Structural elements' and 'Technological devices'. These sections show the relationship between building elements and invisible factors that intervene in the definition of their form. Indeed, in order to be appropriately implemented, structural and technological elements require a rigorous procedure of calculation based on the results of empirical tests represented in diagrams and charts. In particular, this condition is evident in the plates dedicated to reinforced concrete structures. Here, the size of the beams, as well as the amount of concrete and steel, is strictly related to the structural diagram layout, which becomes an integral part of the overall definition of the beam itself. Therefore, diagrams represent the building elements in a way that reflects their empirical nature. In this sense, the diagram translates a constructive figure into an empirical fact, namely a fact explained through physical laws and completely purified of metaphysical or aesthetic speculation.

In addition to diagrams, the handbook implements the use of the technical chart in order to represent combinatorial elements (such as windows fixtures, furnishings, and so on) and other kinds of assemblages. Particularly, the section dedicated to 'Finishings', edited by Ridolfi, shows an extensive use of the technical chart in which single elements can be combined. For instance, the technical chart of the window fixtures shows the various ways different components of a node can be coupled, joined, or hooked in relation to different layouts and window sizes. [Fig. 2] Moreover, the technical chart allows Ridolfi to address design issues of variable complexity and dimension. For instance, at the larger scale in the urban development plan for Terni, Ridolfi uses the technical chart in order to show various combinatorial possibilities of a single residential unit with the same combinatorial approach applied to the combinatorial plate of the window fixtures. [Fig. 3] In this way, the technical chart establishes a continuity between small construction details and large urban clusters.

Through these innovative representation techniques, the *Manuale CNR* attempted to represent architecture as a collective work where all fields of construction science converge. At the same time, it also established a precise orientation for architectural design, which instead of aiming at formal expression, has to support a continuous dialogue as well as a negotiation between the forces of production. Design was intended as a way to stage a social reality, to represent Italian culture by the means of its productive skills embodied in traditional building techniques. Nevertheless, the *Manuale CNR* did not achieve the expected success and in 1962, after its third edition, it was no longer updated.

After the experience with *Manuale CNR*, Mario Ridolfi undertook further research on building normalisation in 1949. Later, his encyclopaedic activity continued in the field of traditional

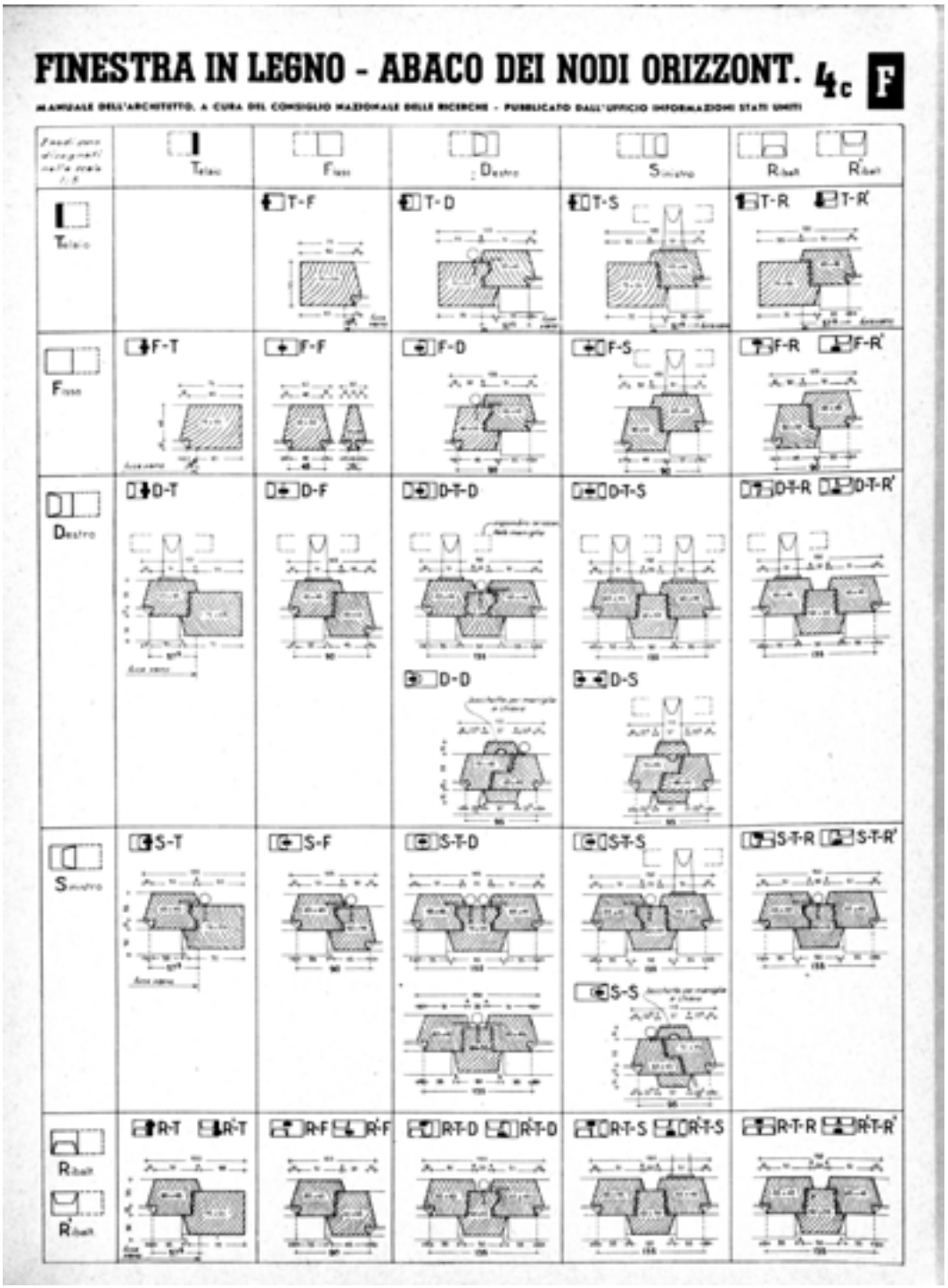

Fig. 2: Technical chart of window fixtures. Source: Cino Calcaprina, Aldo Cardelli, Mario Fiorentino, and Mario Ridolfi, eds., *Manuale dell'architetto* (Rome: CNR–USIS, 1946).

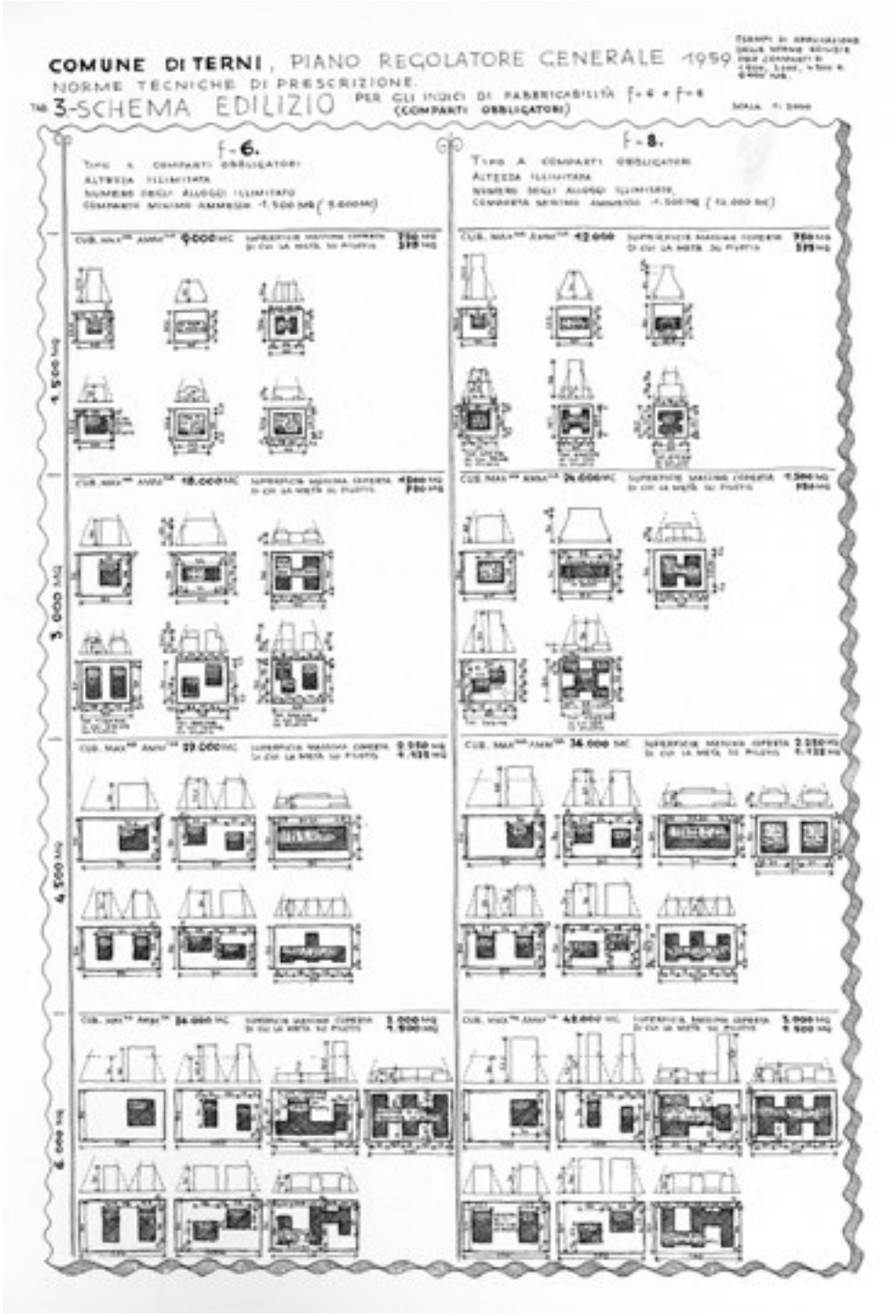

Fig. 3: Technical chart of the residential units conceived by Mario Ridolfi for the Urban Development Plan of Terni (1959). Source: Cellini, Francesco, and Claudio D'Amato. *Le architetture di Ridolfi e Frankl*. Milan: Electa, 2005.

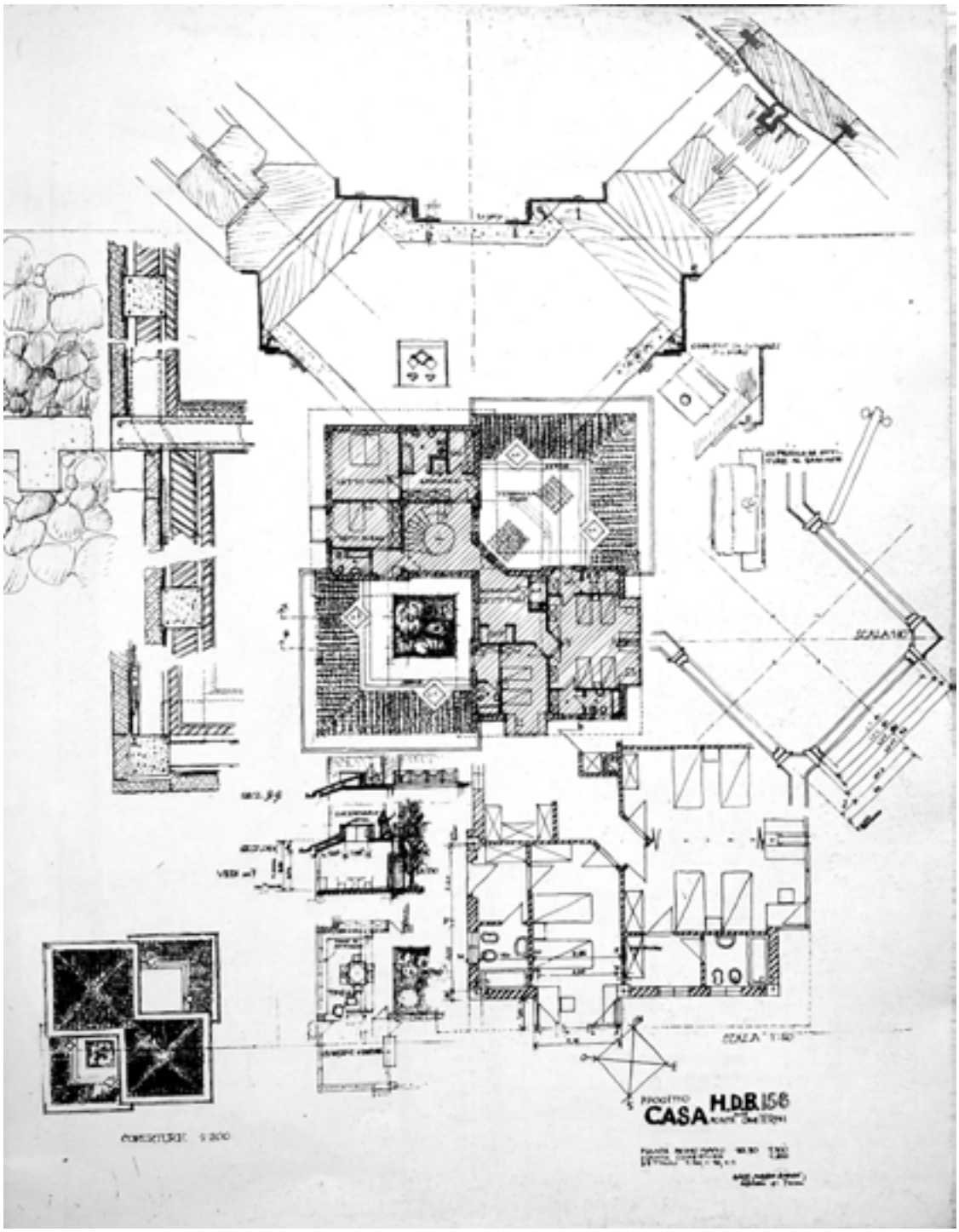

Fig. 4: Morphological affinities between architectural plan and technological details in Mario Ridolfi's drawings for *Casa De Bonis I* (1971). Source: Cellini, Francesco, and Claudio D'Amato. *Mario Ridolfi: manuale delle tecniche tradizionali del costruire: il ciclo delle Marmore*. Milan: Electa, 1997.

construction techniques when, in the last stage of his career, he moved to the *Marmore*, a place in the Umbrian countryside. Here, Ridolfi spent the last years of his life and after various family misfortunes he committed suicide. The *Ciclo delle Marmore* is a 'handbook of traditional building techniques' compiled between 1966 and 1984, during which he designed a dozen single-family houses.[49] In this work there is no distinction between the roles of architect and builder. Both of them are integrated within the same 'unified science' of building.

At the *Marmore* the building site assumed an existential meaning for Ridolfi. He worked closely with craftsmen and builders. Moreover, it represented a place that had not yet metabolised the pressure of industrial development. The relationship between production and the social structure was reconciled. This condition is particularly evident in Ridolfi's drawings where a strong relationship among masons, carpenters, and craftsmanship is apparent.[50] Every new project was not really intended as an experimental formal attempt, but rather as an occasion to establish temporary patterns of temporary artisans' communities working for a shared ambition.

Although Ridolfi may look like a drawing virtuoso, he actually used drawing as a logical tool. Drawing was not conceived as an autonomous gesture, but rather as a way to state a problem and to connect all the necessary references to solve it. For Ridolfi, drawing facts and construction facts could not be separated. For this reason, the houses Ridolfi designed at *Marmore* were not standard buildings but rather 'nodes'.[51] The term 'node' meant a way to compress the sum of all technical contributions into a single design idea. In this sense, the 'node' is an encyclopedic building. The logical combination Ridolfi developed at *Marmore* is sometimes so complex and articulated as to almost hide the plan itself. For example, in the plate for *Casa De Bonis I* the node is represented through the comparison of an enlarged window detail and the ground floor plan of the house: the two figures appear to be not only formally but also logically related. [Fig. 4]

The methodological approach implemented by Ridolfi at the *Marmore* was in direct continuity with the *Manuale CNR*. Although the ambitions and scale of research were widely reduced, the analytical approach remained the same. For Ridolfi, only an in-depth investigation of the technical resources of a national or local reality allowed the identification of specific design issues, and consequently the choice of appropriate analytical tools. In this sense, architectural design was not only a way to negotiate construction issues with a productive apparatus, but also, in a wider perspective, a 'lens' through which the conditions of an overall social apparatus could be read and represented.

Concluding note

The year the *Manuale CNR* was published falls within the decade when Otto Neurath's *Encyclopedia of Unified Science* was elaborated and published. Nevertheless, although no effective contact between the two works is historically documented, they do show methodological affinities. Both claim that disciplinary development cannot be conducted in isolation, nor detached from reality. Therefore, the choice of encyclopedia is a way to assert knowledge as a collective project. Moreover, moving research outside of the single disciplines implies a relation with the social and political problems of the time. Scientific knowledge thus becomes an object of negotiation and at the same time a way to establish a mirror between science and society, between scientific research and political commitment.

Both of these works remained dramatically unfinished. Every attempt to continue these projects was ineffective. Nevertheless, the methodological approach of encyclopedism still remains a model for knowledge development, more precisely a critical model. Faced with encyclopedism we inevitably

ask ourselves: How critical are we in our analytical approach? How self-referential is our analytical approach towards our discipline?

Notes

1. Otto Neurath, Marie Neurath, and Robert S. Cohen, 'From Vienna Method to Isotype,' in *Empiricism and Sociology* (Dordrecht: Springer Netherlands, 1973), 214–23. See also Otto Neurath, 'Isotype', in *Empiricism and Sociology*, ed. Marie Neurath and Robert S Cohen (Dordrecht: Springer Netherlands, 1973), 224–48.
2. 'The practice of living reduces the multiplicity quickly. The unambiguity of the plans to be put into operation enforce the unambiguity of predictions'. Otto Neurath, 'Radical Physicalism and the "Real World"', in *Philosophical Papers, 1913–1946* (Dordrecht: Reidel, 1983), 105.
3. See Nader Vossoughian, *Otto Neurath : The Language of the Global Polis* (Rotterdam: NAi Publisher, 2008), 27–44.
4. Ibid., 29.
5. 'Marxism is engaged in tracing correlations between the social condition and the behavior of whole classes, and then deducing the frequently changing word sequences that are used to 'motivate' behavior which is thereby conditioned and deducible with the help of laws'. Otto Neurath, 'Sociology in the Framework of Physicalism', in *Philosophical Papers*, 80.
6. Paul Arthur Schilpp, ed., *The Philosophy of Rudolf Carnap* (La Salle/Ill: Open Court, 1997), 24. See also Neurath, Neurath, and Cohen, *Empiricism and Sociology*, 45.
7. See Danilo Zolo, *Scienza e politica in Otto Neurath: una prospettiva post-empiristica* (Milan: Feltrinelli, 1986), 119–23.
8. In this sense, Neurath affirmed that 'Marxism [was] engaged in tracing correlations between the social condition and the behaviour of whole classes, and then deducing the frequently changing word sequences that are used to 'motivate' behaviour which is thereby conditioned and deducible with the help of laws'. Neurath, 'Sociology in the Framework of Physicalism,' 79–80.
9. See Roman Jakobson, *The Framework of Language* (Ann Arbor: University of Michigan, 1980).
10. 'It would be a mistake to believe that the physicalist rendering of everyday affairs must be complicated because very complicated physical formulas are needed – some of which are not yet at hand – for the calculation of certain correlations. The physicalist everyday language comes from prevailing everyday language'. Neurath, 'Sociology in the Framework of Physicalism,' 65.
11. Neurath, Neurath, and Cohen, *Empiricism and Sociology*, 45.
12. 'Strings of "ink blobs on paper" and strings of "air perturbations", which can be considered equal under certain circumstances, are called statements'. See Otto Neurath, 'Protocol Statements', in *Philosophical Papers, 1913–1946* (Dordrecht: Reidel, 1983), 91–99.
13. Nikola Nottelmann, 'Otto Neurath on the Structure of Protocol Sentences; A New Approach to an Interpretative Puzzle', *Journal for General Philosophy of Science* 37, no. 1 (2006): 173.
14. Neurath, 'Protocol Statements', 94.
15. Thomas E. Uebel, 'Neurath's Protocol Statements: A Naturalistic Theory of Data and Pragmatic Theory of Theory Acceptance', *Philosophy of Science* 60, no. 4 (1993): 590.
16. 'The scientific realm – as argued by Neurath – forces us to cooperate and to begin again and again from the protocol statements which we have in common'. Otto Neurath, 'The Orchestration of the Sciences by the Encyclopedism of Logical Empiricism', *Philosophy and Phenomenological Research* 6, no. 4 (1946): 507.
17. Neurath, 'Universal Jargon and Terminology', in *Philosophical Papers*, 213–29.
18. Neurath, *Philosophical Papers,* 181.
19. Neurath, 'An International Encyclopedia of Unified Science', in *Philosophical Papers*, 142.
20. David Keyt, 'Wittgenstein's Picture Theory of Language', *The Philosophical Review* 73, no. 4 (1964): 493–511.
21. Neurath, 'Encyclopedias as 'Model,'' in *Philosophical*

Papers, 145.

22. Ibid., 146.
23. 'Encyclopedism shows at a glance less harmony than its predecessors, based on "Pyramidism".' It accepts the fact that the vast mass of the groups of statements are, as it were, in one plane'. Neurath, 'The Departmentalization of Unified Science', in *Philosophical Papers,* 204.
24. Otto Neurath, 'Unified Science as Encyclopedic Integration,' in *International Encyclopedia of Unified Science*, vol. 1 (Chicago: University of Chicago Press, 1946), 3.
25. 'The establishment of cross-connections is in close relationship with the question of unity of terminology, with the creation of a "universal jargon" containing at the same time everyday terms and scientific formulas, the different languages that one can either join together or reduce one from the other'. Neurath, 'Encyclopedias as "Model"', 155.
26. 'The mosaic pattern of the sciences might in the course of the ages show features more and more connected but always changing, if the scientific attitude will remain at all valid'. Neurath, 'The Departmentalization of Unified Science,' 204.
27. 'It seems to me important that "unpredictability" plays its part within Empiricism.[…] Sometimes the behaviour of human groups may be connected with some changes which appear "by chance". Neurath, 'The Orchestration of the Sciences by the Encyclopedism of Logical Empiricism', 245.
28. Neurath, 'Encyclopedias as '"Model"', 158.
29. The necessity of a similar collaborative platform between science and technology is highlighted in Gilbert Simondon's philosophical research on the 'technical object'. Gilbert Simondon, *Du mode d' existence des objets techniques* (Paris: Aubier-Montaigne, 1969).
30. For an accurate analysis of the relationship between d'Alembert and the Encyclopédie see Franco Venturi, *Le origini dell'Enciclopedia* (Turin: Einaudi, 1963), 70–108.
31. Neurath, 'The Departmentalization of Unified Science', in *Philosophical Papers*, 201. Here Neurath provides a list of well-circumscribed sciences, namely: Heraldry, Criminology, Theory of Business Cycles, Engineering, History of Fine Arts, Phonetics, Comparative Grammar, Procedures of Historical Study, Anthropogeography, Psychiatry, Theory of Achievement and Behaviour, Anthropometry, Historiometry, Mendelism, Procedures of Botanical Study, Ecology, Geology, Astronomy, Cosmology, Physics, Theory of Probability, Vector Analysis.
32. Ibid., 200.
33. Ibid., 203.
34. Ibid., 202.
35. Ibid., 203.
36. Ibid., 204.
37. Ibid.
38. 'The march of science progresses from encyclopedias to encyclopedias. It is this conception that we call encyclopedism'. Neurath, 'Encyclopedias as "Model"', 146.
39. Paolo Portoghesi, 'Il realismo di Ridolfi,' in *Mario Ridolfi Architetto 1904–2004*, ed. Renato Nicolini (Milan: Electa, 2005). Similarly, Giovanni Durbiano states that Ridolfi's architectural work represents the 'first possible exponent of a ''realist architecture"' in the post-war period after the Second World War'. Giovanni Durbiano, *I nuovi maestri: architetti tra politica e cultura nel dopoguerra* (Venice: Marsilio, 2000), 71.
40. Manfredo Tafuri, *Storia Dell' architettura italiana : 1944–1985* (Turin: Einaudi, 1986), 4–39.
41. Manfredo Tafuri, 'Architettura e Realismo,' in *Architettura moderna : l' avventura delle idee, 1750–1980* (Milan: Electa, 1985), 123.
42. Mario Ridolfi, 'Contributo allo studio sulla normalizzazione degli elementi di fabbrica. Proposta di un sistema per la normalizzazione degli infissi in legno,' *Architettura* V (1940): 241–48.
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47. Barrera et al., *L'arte di edificare*, 216.
48. Mario Ridolfi, 'Il Manuale dell'architetto', *Metron* 8 (1946): 35–42.
49. Francesco Cellini and Claudio D'Amato, *Mario Ridolfi : manuale delle tecniche tradizionali del costruire : il ciclo delle Marmore* (Milan: Electa, 1997).
50. Francesco Moschini, 'Mario Ridolfi. L'architettura come pratica artigianale', *d'Architettura*, no. 17 (2002): 188–91.
51. Cellini and D'Amato, *Mario Ridolfi : manuale delle tecniche tradizionali del costruire : il ciclo delle Marmore*, 19.

Biography

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Possibilia: Possible Worlds and the Limitless in Architecture

Sean Pickersgill

Possible worlds

One of the core tensions in architecture has been the relationship between the conventional practice of design, documentation and construction (whether real or addressed in architecture schools through practice-based training), and the role of impressionistic, incomplete and fictional approaches to architectural design. While the former constitutes the acceptable and coherent relationship between forms of ideation and representation that has, as its goal, the completion of a materially real structure in the world, the purpose and meaning of the latter is less clear and considerably more problematic. In support of the value of speculative work one of the core roles of architecture theory is on occasion to provide a contextual reading of works that, at face value, seem to exist purely to stubbornly demonstrate their incommensurability with the world. Piranesi's *Carceri* drawings, Lequeu's images of a gendered and sexualised practice, Constant's urban vision of *New Babylon* and any number of student projects that depart from the everyday, all purport to describe a process of understanding architecture that has internal consistency within the work but is seemingly incommensurable with professional practice.

Often the justification for this work is that it expands the territory of the discourse on what architecture *might* be, and that the qualia of these projects reveals irruptions in dominant discourses on what might be considered real and rational – a value in itself. But how exactly, does it do this? And how can something seemingly impossible to realise, actually mean anything non-trivial in our existing material circumstances?

Behind this relationship is a presupposition that has been at the core of recent developments in modal logic and the discussion of possible worlds. If we assume that everyday architectural practice and speculative work exist in the same world, an investigation within the analytic tradition would seek to define the existential conditions in which the real and the imaginative can be in the same epistemological space, be real, and be meaningful. How can Lebbeus Woods's work, for example his cenotaph for Einstein, and that of a conventional practice exist in the same explanatory schema? Within the analytic tradition there are quite powerful tools for examining this relationship, from Frege and Russell's use of the existential quantifier[1] to the work of Saul Kripke[2] and David Lewis[3] on possible worlds in modal logic and Lubomir Doležel[4] within studies of fiction (applying the work of Lewis, et al.).

This article will set out the philosophical basis for considering speculative architectural projects within an explanatory schema that describes an analytic approach to the consideration of fictionalised possibilities. It will show how the transition from a one world schema of considering the relationship between the real and the fictional, which constrains fictional artefacts to be either semantic representations of actual (diminished) circumstances or, worse, empty signifiers that can be more powerfully described and

understood within a multiple world schema. This is an issue of some importance as it underpins the robustness with which propositions may be made about, potentially, conflicting sets of circumstances. A 'one world' schema assumes that an open set of propositions about the world (including architecture) should be internally consistent (or that their inter-consistency is a matter of proof). If a proposition, or in our case an architectural project, is deemed to be 'merely' semantic, and without a direct referent in the material world, then it is sometimes relegated to the status of epiphenomenon. A 'multiple world' schema, in contrast, requires a more flexible method of thinking because it requires one to, typically, relax the need for a specific overall explanatory scheme tied to our world, without forgoing the imperative, as with Occam's razor, to reduce the number of complexities within any explanation. By doing so, as the argument sets out below, fictional propositions are not 'merely' semantic, but consistently robust 'in their world', and in every world the fiction describes. We may never be able to materially access these worlds, but they are nonetheless logically possible. Moreover, by understanding the clarities that come from employing logical expression in the description of counterfactual circumstances, the article will show that speculative architectural projects occupy a unique ontological space that is real and rational. But to do this we need to first recognise the difference between different types of propositions about architecture.

Ecce architecture

When we think of how architecture is, how it comes to be what we see and experience it as, we can ask two simple and reasonable questions: how has it been undertaken in the past up until the present day, and how might it be undertaken in the future? It is a simple relationship based on ideas of consistency and prediction. We know that the likelihood of there being revolutionary change is generally unlikely since the production of an architectural work entails the efforts of many persons from conception to completion and beyond and that the complexity of these relations work against spontaneous idiosyncratic examples. Because architecture is, usually, expensive and required to satisfy a complex array of performative functions it becomes the outcome of groups of professional consultants, prospective client and user expectations, regulatory requirements and conventions of construction. This characterisation usually holds for both constructed and proposed work, but not for all types of representations, as this article will show.

In addition, modes of discussing architecture, and the complex semantic analyses that follow from the non-analytic tradition, emphasise the metaphorical relationship between patterns of thinking and the conceiving of and thinking about architecture, and in particular the cross-relevance of discursive heuristic domains between architecture and other areas. These types of analysis, from those undertaking discussions on issues of sustainability within the broad spectrum of definitions of that term, to more focused technical discussions on behaviour and desires in contemporary culture, as a representative sample, rely on morphological and linguistic matches to assert the presence of 'architecture' in a variety of intellectual practices. Perhaps it was the emergence of the 'post-critical' discussion in the beginning of the 2000s that recognised that the increasing complexity of these bodies of knowledge made their usefulness (at a completely utilitarian level) questionable.[5]

As an example, Bernard Cache's *Earth Moves* describes a relationship between the topology of thinking in the work of Gilles Deleuze and the non-standard geometries of his 'objectile' projects.[6] Cache takes specific care to articulate the morphological aspects of objects and their transformations under a series of transitive operations. The formal relationship is complex, as is the fine-grained discussion of the haecceity of both the object and the viewer/maker; however it is not clear what

implicit and intrinsic demands the forms make as public statements, or in the context of a public discourse on their performative value.

So, for the purposes of this article, if we limit the discussion of architectural projects to the degree to which their extensional and intensional qualities form a component of a domain of discourse, there may be another mode of reviving the qualities of resistance and criticality, or at the very least, understanding that architectural work that positions itself outside of everyday expectations of the usefulness of architecture and theory continues to be produced.

Logic

Logic and modal logic are not necessarily the first forms of thinking that one might associate with architecture. The minutiae of logic as a practice emphasises the definition and specificity of propositions about the world, whose viability is contested within the philosophical discussion of logical form. It is not necessary to rehearse the component aspects of logic in this essay, but it is worth recognising that the examples used in logic are never directed specifically at a particular state of affairs in order to investigate its qualities *qua* a subject of study, unless to allow or deny its generality. The discussion of syllogisms in logic that commence from the proposition: 'All men are mortal'; 'Socrates is mortal'; therefore 'Socrates is a man' is not about Socrates *per se*, but about examples of set theory membership involving 'all' and 'at least one'. In this sense a logical proposition about architecture, 'All architecture is discursive' for example, would never be evaluated solely to discover the truth-value of the proposition: 'that all architecture *is* discursive'. Logic instead is a tool for analysing states of affairs from which claims are made regarding the specificity or generality of their application.

Indeed, it seems perversely pedantic to scrutinise every aspect of a complex cultural phenomenon such as architecture in terms of individual propositions, since complex propositions about existing phenomena entail an almost infinite number of sub-propositions that address the conditions for the head proposition to be true. Because, in general, we wish to avoid creating propositional scenarios in which the truth-claims of the initial statement requires an infinite regress of supporting claims, we look for a method that uncovers the most efficient supporting propositional chain. 'All good architecture is coloured white' for example would require many conditional relations (defining 'good', 'architecture', 'coloured' and 'white') that support the original claim. However, it should be noted that this does not mean that the process is inherently relativised or is dependent on individual perception. Any expanded set of propositions that include the terms above will, on the contrary, work to demonstrate the applicability of the head (sometimes caller 'horn') proposition once contextualised. However, this process of creating complex propositional chains supporting an architectural state of affairs can be complex and exacting, though the process is simple, if the knowledge base for making propositions is large – as it is in architecture.

A strong argument could be made that the general terms employed in architecture, 'design' or 'critique', actually refers to this very process in which competing truth claims/conditions are assumed as a premise for a project and then tested for the validity. In propositional logic this is called forward chaining when we are trying to determine if the true statements that support a desired outcome are supported by the factual basis of the premises. Forward chaining (and backward, for reasons of interrogation rather than proposition) emulates the state of affairs in which we might discuss the proposition 'Good architecture is coloured white' without having to laboriously define the truth claims of the knowledge base that supports (or denies) this.[7]

Hermeneutics

It is at this point that it may appear that there are a

number of naively normative assumptions regarding the process of interpretation in the above example, and potentially within the discussion overall. Further, when discussing something concerned with the ambiguities of 'meaning', it could be argued that this issue is assumed to be clear and flow unproblematically from these statements. There are a few points to make in this regard. The employment of propositional statements regarding a world do not, as statements, need to conform to issues of interpretation and inter-subjectivity within a discursive context of author and reader. I would argue that this is an unnecessary concentration on ambiguities within the qualia of statements and their extensional properties, when a simple recognition of their intensional boundaries will suffice for the point to be made. For example, the proposition above, 'All good architecture is coloured white', while rich in associations (its extensionality) is logically coherent *in at least one* reading (its intensionality). While modal logic does not capture all aspects of propositions, because they do not require this level of fixity, it does make use of the simple assertion that things do mean what they say, true or otherwise. Secondly, the pre-occupation with the practice of employing hermeneutic awareness within the act of reading, the attendance, to a hermeneutic 'circle' that requires the reader to fully disclose the ontological 'entailments' in the act of interpretation, usually asserts that this process is a necessary originary disposition to make aware 'states of understanding'.[8] While there is clearly value in self-awareness and issues of structural bias, in comparison with studies in modal logic, and in fictionality, this seems an unnecessary level of scholastic caution.

At this point we might just be making an argument for the recognition of logical entailment in architectural discourse, which seems to be unproblematic. However, as we shall see, there are a number of special conditions for architectural projects that make claims on knowledge bases that are only counterfactually true. In part this is to do with the heuristic function of discussion generally, but it will also involve the role of fiction and narratology in architectural design. To clarify this position, it is worth considering the difference between actual-world projects and possible-world projects.

Actual world – Blur

It is true that in architectural discourse we are keen to test the applicability of propositions about projects and to examine the logical entailments that follow. Publicity material presenting Diller Scofidio and Renfro's Blur Building of 2002 makes the following claims:

> Contrary to immersive environments that strive for visual fidelity in high-definition with ever-greater technical virtuosity, Blur is decidedly low-definition. In this exposition building there is nothing to see but our dependence on vision itself. [It] is an experiment in de-emphasis on an environmental scale.[9]

On face value it would be reasonable to examine the truth value of their claims, concentrating on those propositions that intuitively seem to imply the most distinct areas of innovation while ignoring the tedious questioning that might follow simple statements of fact, the knowledge base.

Yet for all the uniqueness of Diller Scofidio and Renfro's approach in this project, its tangible presence as an architectural structure within a complex, semantic discourse is stabilised by the fact of its existence, since its presence acts as an extensional referent for claims about its qualities in the actual world. Extensionality, in this instance means that the knowledge base of propositions can be checked (or backward chained) against what is known and true about the project. However, we can also ask related questions: What if all art pavilions were similarly created? What if it were co-opted as part of a commercial advertising campaign? What if it were the site of an extreme act? These questions, while not explicitly part of the original conditions of

the project or the overt intentions of the architects, seem to have some form of intelligibility since in answering them we will inevitably refer to material and theoretical conditions that are unique to the Blur Building. It is in this context that it is necessary to introduce the discussion that has revolved around the creation of possible worlds within the field of modal logic.

Possible worlds – modal logic

When we look at images of proposed architectural projects, one of the tests of their coherence, in fact the commonplace view, is how well they accord with our expectations of what we have seen before. If the project is a multi-storey tower, it will generally be vertical in orientation, include repetitive floors and be grounded to the earth's surface. These are the constituent elements of the knowledge base that is maximally truthful. And while there are many subtler, and sometimes problematic, means of identifying what we expect architecture to appear to be, this is a commonplace expectation within the actual world since its contradiction would cause us to question whether it is possible the architectural project is, *caeteris paribus*, a building. For this reason, we are also likely to be surprised by the presence of a building floating in the air in defiance of gravity, or a building be made of rice noodles when its overt intention is to be durable and endure, or to require users to act in a fashion that has no grounding in commonplace behaviour.

Yet there is a considerable body of work designed to be as transgressive of conventions as possible. The relationship between architectural practice and transgressive ideas has a considerable and well-articulated history that recognises the role of an avant-garde, even as a minor practice, that proposes works in opposition to the domain of the real.[10] These projects, implicitly unrealised because of their speculative status, suffer the prejudice that their propositions about how architecture might 'be' is vitiated by the imperfect assumptions they make about what is possible. But while this objection assumes that the final state of all speculative projects is a material reality within the actual world, clearly many are never intended to be pursued to that end. More importantly, value is attached to the propositional 'world' that the projects seem to inhabit and imply through their existence *qua* propositions. In modal logic, these alternative states of affairs are termed 'possible worlds' since they require there to be a 'world' that differs from the actual world, yet sustains necessary and sufficient conditions for this transgressive proposition to exist and be recognisable as 'a' world. So that they are not completely meaningless, if this were possible, they share some measure of truth conditions in their knowledge base that is consistent with the actual world. Modal logic itself, as we will see, engages directly with expressive contexts in which fictionality is a core component of the propositions – whether directly in the 'worlds' created by fiction (including architecture), or in cases of historical revisionism in which alternative historical circumstances (might) have recognisably changed the present. These conditions are part of a spectrum of fictionality and counterfactual speculation that both tests the legitimacy of the present and the possibility of alternative views of the future.

A high castle

A common example within modal logic is the proposition that Germany won the Second World War, and that a number of re-appraisals of geo-political circumstances would follow. *The Man in the High Castle*, a novel by Philip K. Dick, pursues this very premise, speculating on the possible behaviours and actions of American citizens in the context of occupation by German and Japanese forces.[11] While Dick's novel is complete in the world it presumes and proposes, irrespective of actual world conditions, the tension in the narrative comes in part from the possibility that there may have been a circumstance that made real the conditional chain of events assumed and proposed.

Modal logic, then, is interested in the intellectual behaviour we engage in when we make propositions that have no extensional legitimacy (truth claims) because, in our example, there are no actual world referents that can be pointed to in which Germany won the Second World War. It does so because the exercise makes sense as a demonstration of transposition in logic. If/then statements describe a causation of events even if there is no empirical evidence of their possibility. Indeed, the entire narrative of works such as Dick's, and arguably of all fictions, is based on this premise.

The purpose of transposing the complexities of a narrative into propositions that can be examined for their extensional properties is that it allows for scrutiny of how expectations of causation are maintained. So, for higher order (more complex) propositions the location of invalid components of the proposition are clearer. For the proposition: Germany won the war and occupied the United States, it can be expressed as:

$$\exists x, (x,W) V (x,O)$$

There exists (at least one) world in which Germany won the War (W) and was the occupier of the United States (O).

The first component of this, existence, can be looked at through a specific term: the existential quantifier (∃). In symbolic logic it is used to set out the initial proposition, 'There exists…', such that '∃x' means 'There exists x' or 'there is at least one x'. The existential quantifier allows us to temporarily investigate a possible world in which this logical sentence is extensionally true. Usually the description of the premise allows users to isolate and identify components of the proposition that have no actual world referent, distinguishing between the robust and the flawed components of a proposition. For example, a set of propositions about economic behaviour may suggest that past behaviour of consumers will entail future patterns, meaning there can be confidence in modelling practice that is based on as few conditional propositions as possible. Tacit knowledge of behaviour is then interrogated by a network of conditionals that form a behaviour tree and which allow for counterfactual speculation on alternate behaviour. Further, when discussing the assumptions and transpositions within fictional narratives, the degree to which suspension of disbelief of existential referents is assumed or modified is crucial to the quality of the narrative and in particular its (the narrative's) ability to withstand claims of cognitive dissonance.

The existential quantifier and domain of discourse

So, if it is unfortunately tedious to try and define what architecture 'is', the process of ruling what may be relevant or not in a definition can at least lead us to some interesting questions on the methodology of how architecture exists, or how we make propositions about architecture that are true. We may also ask how we make propositions through architectural projects which remain meaningful when they are presented in a context in which they imply a non-actual possible world. This can be done by employing some basic structural characteristics of philosophical logic commencing with questions of existence, sense and reference.

As we have seen, when we consider the question of how we recognise characteristics of a building or proposal, we can begin to set out a series of truth claims that determine the 'set' of properties that we recognise to be relevant. For the multi-storey building described above, we can imagine a Venn diagram in which 'vertical orientation', 'repetitive floors' and 'attached to the ground' are some of the intersecting sets that we could determine. Clearly the greater the number of these sets and the more specific they are, the more finely tuned and less ambiguous is our characterisation.

Why is it necessary to think of worlds being 'actually' possible rather than simply understanding that they are definitely not-actual, they are principally fictional and not to be believed in any meaningful way, and need not be considered a possible world? The answer is in the insistence that there are maximally consistent logical consequences in the possible world that may be inspected for their congruency with the actual world. The greater the inspection and the more legitimate, or in the terminology of Doležel 'textured', is their claim on actuality the more the possible world must be examined to determine the texture of its fictionality.[12] For example, imagine a project focused on a condition or state of affairs such as the resurrection of Sarajevo following the warfare of the 1990s, a project that is not known to be possible but becomes so. The original circumstances of Lebbeus Woods's proposals, published in *Radical Reconstructions*, was the ongoing siege of the city that he witnessed in 1993. His architectural proposals were the outcome of ideas on reconstruction that might have been, but were not necessarily, possible.[13] The fact that they did not eventuate is irrelevant to the purpose of the project, which is to show states of affairs, a possible world, in which alternate outcomes are possible, and which contains a network of implications for what 'reconstruction' could look like.

Speculative architecture – fictionality

Generalising on Woods's project (and those like it) the question then emerges, how is this relevant to architectural practice and to the thematic discussions that accompany speculative architectural projects? What sort of approach can or should we adopt in identifying those qualities in the project that are most notable and potentially relevant to actual world properties? Or alternatively, how do speculative projects maintain a distance, a fictionality, from the actual world knowledge base?

So, for speculative projects that implicitly propose a series of counterfactual states of affairs that legitimate their premises, there are five questions that can be asked:

1. How real are they?
2. How do we discuss them?
3. What proof of existence is necessary for them to have extensional legitimacy?
4. What propositional chains do they entail?
5. What are their claims on ontological commitment?

Addressing these questions requires a clear understanding of the relationship between the logical status of possible worlds and the rhetorical aspects of fictionality they employ. Fictionality itself is a subject of study within narratology and one of the principal contexts in which the interests of modal logic and narrative studies connect. But it is also concerned primarily with the exploration of texts as opposed to propositions. There is considerable debate on the methodological differences between fictionality and possible world analysis, and one of the more trenchant criticisms by Paul Dawson points out that while texts may contain propositions within them, they are not undertaking the same kind of testing of referentiality that logical propositions do.[14] It is in this context that architectural projects occupy a special space between literary fiction and logical propositions since they clearly illustrate possible worlds that entail specific propositions with extensional referents concerned with alternative architectural realities.

How real are they – extensional and intensional referents

In a complex propositional world such as that of narrative fiction or of fictional worlds (states of affairs), there is a question regarding the extensional expectations of that world. It is important to 'believe' that the apparent qualities of all entities are real in their world, and that that world, in the absence of information otherwise, adheres to the qualities of the actual world. In their 'Ten Theses about Fictionality' Nielsen, Phelan and Walsh propose that

a core aspect of fictionality, thesis number eight, is that there is a double exposure of the real and the imagined.[15] This means that there is an instrumental function present in some textual fictions in which the imagined state of affairs has an actual world relevance as a non-actualised possibility. Whether this is clearly an extensional (i.e. metaphorical and semantically communicated) proposition for the actual world, or an intensional proposition for a world in which the proposition is true (i.e. has real referents) is not clear in their account. Their example is Martin Luther King's 'I Have a Dream' speech in which he famously speculates on a vision of American society that may come. In this context it is possible to suggest that King is referring metaphorically to the actual world and is not seeking a clear extensional referent, a criticism that Dawson makes.[16]

A better example, arguably, can be derived from examining the complex propositional structures within speculative architectural projects, since the nature of their visual textuality presents a world composed of extensional referents. Projects of this form create a reality that inherently presents, within the limits of the media, a maximally consistent possible world. Indeed, when studying projects such as Pamela Tan's *The Soil City*, it is clear that the imaginary landscape/cityscape exists within a world in which its context, Greenwich specifically and London generally, is recognisable. [Fig. 1]

In the alternative, it might be suggested that projects such as these are complex metaphors for an existing, or possible, state of affairs in the actual-world Greenwich. In fact, to present the work as being inherently metaphorical creates an unnecessary level of interpretive complexity and inherently devalues the texture of spatial and material reality, the extensional referents, that the work presents. And although it seems something of a suspension of disbelief to argue for the presence of a possible world in which these images are true propositions, it is no more of an effort to treat them as accurate within the maximally consistent fiction of *Soil City's* London in the same sense that Dickens's London is the location where the events of *Little Dorrit* take place. To dismiss the images as extensional (semantic) referents to an 'other', real version of London is unnecessarily complex since there is a clear intention for the project, as with the book, to be read as indivisible and coeval from the existing city.

It is in this context that we must be completely clear about what possible worlds are. Possible worlds are not present in some other part of our universe since they are causally independent of our own, you cannot travel to them. Further, possible worlds are the consequence of the existence of modal statements about the possibility of other states of affairs in which these propositions are true for that world. They are not the same as semantic fictions as discussed above when considering their intensional relation to the actual world, but it can be the case that fictions can be composed of complex modal statements that have extensional referents in relation to the possible world they adhere to. Simply, this means that architectural projects are maximally real in their world (their intensional properties) whilst also displaying extensional referents that make them appear to have family resemblances to other worlds, including our own. It is the argument of this article that speculative architectural projects, and their ilk, are specifically designed to employ the facility of possible-world modality, since their *raison d'être* is the modal propositional statements they infer.

Further, another aspect of narratology's definition of fictionality, when considered within the possible-world model of analysis, is one of reality, consistency and logical entailment. Clearly fictional narratives employ forms of logic to ensure that the actions, behaviour and events of a narrative are semantically coherent and that predictive propositions are non-trivial. But how is this expressed in a

Fig 1: *The Soil City*, Pamela Tan, 2015. http://superarchitects.world.

logical form that captures the consistency and non-triviality of fictional (non-real) states of affair? Within modal logic, this is through the use of 'possibility' and 'necessity'. This is an important consideration when examining architectural projects, because of the tradition of assuming causation (that things are designed to happen) within projects. Moreover, the quality of the texture of their fictionality, as above, can be examined to judge if the causal world they imply is non-trivial.

Possibility and necessity

Possibility and necessity, when first viewed through the methodology of modal logic, document the presence of extensional referents that are implied in possible-world states of affairs, but without carrying with them the weaker claim that they are only 'fictionally' true in that (and only that) possible world. In modal logic, these conditions are expressed thus:

□W – necessarily true in every possible world

◊W – possibly true in some possible world

In essence, these quantifiers respectively capture the necessary conditions for modal statements, including that of non-contradiction for example – that something can be both 'x' and 'not x', as well as helping define the characteristics of a possible-world proposition that we may be interested in. If it is necessary that 'x' is possible in some possible world then we are closer to recognising the difference between required and contingent aspects of a world. Often these required aspects are those that are relied upon to be true for both the actual world and the possible world of the architectural project.

So if many speculative architectural projects exist in some intersection of the real, actual world and the world(s) of their making it is clear that there are propositional claims inherent in the possible worlds they describe that are not indifferent to the actual world. For example, in similar fashion to *The Soil City*, Samee Sultani's *Mute Peregrinations Through a Narrow Conduit*, locates itself in proximity to Shark Island in Sydney Harbour, utilising the relative isolation of the island within a major city as a starting point for its narrative on a museum of ambiguity.

In this scenario, there are overt requirements in the project that it is the task of the analyst/critic to discern and state. What is generally and inexactly called 'context' in architectural projects in fact comprises the necessary non-modal and modal propositions that ground the discussion, most of which are tacit but a number of which are strategically shown. [Fig.2]

Possible and likely

For complex possible worlds, the task of describing both modal and actual qualities within the states of affairs can constitute a dependency chain of propositions about that world. As a proposition is a claim for existence, it is important that the chain of propositions avoid unnecessary circular statements of the type: 'It is true, because it is in this world'. Fine-graining the analysis of propositions helps identify the necessary and desirable fictional and non-actual properties of a proposition chain. The transformation of modal propositions regarding a possible world gain plausible actuality as a consequence of the re-expression of propositions about the fictional world that are non-modal. This is also, as above, a key point of difference between this approach and that of hermeneutics.

The London of *Little Dorrit* is described within the fiction of the text, just as Tan's Greenwich and Sultani's Sydney Harbour are situated in a greater context of necessary properties. Yet it is the actual London of the nineteenth century that Dickens refers to and which may be described in non-modal terms without injuring the consistency of the text's fictionality. This is an important aspect of modality within architectural projects as well as within fiction. For in both there is the expectation that further conditional propositions, how a character will act in

Fig 2: *Mute Peregrinations Through a Narrow Conduit*, Samee Sultani, private collection, 2014.

the next chapter or what the consequences of this design for its host city might be, are of relevance for the coherence of their propositional chains.

Summary

In summary, the familial resemblance between fictional and modal analyses of the coherence of possible world projects means that there are considerable gains to be made in understanding how they function. Moreover, we can understand that the prejudicial claim that the fictional, or worse fantastical, aspects of their worlds necessarily mean they can be ignored is untrue. In fact, the intuitive argument that projects such as these exist and are eloquent inventions provides a compelling demonstration of the importance of imagination in the design process. Furthermore, whatever transgression of the real they provide, the more attentive we are to the chain of well-formed propositions they infer, the more we can understand the process of their coming to being. The process of determining their deep logical coherence, as a description of *a* world validates their coherence in our world.

Postscript – ontological commitment

Although outside of the parameters of this paper given the complexity of the subject matter, the question of how ontological commitment occurs for both a reader of fiction and for a 'viewer' of an architectural project can be productively analysed through the lens of modal statements about possible worlds. Further, in architectural projects it is quite possible to determine a narrative of actions and behaviour that the work states and implies. The presence of the viewing subject, properly managed, can entail an ontological commitment of the viewer into the narrative of the possible world.

Speculation on the required or desirable behaviour of the reader/actor can be supplied by both meta-textural instructions and by the apparent performance requirements of the environment, both of which are assumed modes of engaging with the work. Modal and non-modal propositions about the ontologically committed reader/actor can follow the same form of analysis as propositional chains regarding the states of affairs of the possible world.

Within possible worlds, the presence of characters/agents implies functionality and causality of their actions and beliefs. In fiction there are three world forms, or possible world ontologies, that can be speculated:

1. the epistemic world (the world of propositional chains developed from non-modal and modal propositions)
2. the desire world (propositional chains regarding the desire landscape of the actor/reader)
3. the obligation world (propositional chains regarding the performative obligations of the actor/reader).

So the next step for this form of analysis, implicit in some architectural projects, is the choreography of desires and obligations by agents within that world. Assuming that a maximal non-modal series of propositions exists for that possible world, the performance of actions can evolve from a static to a performative engagement.

Notes

1. Gottlob Frege, *Conceptual Notation and Related Articles*, trans. Terrell Ward Bynum (Oxford: Oxford University Press, 1972); Bertrand Russell, *Principia Mathematica* (Cambridge: Cambridge University Press, 1903).
2. Saul Kripke, *Naming and Necessity* (Cambridge, MA: Cambridge University Press, 1972).
3. David Lewis, *Counterfactuals* (Cambridge, MA: Harvard University Press, 1973.
4. Lubomir Doležel, *Heterocosmica: Fiction and Possible Worlds* (Baltimore: Johns Hopkins University Press, 2000).
5. See particularly, Robert Cowherd, 'Notes on Post-Criticality, Towards an Architecture of Reflexive Modernism', *Footprint* 4 (Spring, 2009), 65–76.

6. Bernard Cache, *Earth Moves: the Furnishing of Territories* (Cambridge, MA: The MIT Press, 1995).
7. 'Forward chaining', a term used often in business systems, derives from the principle of *modus ponens* in propositional logic. The classic demonstration of this is in Alfred Tarski, *Introduction to Logic and to the Methodology of the Deductive Sciences* (Mineolo, NY: Dover Publications, 1946).
8. L. Garagalza, 'In the Footsteps of Hermes: The Meaning of Hermeneutics and Symbolism', *Parrhesia* no.16 (2013), 1–13. Garagalza gives a succinct description of the hermeneutic process. The most influential argument for hermeneutics is Hans-Georg Gadamer, *Truth and Method*, trans. W. Glen-Doepel, trans. revised by Joel Weinsheimer and Donald G. Marshall (New York: Continuum, 2004 [1960]).
9. Diller Scofidio and Renfro, Blur Building, Exposition Pavilion: Swiss Expo, Yverdon-les-bains, 2002, http://www.dsrny.com, accessed 10 May 2016.
10. The 'domain of the real' here refers to and acknowledges both the well-formed propositions about how well proposals accord with actual world references, and also analogously, the idea that the 'real' is a contested space of appearance in discussions that flow from Marx, Althusser, Derrida, and, to an extent, Freud and Lacan.
11. Phillip K. Dick, *The Man in the High Castle* (Boston, MA: Mariner Books, 2012).
12. Lubomir Doležel, 'Possible Worlds of Fiction and History', *New Literary History*, 29, no. 4 (1998), 785–809.
13. Lebbeus Woods, *Radical Reconstructions* (Princeton: Princeton Architectural Press, 2001); Lebbeus Woods, 'War and Architecture: The Sarajevo Window', https://lebbeuswoods.wordpress.com, accessed 22 May, 2016.
14. Henrik Skov Nielsen and James Phelan and Richard Walsh, 'Ten Theses about Fictionality', *Narrative* 23, no. 1 (2015): 61–73, and Paul Dawson 'Ten Theses against Fictionality'," *Narrative* 23, no. 1 (2015): 74–100.
15. Nielsen, Phelan and Walsh, 'Ten Theses', 68.
16. Dawson, 'Ten Theses', 90.

Biography

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The Persistence of Buildings and the Context Problem

Fabio Bacchini

Introduction

In this essay I will deal with the persistence question about buildings, taken as a central member of the category of architectural entities. Generally speaking, the persistence question is a question about what is necessary and sufficient for a numerical identity among entities existing at different times to hold. Raising the persistence question about buildings amounts to asking what is necessary and sufficient for a past (or future) building to exist now.

Of course this question is fundamental to our practices concerning the conservation, restoration and rehabilitation of buildings, which are often dedicated to letting a specific individual building continue to exist in time. Apart from important issues such as who should establish what is historically significant, what role heritage conservation should have in a society, and whether it stands in the way of progress, a more basic question is how we can determine whether a building from the past exists now (since, contrary to appearance, it might not have survived the changes it has undergone) and what conditions must hold for a building existing in the future to count as *this* building existing in the future (since, contrary to appearances and despite – or even because of – our efforts to preserve it, it may cease to exist in the meantime).[1] In other words, heritage conservation is simply impracticable if the persistence question about buildings is not raised. Again, the persistence question seems an inescapable question, also in order for the UNESCO World Heritage Committee to verify whether a particular building meets the conditions of *authenticity* and *integrity* which in turn are necessary requirements for it to be included in the World Heritage List.[2]

Indeed raising the persistence question results in revealing what our concept of a building is. In fact, by exploring the persistence question about buildings, we may discover that, according to our best intuitions and judgements, a building can survive some kinds of change or transformation and cannot survive others. This discloses what properties are constitutive of a building, and what properties are merely contingent. Further investigating why this is so is important for understanding the way we think of buildings, as well as for serving our goals (e.g. heritage preservation and conservation) in a more efficient and consistent way. It may also help architects to be more self-conscious of what they do when they design and bring into existence new buildings, make choices that affect their life cycle, or modify some of their features (such as their functions).

In this article I focus on one specific kind of property change and its effects on the persistence of buildings: spatial relocation. If we engage in the thought experiment of imagining a situation (that might soon become a technically practicable option) in which a specific building like Notre Dame Cathedral is transferred stone-by-stone from Paris to a very different location, we will normally have a strong intuition that the relocated cathedral is no longer Notre Dame. But why?

I will argue that this happens because buildings are constitutively located in a certain place. But again, why? And why – unlike buildings – do ordinary objects and the vast majority of works of art not turn out to be similarly constitutively characterised by a certain location? I will explore different answers, rejecting them one by one; and I will finally get to what I consider the correct one.

Indeed my answer will have some interesting consequences with regard to further issues concerning the ontological and aesthetic status of architecture. In particular, architectural entities like buildings turn out to have much in common with a specific class of works of art, namely site-specific works of art. I will not commit to the thesis that architecture is art, either always or only in some specific circumstances (and I will signal my neutrality by employing here and there in the essay the dubitative expression 'architectural work (of art)'). Nevertheless I will conclude that, *if* architectural entities like buildings are to be considered works of art, they should be considered *site-specific* works of art. The main reason is that site-specific works of art, too, cannot survive relocation (at least, as we will see, this has been true until an intense mobilisation of site-specific works of art has become customary in the art world since the late 1980s); and, the explanation of their incapacity to survive relocation is the same as for buildings.[3]

A clarification is due regarding the use of the expressions 'context' and 'outer context' that I will make in this essay. By using these terms, I will refer to the material external environment of a building, as constituted by material entities (such as trees, rivers, streets, bell towers, other buildings, sunlight) and the properties instantiated by them. I am aware that the 'context' of a building can legitimately be thought, in the wider sense, to include social practices, cultural habits, political institutions, as well as the experience of the building by human and perhaps even non-human beings; it could also include the conception of the building in certain ways and the attribution to it of certain functions, significance, aesthetic value, and so on. It would of course be interesting to investigate how, if ever, a change in the broad context that is not also part of the narrow context affects the persistence question about buildings. Just to mention one possibility, it seems only reasonable for the social and cultural geographers inspired by actor network theory, who in the last decades have taken even an object's status as a 'building' to be not given but produced by social and cultural work of various kinds, to claim that if certain relevant social and cultural processes fail, the building's identity is destroyed.[4]

I find it equally admissible, however, to raise the persistence question about buildings with regard to the narrow context, provided that we make one indispensable assumption. It must be assumed (as I do) that when the persistence of a building is affected by a context change (such as relocation) that involves some change both in the narrow context and in that part of the broad context that is not also part of the narrow context, the change in the narrow context *alone* would have been *sufficient* to produce the same effect.[5]

The persistence question about buildings

Raising the persistence question about buildings consists in asking what is necessary and sufficient for a past or future architectural entity, like a building, to exist now. As usually happens with regard to other items, the persistence question about buildings is twisted together with some other questions, such as the buildinghood question (what is necessary and sufficient for something to be a building, or equivalently, what distinguishes a building from a non-building) and the ontological question – what a building exactly consists in: a material object rather than an event, a type rather than a token, and so on.[6]

Consider, for instance, Dominic Lopes's claim that while according to standard western ontology a building is a material object individuated as common sense individuates objects like chairs and tables, according to traditional Japanese ontology, buildings are token events, which may also include one or more round of reconstruction.[7] It is easy to see how important consequences for the persistence question follow from Lopes's specific answer to the ontological question. If an adherent of the standard western ontology visits the *goshoden* (i.e. the main sanctified structure) of Ise Jingū – one of Japan's most visited Shinto shrines – today, she is necessarily visiting a building that is no more than twenty years old. In fact the goshoden has been rebuilt about every twenty years in the latest twelve centuries, alternatively in one of two adjacent lots, introducing numerous changes in material and spatial specifications from one rebuilding to the next. From the point of view of standard western ontology, about one hundred different buildings have been built up and destroyed in that couple of adjacent lots since Ise Jingū was founded in around the sixth century. Quite differently, when an adherent of the traditional Japanese ontology visits the goshoden today, what she visits is the very same building that was built in the sixth century. In other words, if we take buildings to be token events, then the goshoden of Ise Jingū today is the same building as the goshoden of Ise Jingū in the sixth or the tenth century, since each is part of the same individual event – just like the first part of your birthday party yesterday at 8.00 pm, and the final part of your birthday party today at 4.00 am, are both with full rights temporal parts of the same party, so that Jenny can truly assert she attended the *same* party Jack did, provided that Jack showed up at the party yesterday at 8.00 pm and left at 9.00 pm while Jenny only popped in today at 4.00 am.

Indeed, a range of recent works by social and cultural geographers seems to conceptualise buildings less as material objects than as events, that is, performances where various materials are held together in specific assemblages by everyday social practices.[8] Many architects aware of this kind of literature have explicitly embraced the idea of working on complex spatial projects prioritising social and economic objectives rather than simply creating new material objects.[9]

No matter whether we consider a building to consist in a material object or an event, we may take it to consist in a type rather than a token. Here we must take into account Nelson Goodman's distinction between one-stage and two-stage arts.[10] While painting and literature are one-stage arts, since the resulting work of art can be fully experienced after the artist has painted or written it, classical music (but not jazz improvisation) is two-stage, since a performance must follow the act of composition in order for the work of art to be enjoyed. Now, it seems that architecture is a two-stage activity (we do not need to concede here that architecture is art): first a plan is produced and later one or more edifices are built following the plan. Although the architectural plan is dissimilar from a musical score in that it does not count as instructions to produce *performances* that are instances of the work, it is still similar to the musical score in that it counts as instructions to produce *something* that is an instance of the work – material constructions rather than performances.[11]

In this scenario, a first question is whether the architectural work (of art) is to be identified with the type expressed by the architectural plan or with one of its instances. A second question, however, is whether *the building* (as an architectural entity) should be identified with the type or with each of its instances. Perhaps the answer to this second question depends on the answer to the first – since, for example, the building is to be identified with whatever the architectural work (of art) is; and perhaps the two questions are independent.

In the remaining sections of the article I will assume buildings to be (i) architectural works (of art), (ii) material objects, and (iii) material instances of a type expressed by an architectural plan, in accordance with the commonly accepted view. However, I think that these issues should be considered as open; and I take each of them as an illustration of the interdependence of the persistence and ontological questions.

Relocation

An interesting problem worth investigating is how the persistence question about buildings is affected by their spatial relocation. It is thought-provoking if for no other reason than because we cannot find any corresponding problem affecting the persistence question about ordinary objects or works of art. We unproblematically consider statements of this kind as true:

> (1) the painting called '*Impression, soleil levant* by Monet' which was in Paris last year is the same painting as the painting called '*Impression, soleil levant* by Monet' which is in Las Vegas now (provided that the painting has been carefully moved from Paris to Las Vegas).

On the contrary, we may doubt whether a specific building would still be the same if we moved it to another location; and we would consider at least some statements of this kind as false: [Fig. 1]

> (2) the building called 'Notre Dame' that was in Paris last year is the same building as the building called 'Notre Dame' that is in Las Vegas now (after meticulous stone-by-stone transfer).[12]

It seems that to change the position of Notre Dame is to alter one of its essential properties, while no essential property of an ordinary object or work of art is ever altered by moving it. But why? We are in search of an explanation for the following proposition:

> (3) Differently from ordinary objects and works of art such as paintings, sculptures, songs, symphonies, tragedies, movies and novels, (the majority of) buildings are such that changing their position alters one of their essential properties.

One possible explanation of (3) is that buildings, differently from ordinary objects and works of art, are originally conceived by their planners as permanently located in a certain position. An advantage of this answer is that it correctly predicts that we would more easily accept statements like (2) with respect to buildings that were *not* originally conceived by their planners as permanently located in a certain position – like for example modular buildings. Still it should be noted that we would probably continue *rejecting* (2) even if an ancient, undisputedly authentic manuscript were discovered where Bishop Maurice de Sully reported that his first vision of Notre Dame was compatible with it being transferred in the future to 'a far land beyond the sea' – and I imagine nothing would change if analogous discoveries proved that the same authorial intent were attributable to any architect-like figure who contributed to the edification of the cathedral, such as to Jean de Chelles and Pierre de Montreuil.

We may also note that works of art *are not constitutively* located in a certain position even in cases where their authors originally conceived them so. Indeed, they *are not* generally *constitutively* located in a certain position *tout court*. But a few considerations are in order here.

First, Sherri Irvin has recently argued that the artist's sanction is decisive in fixing the boundaries of a work of art and to determine whether a certain feature of the work of art (even a future one) is to be considered as constitutive or accidental.[13] A corollary of her claim seems to be that, when an artist sanctions that a work of art cannot (or can) be moved, this results in the work's being (or being not) constitutively located in a certain position. But

Fig. 1: Notre Dame Cathedral, Île de la Cité, Paris, France. Photographer: David Monniaux.

isn't Irvin attributing too much power to the artist's sanction? Suppose for example that Vincent van Gogh had publicly declared in 1890 at relevant points during the production of *Wheatfield Under Thunderclouds* that it was to be conceived as an unconventional work of art among whose essential features had to be included new physical features at different moments in the future – that is, all the new physical features caused by a series of hard hammer blows to be delivered by the curators to the work in 1990, 2090, 2190 and so on. I am not convinced that we would agree with Irvin that the curators should obey Van Gogh, and above all that such an artist's sanction would have had an impact on what are the constitutive properties of the work. Irvin acknowledges that the artist's sanction functions in concert with a set of conventions, but the point here is precisely that these well-established common stances, when they exist – together with how the public *de facto* (most of the times conservatively) solves problems of metaphysical indeterminacy about works of art, such as those consisting in determining whether a specific property is constitutive or contingent – appear often normatively more relevant than the artist's sanction itself. To come to an actual case, the Czech-born writer Milan Kundera seems to have repeatedly sanctioned as a constitutive property of his literary works of art that they are published as a traditional book printed on paper rather than in digital form.[14] I doubt, however, also in this circumstance whether the artist's sanction has proved sufficient to make that property constitutive. This is why I am assuming that historical discoveries about Maurice de Sully, Jean de Chelles and Pierre de Montreuil's originally conceiving Notre Dame as movable would not be sufficient for us to stop rejecting (2).[15] And of course we would still be in need of an explanation of (3).

A second consideration: some special works of art exist that, differently from paintings, sculptures, songs, symphonies, tragedies, movies and novels, are constitutively located in a certain position. It is the case of all site-specific art, such as for example street art. Site-specific art is an artistic genre born in the 1960s and 1970s 'which incorporated the physical conditions of a particular location as integral to the production, presentation, and reception of art' and 'gave itself up to its environmental context,[16] being formally determined or directed by it'.[17] Street art is a subgenre of site-specific art that makes 'material use of the street that is internal to its meaning',[18] so that pulling it from the street would 'destroy […] its meaning and status as street art'.[19] I will come back to site-specific art and street art later in the essay. However it remains true that ordinary works of art *do not* normally turn out to be *constitutively* located in a certain position *tout court*, as previously noted.

To return to our main argument, we would still need an explanation of (3). One may say that what makes the difference is that buildings are particularly difficult to move, so that they are ordinarily never moved. Somehow, such immobility makes their being located in the particular position they occupy a *constitutive* property. A first difficulty is that we are not explaining why an *accidental* property – 'being durably located in a certain position *P*' – turns out to be a constitutive property. A second, related difficulty is that 'being difficult to move' and 'being durably located in a certain position *P*' are also properties of some ordinary objects. Consider the Ahnighito meteorite, which weighs 31 tons and can surely be classified as no less difficult to move than the average building – if for no other reason than because it cannot be dismantled and rebuilt. Its long-lasting immobility has once been violated when it was laboriously moved from Cape York, Greenland to the American Museum of Natural History in New York; and still its persistence has not been affected at all by this relocation. Then clearly it is not true that accidental immobility or difficulty to move *per se* can explain (3).

Another dead end is pointing at the fact that buildings – differently from ordinary objects and the aforementioned works of art – do have foundations that make them firmly implanted and deeply rooted in the ground, hence constitutively bound up with their location. In fact, on the one hand there are some buildings with respect to which statements of type (2) hold, and which at the same time do not have any foundations (such as the Doric Temple in the Triangular Forum in Pompeii) or are visually perceived as if their foundations are not a proper part of them (such as Shigeru Ban's Paper House in Yamanakako, which stands on an elevated, square platform). On the other hand, trees can survive relocation in spite of their being rooted deeply in the ground – so that even the General Sherman tree – the world's largest giant sequoia located in Sequoia National Park, California – is commonly conceived as a material object that would persist even if (carefully) moved to another park.

More complex imaginary scenarios

We can take a step forward by trying to further specify (3). When we say that '(the majority of) buildings are such that changing their position would alter one of their essential properties', we are not specific enough about *what exactly the essential property is* that is altered by a position change. One possibility is this:

> (4) Unlike ordinary objects and works of art, (the majority of) buildings are such that changing their position would alter one of their essential properties, that is, the property of being located in the particular part of the earth's surface they occupy.

Another, quite different possibility is this:

> (5) Unlike ordinary objects and works of art, (the majority of) buildings are such that changing their position would alter one of their essential properties, that is, the property of being surrounded by their specific external context.

Which is a correct specification of (3)? Consider again Notre Dame and its capacity to survive different kinds of change. Both (4) and (5) predict that we would reject (2) in case of a meticulous stone-by-stone transfer of Notre Dame from Paris to Las Vegas. Their predictions, however, would significantly differ with respect to more complex imaginary scenarios. Suppose that we transfer the entire city of Paris – Notre Dame included – to Clark County, Nevada. Like in the previous scenario, Notre Dame has been transferred to Las Vegas. But now – in spite of its occupying a lot which is very far away from its original location – it is still surrounded by the things that we used to call 'Quai de Montebello', 'the Préfecture de Police', 'the Pont de l'Archevêché', and so on, which have been scrupulously relocated as well. 'The Seine', too is flowing as usual along one side of the cathedral and between 'Île Saint-Louis' and 'Île de la Cité' (although its waters are now running from a source located somewhere in the US rather than in Burgundy). Would we judge that Notre Dame has survived the relocation? It seems to me that we would be inclined to accept (2) under these circumstances (in spite of the changes in climate, the quality of the sunlight, and so on). After all, Notre Dame would be surrounded by the same Parisian things it is usually surrounded by in Paris, as always, and this seems quite important for accepting (2).

Of course there should be an analogous hesitation in considering the relocated 'Préfecture de Police' as the same architectural entity as the Préfecture de Police, the relocated 'Pont de l'Archevêché' as the same architectural entity as the Pont de l'Archevêché, and so on. This in turn may cast doubt on whether to accept the previous scenario as one in which the outer context of Notre Dame has remained the same (and, only its absolute position on the earth's surface has changed, along with the ensuing astronomic and climatic consequences). Two answers are in order. The first answer is the holistic claim that the relocated Notre Dame would

be the same as the Notre Dame in Paris by virtue of the relocated Quai de Montebello, Préfecture de Police and Pont de l'Archevêché being the same as the Quai de Montebello, Préfecture de Police and Pont de l'Archevêché in Paris, and vice versa – the relocated Quai de Montebello would be the same as the Quai de Montebello in Paris by virtue of the relocated Notre Dame, Préfecture de Police and Pont de l'Archevêché being the same as the Notre Dame, Préfecture de Police and Pont de l'Archevêché in Paris. To say it in French, *tout se tient* with respect to buildings' persistence after relocation. The second answer is that the requirements for an outer context at t_1 to be the same as another outer context at t_2 are weaker than the requirements for a building at t_1 to be the same as another building at t_2. Specifically, for context *X* at t_1 to be the same as context *Y* at t_2 it is not necessary that every building that is part of *X* at t_1 be the same as one (and only one) building that is part of *Y* at t_2. In particular, either physical identity or physical continuity seems perfectly sufficient to guarantee context identity over time, although neither seems sufficient to guarantee building identity over time. Since the scenario we have imagined is a scenario in which physical identity is preserved, it can be considered a scenario in which the outer context is the same in spite of the fact that we may hesitate to consider each component architectural entity – such as the relocated Préfecture de Police and Pont de l'Archevêché – as being the same as the Préfecture de Police and Pont de l'Archevêché that were in Paris. Incidentally, the latter answer also explains why we may accept (2) by virtue of the outer context being the same as in Paris, while at the same time being uncertain as to whether the relocated town is identical with Paris. We may add that the problem whether the relocated town is the same as Paris may depend in turn on whether the relocated town is surrounded by the same specific outer context Paris was originally surrounded by (and so on).

Now consider the opposite situation, in which we change the building's outer context by preserving its original position on a specific part of the earth's surface. Suppose that we leave Notre Dame where it has always been, but we substitute the whole town of Paris around the cathedral for the town of Las Vegas (with the exception of the Plaza Hotel and Casino), say, which we eliminate in order to create an empty space in which to nestle Notre Dame, at the very beginning of the Freemont Street Experience. [Fig. 2]

The Hôtel-Dieu, the Préfecture de Police, the Conciergerie and the Pont Saint-Michel are not around the building anymore. Along its spiral 387-step-climb it is obviously still possible to have a closer look at its famous gargoyles and chimeras, but there is no breath-taking panorama of Paris; rather you can enjoy a spectacular view of downtown Las Vegas with its glowing neon signs. I assume that in this case we might decide to reject (2).

Our mental experiments reveal that (5) rather than (4) is an adequate specification of (3) – what may in turn prove valuable for explaining it. The main question now is: why is the property of being surrounded by their specific outer context an *essential* property of buildings, but not of ordinary objects and works of art?

The answer

Consider a musical work of art like Beethoven's Fifth Symphony. Although it was premiered on 22 December 1808 at the Theater an der Wien in Vienna conducted by Beethoven himself, we usually do not consider it *essential* for a musical performance to count as an execution of Beethoven's Fifth Symphony that it be performed on 22 December 1808 or be conducted by Beethoven (that would imply that it is no longer possible to perform it). Why? Because we have a decisive and clear criterion for

Fig. 2: The Fremont Street Experience by The Jerde Partnership (1995), Las Vegas, Nevada, USA. Photographer: Jean-Christophe Benoist

distinguishing contingent from constitutive properties in the case of classical music. The criterion – as Goodman pointed out – is that the constitutive properties are only those prescribed by the score; and the score is in a definite notation. Therefore any performance that complies with the score *is* a performance of Beethoven's Fifth Symphony, regardless of the circumstances under which it is played.[20] The same – mutatis mutandis – holds for works of art like songs, comedies, tragedies and novels. For paintings and sculptures things are different: there is no notation. This means that we lack any criterion for telling contingent from constitutive properties. As Goodman explains, 'in painting, with no such alphabet of characters, none of the pictorial properties – none of the properties the picture has as such – is distinguished as constitutive; no such feature can be dismissed as contingent, and no deviation is insignificant'.[21] Still – it must be observed – we generally *do not* consider that contextual properties are among the constitutive properties of paintings. For example, we do not think that paintings cease to be the particular works of art they are if they are moved away from the painter's atelier or from the location where the painter has chosen to exhibit them. The reason seems to be that our aesthetic judgements about paintings only concern, and are grounded on, intrinsic properties of the painting. No property of any entity forming part of the outer context – and no relational properties of the painting among whose relata are entities forming part of its outer context (like 'being illuminated in a particular way by *L*') – can ever found an aesthetic judgement about a painting. Without a doubt, things might have been different: it might have been the case that our most serious aesthetic evaluation of paintings could also take the form of judgements like: 'Guernica has such a dramatic quality thanks to the giant white-haired museum attendant standing guard at the door next to it'. But usually, nothing of the like happens. And – when we deal with a kind of work of art for which a notational language is absent or in any case insufficient to specify all the constitutive properties – those features, and only those features, that are eligible to be aesthetically relevant in the aesthetic judgements about the works of art of that kind are also not dismissible as contingent with regards to the individual works of art of that kind. In other words, when a notational language exists, it identifies constitutive properties; when a notational language either does not exist or is incapable of specifying all the constitutive properties, the source of differentiation among constitutive and non-constitutive properties lies in a property's being eligible or not eligible to be aesthetically relevant in the aesthetic judgements about those works. Since such eligibility depends in turn on historical, social, cultural and ideological factors, the very distinction among constitutive and non-constitutive properties for each family of works characterised by missing or 'weak' notation is finally contingent on such factors. This amounts to saying that, whenever it has not been culturally solved by precipitating a notational language which in turn provides 'a theoretically decisive test for compliance', the problem of determining what the constitutive properties of a specific kind of work of art are is still fluid and at the mercy of socio-culturally accepted aesthetic judgemental practises.

This story can be useful to shed light on the peculiar case of buildings, at least if – as I am assuming – buildings are or can be equated with works of art after all. First, we do have in architecture a kind of notational language in plans; but it is manifest that we usually allow among the constitutive properties of edifices much more intrinsic properties than just those indicated in plans (for example, materials, interaction with sunlight, shadows).[22] Thus, as in painting, in architecture no intrinsic feature can usually be dismissed as contingent.

Secondly, differently than for paintings, symphonies and novels, our aesthetic judgements about buildings often concern, and are grounded on, extrinsic properties too: relational properties of

the building among whose relata are entities that form part of its outer context, and even non-relational properties directly instantiated by entities belonging to that context. To give some examples, it is not uncommon for aesthetic judgements about Frank Lloyd Wright's Fallingwater to rely on its integration with the striking natural surroundings and even on the beauty of the waterfall itself; for aesthetic judgements about Palazzo Sansedoni in Siena to mention some properties of the other buildings lining the shell-shaped Piazza del Campo; for aesthetic judgements about Alila Villas Uluwatu by WOHA Architects to stress the importance of the sea view and the shadows cast inside by the sunlight; [Fig. 3] and for aesthetic judgements about Under Pohutukawa Residence by Herbst Architects to depend on properties relating to the amazing mature Pohutukawa trees around the house. [Fig. 4] Indeed there is no extrinsic contextual feature of an architectural entity that cannot be crucially used in an aesthetic judgement about it. Therefore, regarding architectural works in general, the set of features that cannot be dismissed as contingent includes all contextual features. This explains why usually buildings cannot survive relocation: because usually there is no basis for ruling out any extrinsic contextual feature of the work as inessential. The same is clearly not true of ordinary objects and works of art, whose essential features are generally considered to be a subset of their intrinsic features, no matter what view we take of their specific nature.[23] This gives us an explanation of (5).

A further difficulty

There is another curious aspect of the problem that deserves analysis. We would usually expect that the higher the number of the contextual properties of a building that are altered by a particular relocation, the more threatening that relocation would be to the persistence of the building. (Remember that contextual properties are not just constitutive properties, and rather are properties that can neither be dismissed as contingent nor distinguished as constitutive. Thus, while altering the majority or the totality of contextual properties certainly prevents the persistence of the building, altering just one or a handful of them can hardly be considered to do so). And indeed, if asked to compare Notre Dame's meticulous stone-by-stone transfer to Las Vegas with Notre Dame's meticulous stone-by-stone transfer to the Île Saint-Louis (where many 'Parisian properties' are preserved, such as for example 'being near the Pont de l'Archevêché'), we would very probably value the latter relocation as less menacing to Notre Dame's persistence than the former.

We would also expect very minute context changes to be negligible as to the persistence of a building. Indeed some minor alteration of the outer context, like the appearance of M. Dupont walking down the Rue de la Cité does not alter Notre Dame's identity and is entirely innocuous as to its persistence. We are tempted to say that there is something like a maximum partial change in the outer context that a building can survive, and that it is perhaps possible to determine it.

But a difficulty arises here. Whatever the maximum context change that is not detrimental to Notre Dame's persistence – and independently of whether we can ever determine it – it is indisputable that there is an even greater context change that is nevertheless revealed *not* to be lethal to Notre Dame's persistence, namely the change from thirteenth-century Paris to contemporary Paris. Indeed Paris has changed dramatically around Notre Dame since its construction, to the point that we can agree that contemporary Paris is more similar to – say – contemporary Lyon than to thirteenth-century Paris. Yet we would value Notre Dame's stone-by-stone transfer to contemporary Lyon as more threatening to its persistence than its outer context change from thirteenth-century Paris to contemporary Paris, which indeed proved

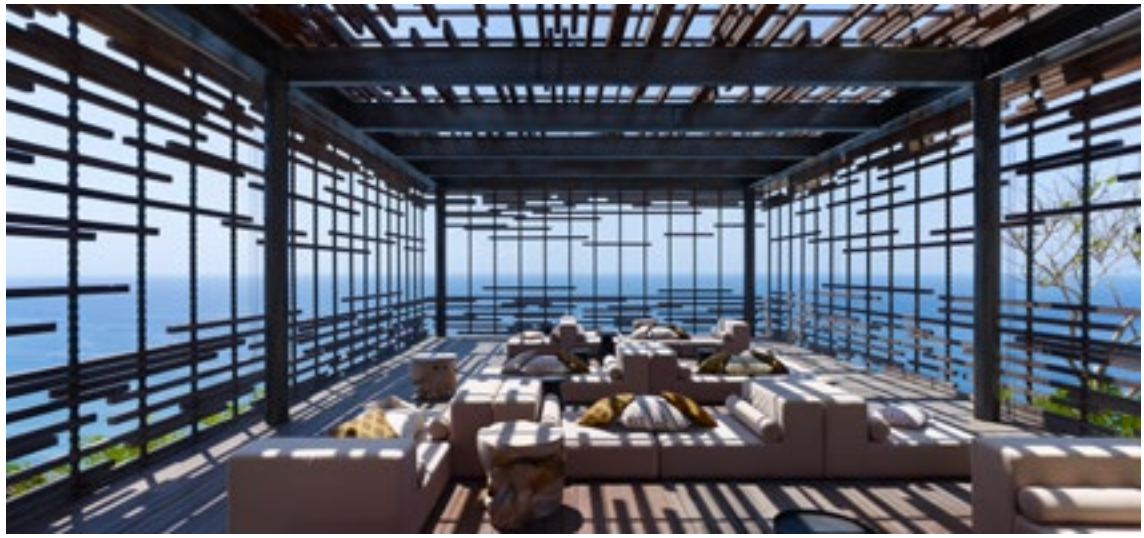

Fig. 3: Alila Villas Uluwatu by WOHA Architects (2009), Bali, Indonesia. Photographer: Patrick Bingham-Hall

Fig. 4: Under Pohutukawa Residence by Herbst Architects (2011), Piha North, New Zealand. Photographer: Patrick Reynolds. Contractor: John Armstrong

inoffensive. In any case, it seems that the context change from thirteenth-century Paris to contemporary Paris is both greater and less threatening that any conjectural maximum context change that is not detrimental to Notre Dame's persistence – such as, for example, Notre Dame's 180-degree rotation so that it faces east instead of west, or its transfer to the Square de la Tour Saint-Jacques in the fourth arrondissement in Paris.

One possible answer is that the slower a context change, the less menacing its magnitude. According to this hypothesis, replacing the whole city of Paris around Notre Dame with the city of Las Vegas would not affect Notre Dame's persistence, provided that the replacement is gradual enough (imagine substituting no more than one Parisian brick around Notre Dame with one Las Vegas brick per day). Therefore, while we cannot accept that:

> (6) the building called 'Notre Dame' that was surrounded by Paris *last year* is the same building as the building called 'Notre Dame' that is surrounded by a scrupulously relocated Las Vegas now,

we may accept that:

> (7) the building called 'Notre Dame' that was surrounded by Paris *800 years ago* is the same building as the building called 'Notre Dame' that is surrounded by a scrupulously relocated Las Vegas now,

provided that the replacement of Paris with Las Vegas occurs gradually along all the 800-year period. Once again, it must be noted that contemporary Paris can be judged as more similar to contemporary Las Vegas than to the thirteenth-century Paris; and if the context change from thirteenth-century Paris to contemporary Paris proved inoffensive as to Notre Dame's persistence, the context change from contemporary Paris to Las Vegas as it is now – if it occurred gradually over the course of 800 years – would reasonably prove innocuous too. On the contrary, the quick and immediate relocation of Notre Dame to Las Vegas, however meticulous, is not gradual; and any *gradual* transfer of Notre Dame from Paris to Las Vegas seems to affect Notre Dame's persistence for independent reasons (namely the cathedral would cease to exist – or it would be in no place, or it would be in two very different places – for too long a time).

A weakness affecting this position is that it is not clear why a building can survive a significant alteration to its contextual properties when the alteration is slow and gradual. After all, altering a constitutive property of an entity *slowly and gradually* is nonetheless an alteration. Perhaps it is simply true that, for all properties of an architectural entity that can be neither dismissed as contingent nor distinguished as constitutive, there are some alterations that are so slow and gradual that the entity can survive them. Or, perhaps contextual properties can (only) be temporarily (although necessarily for a very long time) constitutive of an architectural entity.

Another interesting answer is this: the change from thirteenth-century Paris to contemporary Paris around Notre Dame proved to be inoffensive as to Notre Dame's persistence because *it is not a context change*, although it certainly is a change of many (if not all) of its contextual properties. The idea is that contexts – just like persons, cities and Theseus's ships – can persist in spite of ongoing changes to their properties. We may try to specify the relation that would constitute a sufficient condition for the persistence of contexts by analogy with the psychological relation that is thought to be the necessary and sufficient condition for the persistence of people. For example:

> *X* at t_1 is the same context as *Y* at t_2 if *X* is persistentially continuous with *Y*, where persistential continuity is defined as the relation realised by overlapping chains of strong persistential connectedness; in turn,

> persistential connectedness is the holding of particular connections realised by unproblematic instantiations of the relationship of identity over time of architectural entities and other macroentities like trees and rivers (such as the relationships among a war memorial yesterday and the same war memorial persisting today, or among a coffee house on Monday and the same coffee house persisting on Tuesday), and *strong* persistential connectedness is the holding of very many such connections.[24]

However intriguing, this path appears doomed to circularity. In fact – one may say – we would be explaining Notre Dame's persistence by appealing to the persistence of its context, while explaining the persistence of the context by appealing to the persistence of many architectural entities like Notre Dame. We can escape circularity by offering a very different account of context persistence, since either physical identity, or physical continuity, or in certain cases even perceptual indistinguibility or perceptual similarity seem perfectly sufficient to guarantee context identity over time.[25] Or we may argue that there is no circularity here, since we are just saying that persistence questions about certain architectural entities located in the same region of space are intertwined among each other as well as with those about other non-architectural macroentities like trees and hills, and when we are uncertain about the persistence of architectural entity *P* over time period *T*, we should look at the rate of persistence of the other things around *P* over *T* of which we are reasonably certain. Looking at the overlapping chains of strong persistential connectedness is nothing but a specific elaborate way of doing it. Talking about contexts, and identity of contexts over time, is only introducing shorter and more convenient language to do the same, in a similarly specific elaborate way.

Of course, if we want to hold that the change from thirteenth-century Paris to contemporary Paris around Notre Dame proved to be inoffensive as to Notre Dame's persistence because it is not a context change, a clarification is needed as to how Notre Dame's contextual features are identified. We have claimed that the set of Notre Dame's features that cannot be dismissed as contingent includes all its contextual features. What we need is for Notre Dame's contextual features to be identified so as not to change as far as the context persists. For example, they must rather include 'being illuminated in whatever particular way it happens to be illuminated in context *X*' than 'being illuminated in particular way *W*'.

A third, perhaps more obvious answer is to concede that the change from thirteenth-century Paris to contemporary Paris was a change of the context around Notre Dame, and to remark that nonetheless it was *not a city change*. It is possible for architectural entities to persist over a very large context change, provided that this change is not also a city change. Again, we need to identify contextual properties so as not to vary as far as the city persists (for example: 'being illuminated by *the light of Paris*'). And – above all – we need to account for the persistence of cities without relying on the persistence of the architectural entities that are part of them. One of the problems of this answer, however, is that while every architectural entity is surrounded by a context, not every architectural entity is surrounded by a city. Working on contexts rather than cities has the advantage that our conclusions will account not only for Notre Dame, but also for Under Pohutukawa Residence, among whose constitutive properties seem to be properties relating to the wonderful mature Pohutukawa trees currently standing in its remarkable context.

Conclusions

I have focused on the problem of how the persistence question about buildings is affected by their spatial relocation, and why in particular (the majority of) buildings are such that to change their position is to alter one of their essential properties – while

nothing similar happens to ordinary objects and traditional works of art .

I have argued that the solution to the mystery relies on how the distinction among constitutive and non-constitutive properties is drawn in the case of architecture. In the absence of a strong notational language, this distinction is unstable and contingent upon what properties are admissible to relevantly appear in aesthetic judgements about architectural entities such as buildings at a given time and place. Since currently in Western culture, aesthetic judgements about architectural entities can *de facto* relevantly mention extrinsic contextual properties, no extrinsic contextual property can ever be dismissed as inessential to any architectural entity possessing it.

Once we have an explanation of why buildings can usually not survive relocation, we are in a better position to explore the relation among architecture and site-specific art. It seems to me that if we consider architecture to be art, we should classify it as a particular kind of site-specific art. Again, even if we do not think of architecture as art, whenever we equate architectural entities with works of art, we should equate them with site-specific works of art. In fact site-specific works of art as such appear to be incapable of surviving relocation for the same reasons that architectural entities are incapable of surviving relocation; like for architectural entities, the essential property of the site-specific works of art affected by their relocation is that of being surrounded by their specific outer context rather than that of being located in the particular part of earth's surface they occupy; and the paradox of the harmlessness of the change of surrounding context also afflicts site-specific art. It could even be argued that the many points in common among architectural entities and site-specific works of art are a sufficient reason for considering architecture to be (site-specific) art after all.

One may argue that, in particular, inasmuch as urban buildings are to be considered as art, they are to be considered as *street art*. Consider the definition of street art offered by Nicholas A. Riggle: a work of art is street art if, and only if, (i) it uses the street as an artistic resource, and (ii) the artistic use of the street is internal to its significance, that is, it contributes essentially to its meaning.[26] It is difficult to see how any urban building which we accept to qualify as art can fail to satisfy (i) and (ii). (It must be remarked, however, that condition (ii) requires outer contextual properties to be necessarily essential rather than barely not dismissable as inessential.) In fact Riggle assumes his definition to imply that the work's meaning is severely compromised when it is removed from the street.[27] This is no different from saying that some street-related extrinsic contextual properties are constitutive to the work of street art (apparently because they are constitutive to their meaning, which in turn is constitutive to its identity). Similarly, as said, we cannot remove an urban building from the street without threatening its identity, precisely because no street-related extrinsic contextual properties can be dismissed as non-constitutive. Although there is no logical necessity, I take this to be convincing evidence for considering urban buildings as street art (provided that we want to consider them as art in the first place). Note that, if it is correct to qualify urban buildings as street art, then Riggle is wrong in claiming that street art is very likely to be 'illegal, anonymous, ephemeral, highly creative, and attractive' as well as 'cheap to make, free to experience,[28] and owned and overseen by no one', since urban buildings – which easily turn out to constitute the largest part of street art in a city – will barely possess these features.[29]

It is interesting to note that site-specific works of art realised in the 1960s and 1970s have been somehow 'mobilised' by pressures of the museum culture and art market of the late 1980s. Many site-specific works of art have been relocated for important exhibitions (and, in some cases, new

refabrications have been created *ad hoc*). As Susan Hapgood puts it, 'the once-popular term "site-specific" has come to mean "movable under the right circumstances'.[30] In other words, being located in a particular position has ceased to be an essential property of these works of art, while 'site specificity is redescribed as the personal aesthetic choice of an artist's *stylistic* preference rather than a structural reorganisation of the aesthetic experience'.[31] This phenomenon seems consistent with the view that I proposed, according to which when a notational language is either missing or incapable of specifying all the constitutive properties (which is certainly the case for the works of art under consideration), the differentiation among constitutive and non-constitutive properties is unstable and depends in the first instance on what properties are admissible to relevantly appear in aesthetic judgements about the works of art, which in turn is contingent on socio-cultural and material changes such as for example the 'domestication of vanguardist works by the dominant culture', as Kwon reads this specific transformation.[32]

Kwon remarks that the increasing institutional interest in current site-oriented art has produced the figure of an itinerant artist who re-presents the same site-responsive work of art in many different locations around the world. Again, I think we may interpret this phenomenon as a change in the metaphysical status of the extrinsic contextual features of the work, which are now accidental to the work, while previously were not dismissable as inessential. The 'new' site-oriented work of art is now constituted just by its intrinsic properties – perhaps with a special attention to those affording the development of unpredictable relations with the modifiable outer context.

We can speculate on what would happen to architecture if the spatial relocation of buildings progressively became technically practicable as well as financially appealing. It is possible that, if the culture industry and the political economy in the future started to make the relocation of buildings happen, we would in turn change our ways of aesthetically judging buildings in the first place. This would produce a transformation in the metaphysical status of the extrinsic contextual features of buildings, which would lose their qualification of 'not dismissable as inessential'. We might take our current intuition that *these* would be the effects of introducing the practise of relocating buildings as further evidence for the thesis according to which architecture is one kind of site-specific art. What would happen to architecture if transferability becomes reality is apparently no different from what has happened to once site-specific (non-architectural) art under the same circumstances.

I assume that it is possible to offer alternative readings of the recent mobilisation of site-oriented works of art. For instance, we may want to say that the outer contextual properties have never ceased to be not dismissable as inessential, and in consequence there is one numerically different site-specific work of art at each location at which the artist re-represents her original project. But again, it seems that one who holds this view will have no reason for discarding the very same view with regard to the mobilisation of buildings. It is important that – whatever one thinks of the consequences of relocation for site-responsive art – the effects on architecture are taken to be the same.

To understand why architectural entities are not *currently* thought to survive spatial relocation is not a trivial issue. I have tried not only to offer an explanation of this fact, but also to show how casting light on this question has interesting consequences for our knowledge of the ontology and aesthetics of architecture in general.

Notes

1. See Max Page and Randall Mason, 'Rethinking the

Roots', in *Historic Preservation: An Introduction to Its History, Principles, and Practises*, ed. Norman Tyler, Ted J. Ligibel and Ilene R. Tyler (New York: W. W. Norton and Company, 2009).

2. UNESCO, *Operational Guidelines for the Implementation of the World Heritage Convention* (Paris: World Heritage Centre, 2016). Relevant to the present topic, 'Nominations of immovable heritage which are likely to become movable will not be considered' (par. 48).
3. Miwon Kwon, *One Place After Another. Site-Specific Art and Locational Identity* (Cambridge, MA: The MIT Press, 2002), Chapter 2.
4. See Bruno Latour and Albena Yaneva, 'Give Me a Gun and I Will Make All Buildings Move: An ANT's View of Architecture', *Explorations in Architecture: Teaching, Design, Research* (2008): 80–89; Jane M. Jacobs, 'A Geography of Big Things', *Cultural Geographies* 13, no. 1 (2006): 1–27; Gillian Rose, Monica Degen and Begun Basdas, 'More on "Big Things": Buildings Events and Feelings', *Transactions of the Institute of British Geographers* 35, no. 3 (2010): 334–349.
5. Without this assumption, it would be possible that the effects of relocation on the persistence of buildings be systematically causally produced *only* by the changes in that part of the broad context that is not also part of the narrow context – e.g. *only* by the changes in the cultural traits of the people living around the building or relating to it, for example. It is clear that, in this case, restricting one's attention to the covariation between the narrow context and the persistence of the building would be misleading.
6. See Saul Fisher, 'Philosophy of Architecture', in *The Stanford Encyclopedia of Philosophy* (Fall 2015 Editio n), ed. Edward N. Zalta, http://plato.stanford.edu.
7. Dominic McIver Lopes, 'Shikinen Sengu and the Ontology of Architecture in Japan', *Journal of Aesthetics and Art Criticism* 65, no.1 (2007): 77–84.
8. See Loretta Lees, 'Towards a Critical Geography of Architecture: The Case of an Ersatz Colosseum', *Ecumene* 8, no. 1 (2001): 51–86; Jacobs, 'Geography of Big Things'; Rose, 'More on "Big Things"'.
9. Colin Lorne, 'Spatial Agency and Practising Architecture Beyond Buildings', *Social and Cultural Geography* 18, no. 2 (2016): 268–287.
10. Nelson Goodman, *Languages of Art* (Indianapolis: Bobbs-Merrill, 1968).
11. Ted Nannicelli, 'Instructions and Artworks: Musical Scores, Theatrical Scripts, Architectural Plans, and Screenplays', *British Journal of Aesthetics* 51, no. 4 (2011): 400.
12. In my experience as a teacher in a Department of Architecture, about 80 percent of aspiring architects agree that Notre Dame Cathedral would not survive its meticulous stone-by-stone transfer from Paris to Las Vegas.
13. Sherri Irvin, 'The Artist's Sanction in Contemporary Art', *Journal of Aesthetics and Art Criticism* 63, no. 4 (2005): 315–326.
14. See 'Le numérique ne passera pas par Kundera', *L'Express*, 19 July 2012.
15. I am assuming it to be correct to allow either an identification (if architecture is an art) or at least a homology (if architecture is not an art) between the figure of the architect and that of the artist.
16. Kwon, *One Place After Another*, 1.
17. Ibid., 11.
18. Nicholas Alden Riggle, 'Street Art: The Transfiguration of the Commonplaces', *Journal of Aesthetics and Art Criticism* 68, no.3 (2010): 246.
19. Riggle, 'Street Art', 248.
20. Goodman, *Languages of Art*, 117–118.
21. Ibid., 116.
22. This is what Nannicelli means when he says that musical scores and theatrical scripts – unlike architectural plans – are *work-determinative*. While musical scores and theatrical scripts specify *all* the constitutive properties of their related works of art, architectural plans only determine *part of* them. Nannicelli, 'Instructions and Artworks', 400.
23. I voluntarily ignore the problem that, if one takes a person's essential properties to be (at least in part) psychological properties, these may turn out to be (at least in part) extrinsic by virtue of the fact that some (if not all) mental states may have a broad content – that is, a content that is not completely determined by the

individual's intrinsic properties. See Curtis Brown, 'Narrow Mental Content', in *The Stanford Encyclopedia of Philosophy* (Summer 2016 Edition), ed. Edward N. Zalta, https://plato.stanford.edu.

24. See Derek Parfit, *Reasons and Persons* (Oxford: Oxford University Press, 1984), 207.
25. Note that the connective in the above definition is 'if' rather than 'if and only if'. Indeed the reason is that, as I have affirmed earlier, for context *X* at t_1 to be the same as context *Y* at t_2 it is not necessary that every architectural or non-architectural macroentity that is part of *X* at t_1 be the same as one (and only one) macroentity that is part of *Y* at t_2. Consider, for example, Under Pohutukawa Residence by Herbst Architects: it seems sufficient for its outer context to persist that there are many mature Pohutukawa trees all around it, while it is not relevant at all that they are *the same mature Pohutukawa trees.*
26. Riggle, 'Street Art', 245–246.
27. Ibid., 246.
28. Ibid., 246.
29. Ibid., 249.
30. Susan Hapgood, 'Remaking Art History', *Art in America* 78, no.7 (1990): 120.
31. Kwon, *One Place After Another*, 38.
32. Ibid., 38.

Biography

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Reflections on Pragmatism as a Philosophy of Architecture

David Macarthur

The official title of this volume is *Analytic Philosophy and Architecture* but the editors also encouraged contributions concerning the philosophical tradition of pragmatism, which is stationed outside the opposing encampments of analytic and continental philosophy.[1] I shall take up this invitation in the present essay to contribute to the topic 'Pragmatist Philosophy and Architecture'. What pragmatism is, or how we should understand it in the context of architecture, will emerge as we proceed.

The specific motivation for this essay is the appearance of two books in the first decade of the twenty-first century which both invoke the name of 'pragmatism' in expressing the hope for a new beginning in the theory and practice of architecture: William S. Saunders (ed.) *The New Architectural Pragmatism* (2007); and Joan Ockman (ed.) *The Pragmatist Imagination* (2000).[2] In both of these collections the name of pragmatism is associated with bringing the theory and practice, or the abstractions and the realities, of architecture into some new more intimate alignment.

Nonetheless, at first glance, Saunders and Ockman mean quite different things by the term 'pragmatism'. Saunders advocates a 'pragmatic' stance in the familiar businessman's sense that one might associate with America's famous 'can do!' attitude. The OED defines it thus: 'dealing with things sensibly and realistically in a way that is based on practical rather than theoretical considerations.' Pragmatism is supposed to indicate a third way beyond the two sides of the criticality vs post-criticality debate – which concerns advocating either an architecture that takes up a discursively articulable oppositional stance to the dominant culture and an architecture which sees no point in criticising economic or political power structures and instead tries to find 'adaptive syntheses' of the multiple dynamic forces and contingencies that it inevitably confronts.[3]

Pragmatism in this businessman's sense indicates a way beyond this debate only in so far as it alleviates two anxieties Saunders identifies with post-criticality: 1) in the reaction against the over-intellectualised criticality of the 1990s there is a danger of going too far in the opposite direction of anti-intellectualism, an understandable but self-defeating over-reaction to a period of pseudo-intellectual abstraction; and 2) there is the danger of a mindless post-modern acquiescence in the political and economic *status quo*, the fear of an architecture too complacent and spineless in its ethical and political withdrawal to take a stand on controversial issues within the wider culture.

We might characterise the contemporary architectural scene by saying that architecture schools are slowly emerging from a period of *philosophical vampirism*, according to which they suffered from a powerful need to use philosophies of all kinds – perhaps especially fashionable continental philosophies – matched by an equally powerful disappointment, an incapacity to find any real or

lasting satisfaction in any given philosophy; or, at least, not the satisfaction originally craved. But for each philosophy rejected another philosophy was adopted and the cycle continued. That Saunders uses the word 'pragmatism' without explicitly invoking the philosophical tradition that goes by that very name is too noticeable to avoid comment. What it expresses, I take it, is an understandable suspicion of philosophy in the wake of this period of vampirism, as if it is unclear what good *any* philosophy, could do for architecture. As we will see, this suspicion of philosophy is a theme of both books. But disappointment in philosophy is the flip-side of overblown ambitions for it.

Joan Ockman's collection contrasts with the Saunders collection in explicitly invoking the classical American pragmatist tradition of Charles Peirce, William James and John Dewey. But a weakness of her collection is that it allows authors to define pragmatism in very different ways without attempting to say why they belong to the same general outlook. Ockman diagnoses the malady of contemporary architecture as 'the widely acknowledged schism existing between the theory and practice of architecture today.'[4] It is no surprise, then, that pragmatism might seem to offer some hope for a new beginning.[5] One of its central themes is *the attempt to overcome the theory/practice dichotomy* – that is, a fixed metaphysical dualism about the nature of things . As we will see, that has led many to the misguided view that pragmatism solves our practical or professional problems.

In the concluding *Afterword* the American historian Casey Blake adopts a suspicious attitude towards the suggestion that pragmatism might have any significant bearing upon architecture: 'What, if anything, [does] the pragmatist imagination [have] to offer the discussions of architecture, design, urban space, and political change at this turn-of-the-century moment?' More specific questions follow: Does pragmatist epistemology-as-inquiry issue in 'any particular political position'? Does a pragmatist aesthetics focusing on lived experience recommend 'any particular approach to architecture and urban design'? Does a pragmatist approach to the public sphere – one that treats the relation between individual and society as reciprocal and organic – involve 'a commitment to particular understandings of public space, place and scale'?[6]

A general suspicion of pragmatism, despite its apparent celebration, is further signaled by the absence in either volume of any contribution or critical discussion of the work of Richard Sennett, an important sociologist and urban theorist who explicitly endorses a pragmatist outlook.[7] His definition of pragmatism, geared to his research work on modern cities and societies, is of particular interest in the present context:

> [the pragmatist] movement has dedicated itself to making philosophical sense of concrete experience […] From its origins pragmatism addressed *the quality of experience* as well as sheer facts on the ground […] Its animating impulse remains to engage with ordinary, plural, constructive human activities.[8]

Let us take this as the core component of a working definition for present purposes, one that stresses a *multi-dimensional notion of experience*, a *complex, contingent and uncertain reality* and *first-hand engagement in human practices* (echoing Marx's *praxis* but without the Hegelian baggage of an absolute reason).

Curiously, Sennett neglects to mention that the ethos of craftsmanship is at the heart of pragmatism's *democratic experimentalist* epistemology. We *craft* our system of beliefs: adjusting them to fit new facts and experiences whilst retaining as many as possible in the process. Epistemology is here re-imagined as a fallible anti-authoritarian theory of collective inquiry based on empirical experimentation animated by democratic ideals of equal respect,

openness to criticism without fear or favour, and toleration of alternative approaches and dissenting opinions. The guiding principle is that everything, including the method itself, is put to the test of experience, including the experiences of others.[9]

On suspicion of (pragmatist) philosophy

As we have seen, Blake asks whether pragmatism yields any *particular* positions or understandings in the realm of architecture. He doubts whether it does and whether a pragmatist revival would have any 'immediate political payoff'. But it is worth asking whether the fault lies more with the questions he expects pragmatism to answer than with pragmatism itself.

Blake condemns pragmatism for what it cannot do because he is too sure he knows what it hopes or aspires to do. I want to question his implicit conception of its aspirations. For why should we expect or hope pragmatism – or indeed any philosophical outlook – to have *specific* architectural or political payoffs? We must ask, what is the relation between pragmatism and the questions of special concern to architecture (at least in advanced Western countries in the early twenty-first century) that Blake poses?

In the broadest terms, philosophy is reason's reflection on itself, a study of the nature and scope of reason; but also a study of its limits. If philosophy inevitably tends towards rationalism then pragmatism is a counter to that dominant tendency – a form of *empiricism*, a movement calling for a return to experience that arises time and again in the history of philosophy as a dialectical and skeptical reaction to rationalism. Pragmatism, like empiricism generally, calls attention to the depth and variety of human experience as well as the *limits* of argument. It is most assuredly not a philosophy that puts all its stock in reason, for all its undeniable importance. As William James argues, the impact of reason or the power of an argument to change one's mind depends upon what he calls one's 'intellectual temperament' which includes personal taste and sensibility, as well as one's imagination and passions.[10] Pragmatism is the last philosophy to think that open, informed and serious thinking about a difficult problem in architecture or anything else must lead all who engage in it to a single agreed-upon conclusion.

Pragmatism is a form of anti-dogmatism that celebrates an open plurality of specific methods, perspectives and attitudes to the world. It aims to 'let many flowers bloom' in philosophy by *not* claiming any special authority or a priori access to the truth, over and above experience, as Dewey explains:

> *[Philosophy's] primary concern is to clarify, liberate, and extend the goods which inhere in the naturally generated functions of experience.* It has no call to create a world of "reality" *de novo*, nor to delve into secrets of Being hidden from common sense and science. It has no stock of information or body of knowledge peculiarly its own; if it does not always become ridiculous when it sets up as a rival of science, it is only because a particular philosopher happens to be also, as a human being, a prophetic man of science. *Its business is to accept and to utilize for a purpose the best available knowledge of its own time and place. And this purpose is criticism of beliefs, institutions, customs, policies with respect to their bearing upon good.* This does not mean their bearing upon *the* good, as something itself formulated and attained within philosophy. For as philosophy has no private store of knowledge or of methods for attaining truth, so it has no private access to good. As it accepts knowledge of facts and principles from those competent in science and inquiry, *it accepts the goods that are diffused in human experience*. It has no Mosaic or Pauline authority of revelation entrusted to it. But *it has the authority of intelligence, of criticism of these common and natural goods.*[11]

These words are best read against the background of a certain conception of the role or function of

philosophy – one that is overlooked or not clearly in focus in the two books under discussion.

We have already briefly considered Sennett's positive characterisation of pragmatism in the setting of urban theory, and I shall return to consider it further shortly. But in order to better understand how we are to take positive characterisations of pragmatism including that of Dewey, it is worth observing that Richard Rorty, a leading neo-pragmatist, often characterises pragmatism in *negative* terms: fallibilism (the denial of absolute certainty); experimentalism (the denial of unrevisable a priori truth); anti-foundationalism; anti-essentialism; and opposition to metaphysical realism and its correspondence theory of truth.[12] There is an important insight here. Although such '-isms' look like doctrines they are better understood as strategies for opposing various constant tendencies of, or attitudes towards, ways of thinking. While Sennett and Dewey put a positive spin on pragmatism, it is, in an important sense, a *negative discipline,* which has the important corollary that it leaves the question at issue *open* and so invites one to think and decide for oneself how best to respond to it. Let me explain.

Pragmatism is famous for modeling philosophy on science (although as we have seen Sennett makes a good case for modeling it on craft by way of the concept of experience – a model I shall return to). But there are two quite different ways of understanding the philosophy/science relationship here: (1) one might think pragmatism, like science, issues in something akin to the *products* of scientific inquiry – namely, beliefs or theories – the thought being that all reasonable people should accept these cognitive 'products' on the grounds that they have the right evidential and critical credentials. Call this style of philosophy *philosophy-as-ideology*; (2) alternatively, one might think of pragmatism as being like science in so far as it is a socially informed activity which advocates for certain experimental and critical *methods* of investigation. Here 'scientific' connotes anti-authoritarianism, a fallible trial and error experimentalism and openness to criticism. Call this manner of philosophy *philosophy-as-method*. I suggest we see pragmatism in this second way, as a *method* of approach, or, let us say, an *orientation* in thinking and acting as opposed to a set of doctrines.[13]

The great benefit of looking at pragmatism as method rather than doctrine is that it leaves one free to believe what one likes – that is, so long as one is responsible to the initiating question and the facts of the situation and all the relevant considerations that bear on them. Indeed pragmatism's theme is *freedom* for the main task is to give one techniques or suggestions for how to free oneself from perennial confusions, obstacles, and prejudices, which continually threaten to undermine or block clear unbiased reflection.[14] The names of these philosophical threats are familiar: *dogmatism*; *authoritarianism*; *foundationalism*; *essentialism* and *transcendent realism.* In all cases what is at issue is not this or that particular belief or theory but our misguided attitudes towards our beliefs and theories (e.g., treating them as certain, fixed, and timeless) and the explanatory pretensions we foist upon them (e.g., that certain beliefs are foundational in our system of beliefs or that they constitute an *essence* which explains *all* phenomena picked out by a certain term or that they ultimately refer to a *really* real world beyond human experience).[15]

Pragmatism's attitude to problem-solving is pluralistic and anti-absolutist: we must not assume there is a single *right* answer; but, more than that, we must not attempt to relieve ourselves of the responsibility to think and decide for ourselves by supposing that a 'theory' (including pragmatism itself) will solve our problems. Pragmatism leaves you free to solve the problems that face you; what it provides is an orientation, methods, rules-of-thumb,

to avoid some perennial conceptual and explanatory pitfalls. That is the point of calling it a negative discipline.

Blake is not alone in supposing that the job of philosophy is to offer an ideology which *solves* one's problems, by delivering specific answers to one's questions. Arguably philosophy-as-ideology is accepted by all parties to the criticality vs post-criticality debate given that it concerns, on the one hand, the actual production of critical architecture (Michael Hays gives Mies van der Rohe's work as an example) and, on the other, 'performance or practice', the effective production of architectural work.[16] But this conception of philosophy is self-deceptive and misleading. There is no theory or set of rules that will solve the difficult problems facing architecture today: the overwhelming size and complexity of large-scale structures, especially the urban environment itself (e.g. Koolhaas's 'Bigness'); the nostalgia for a sense of lost identity as a result of 'the fragmentation of communities'[17]; confronting how little autonomy or control the architect has in dealing with large and largely immovable political, economic and social forces; the logistical complexities in the co-ordination of so many professions and skilled workers in the design and manufacture of buildings; the disorientation resulting from the digital dematerialisation of buildings as new technologies transform walls into image-screens and virtual spaces seamlessly integrate with physical space; and the threat posed by design software and smart apps in the design and functioning of buildings.[18] It is quixotic to suppose that pragmatism or any philosophy or theory of architecture could solve such problems all at once and once and for all. If pragmatism is to help it is by putting one in a better – less confused, clearer, more free – position to respond to architecture's problems intelligently as they arise.

Here it is most important to distinguish 'theory' from *criticism* in the sense of intelligence-in-action. Problems in any evaluatively rich domain like that of architecture, are not solved by abstract 'theory' (philosophy-as-ideology) but by the application in real-world circumstances of what Dewey called *intelligence*, which involves personal taste, choice and the capacity for good judgment; as well as taking responsibility for the actions that exhibit and realise this intelligence. So we must contest Robert Somol's claim '*that criticism isn't necessary*'.[19] Not only is criticism (intelligence) necessary, the main task of pragmatism-as-method is to make criticism *better*. Intelligence is improved by becoming more experimental and more democratic: expanding the range of those whose experience bears on one's own inquiries; and being open to wider social circles of information, reflection and criticism.

Pragmatism, as we have seen, is committed to pluralism – the idea that there is often no single solution to a given problem. But pluralism goes deeper than that. There is no one right *description* of a situation, or of a problem, either. That's a key reason why major philosophers such as Ludwig Wittgenstein and Iris Murdoch thought that a great deal of thinking has *already* been done in arriving at a *description of the problem* one faces.[20] The practical suggestion for architects is that the more time spent on articulating the problem, the less time, money and effort one will waste rushing forward to consider or, perhaps, realise possible, but what are, in retrospect, ill-considered solutions. To describe the problem in all its complexity is impossible since there is no end to it but to go beyond the current norm, according to which description of the problem is often taken for granted, will get one closer towards a range of better solutions, or, what we might think of as working hypotheses.

As Rorty never tires of saying, pragmatism calls attention to the need to invent new vocabularies, new descriptions, and the new possibilities they make available – and this is nowhere more important than

in the description of the typically inchoate problematic situation one is facing.[21] This gives pragmatism a freedom and flexibility completely absent from the metaphysical tradition; as well as a route to liberate oneself from the everyday metaphysics (e.g. essentialism, supernaturalism) we tend to unreflectively engage in.[22]

Pragmatism is not wedded to its solutions but always keeps a skeptical eye on them to make sure they are working, pulling their weight. This is an aspect of its science-inspired fallibilism. Indeed, for a pragmatist a solution – perhaps a building, a designed landscape or a plan for urban development – is *a working hypothesis* to be tested by (further) experience. Architects are in the awkward position of building their hypotheses. If they do not work it is not so easy to live with or to replace with a better hypothesis. What we need, then, is to change our attitude to misfires, mistakes and failures – to see them as fruitful steps we can learn from on the way to a better tomorrow. For example, a pragmatist strategy for architects might be to rethink the idea that a building is ever *completed*. Instead of thinking in the fixed terms of problem/solution we might see a project as always, in fact, a *work-in-progress* – able to be altered or refashioned in various ways if we come to see that as the better working hypothesis for the new conditions. The Sydney Opera House provides a good example of this new conception in action.[23]

Pragmatism is not, then, a quasi-scientific theory designed to answer architectural or urban problems that philosophers obviously do not have the training or expertise to solve. It is *not* a problem-*solving* method that provides ready-made solutions to problems of whatever sort one chooses: psychological, economic, political, architectural, and so on. It is better understood as a problem-solving *method*: a method of approach or orientation to problem-solving that allows problems to be more clearly articulated free from perennial philosophical threats, some of which we have canvassed. It is a therapeutic reflection whose aim is *to prepare one to think better* about whatever it is one wishes to think about, e.g. a scheme for an architectural project, an urban transport problem or the design of a building detail. As Dewey explains,

> If basic problems can be settled only where they arise, namely, in the cultural conditions of our associated life; if philosophy is fundamentally a criticism which brings to light these problems and gives them the clarity that springs from definite formulation; and if after formulation *philosophy can do no more than point the road intelligent action must take,* then *the greatest service any particular philosophical theory can render is to sharpen and deepen the sense of these problems.*[24]

Blake, then, is guilty of criticising pragmatism on the basis of a misconception about what it can realistically aim to achieve. His pragmatism is a straw man that hopelessly strives, without the requisite knowledge or experience, to be a rival to architectural criticism and practice.

Saunders's suspicion of pragmatism is better motivated. We are invited to ask whether philosophy is part of the problem – say, a form of needless and abstract hyper-intellectualism extraneous to architecture's genuine concerns – or part of the solution, precisely the kind of 'self-reflective thoughtfulness' and responsiveness in design that architecture needs?[25] Two things are worth noting here. One is that pragmatism is well aware of, and attempts to avoid, the disturbing tendency of academic philosophy to devolve into unenlightening scholasticism. Secondly, it is curious that the favoured terms of the new approach Saunders considers all seem to be borrowed from the pragmatist tradition: 'efficacy, innovation, and realism'; 'a healthy resistance to predetermining fixed ideas'; and 'experimentation'.[26] And the same goes for several other contributions to his volume. Consider, for example, Somol and Whiting's manifesto for post-criticality where we

find the following pragmatist terms being valorised: 'projection', 'performativity', 'pragmatics', 'contingencies', 'practice'.

The philosophy of pragmatism haunts Saunders's volume, unnamed. My proposal is that if we consider philosophy as orientation rather than ideology, then there is no need for skeptical reticence about invoking pragmatist philosophy in an architectural context.

Pragmatism and criticism: the case of Rem Koolhaas

Let us now reconsider, from a pragmatist perspective, the criticality vs post-criticality debate, which sets the stage for both Saunders's and Ockman's collections. Rem Koolhaas seems a fitting target for this discussion given his preeminent status as an architectural critic, star architect and champion of the new post-critical movement. It is also worth remarking that he embraces several pragmatist themes himself without ever calling himself a pragmatist. Koolhaas's 'pragmatism' makes it especially interesting in the context of the present discussion to re-examine the surprising and unsettling claim that the architecture he recommends is uncritical or 'post-critical'.

Delirious New York (1978), Rem Koolhaas's retroactive manifesto for Manhattan, and the later *S,M,L,XL* (1995), can both be read as expressing a pragmatist vision of architecture.[27] The architectural condition Koolhaas calls *Manhattanism,* which is further elaborated in his 'theory of Bigness', is articulated in terms of the key pragmatist ideas of uncertainty, contingency, experimental social arrangements and the condition of not-knowing or, put otherwise, our need to make things up as we go along. Koolhaas argues that the new scale of architecture in modern mega-cities renders large-scale architecture and urban design uncontrollable. Consequently, old 'issues of composition, scale, proportion, detail are now moot'.[28] The effects of Bigness are thus uncertain, both at the level of programme and as an effective and affective element of an urban environment. The moral for the architect is that there is no theory, no science, no ethics – in short, no knowledge – that is available to the architect to solve his or her problems in the new 'culture of congestion'.[29] Koolhaas's skepticism about architectural knowing fits well with the pragmatist tradition that focuses more on actual practices of successful making (craftsmanship) rather than an abstract, fixed and universal 'knowledge'.

But rather than experience this loss of the certainty and stability of knowledge as a tragedy, a key feature of Koolhaas's new polemical vision is the frenetic enthusiasm with which he expunges the dream of certainty, knowledge and control to revel in a new age of experiment and surprise. In epistemological terms this might be seen as analogous to replacing the Cartesian dream of absolutely certain knowledge that inaugurated modern philosophy with the fallibilism and experimentalism of pragmatism in the late nineteenth and early twentieth centuries. In aesthetic terms it is an argument within post-Kantian aesthetics for prioritising sublimity over beauty. Koolhaas articulates a new architectural sublime, which finds a delirious pleasure in the incomprehensible 'bigness' of New York's urban environment – which, from the perspective of traditional architecture, is terrifying for the very same reason.[30]

Of particular importance for our purposes is Koolhaas's sense that one must destroy once and for all the nostalgic idea of an architecture that presumes to offer ideological opposition to the economic and political realities of capitalism. Koolhaas sees architecture and urbanism as inevitably having to accommodate themselves to contemporary economic and political forces. Its message to architects is that they are not to work nostalgically and hopelessly against capitalism but to fully develop whatever new possibilities there are

for the creation of 'territories with potential', and of 'enabling fields that accommodate… [indefinite] form[s]', 'discovering unnameable hybrids', and 'endless intensifications and diversifications' within the existing conditions of contemporary society. On this basis Koolhaas concludes that '[architects and urbanists] have to dare to be utterly uncritical'.[31]

As I read him Koolhaas has here fallen into the fallacy of oppositional thinking that has come to typify the criticality vs post-criticality debate. Since he wants to challenge the wholesale rejection of capitalism in the critical traditions inspired by Marx he finds himself denying the relevance of criticism for architecture *in general*. Criticality has to be opposed by an equally totalising uncriticality. Hence the term that is used to describe his stance: *post*-criticality. But why this extremism?

There is no inconsistency in thinking that while architecture must make 'strategic realignments' and adopt 'compromised positions' in its relation to capitalist power it can, indeed *must*, remain critical – even if not in the starkly oppositional sense that Koolhaas means to reject.[32] Pragmatism allows us to see why. When Dewey speaks of '[philosophy's] primary concern […] to clarify, liberate, and extend the goods which inhere in the naturally generated functions of experience' it should be noted that he means to include the goods that inhere in our experience of globalised corporate capitalism and of flawed democracies as represented by, paradigmatically, the USA.

The pragmatist outlook rejects any overarching Hegelian story about reason-in-history or any universalist conception of the good that sees capitalism as inherently and unalterably alienating or as an irrevocable social pathology. Absolutism and universalism are familiar examples of rationalistic metaphysical thinking that pragmatism works hard to oppose. Only when they are cleared away can we free ourselves to see capitalism and democracy not as something fixed once and for all but, like any other dynamic social or political structures, capable of change, evolution and improvement.

Capitalism is an umbrella term standing for a range of different possible systems of private property, corporate capitalism being only one. And even contemporary corporate capitalism is not homogeneous but manifests a multiplicity of heterogenous forces. One can expose and criticise the wrongs and disvalues of capitalism in order to help alleviate social injustices and inequalities and to better realise actual and latent goods in the present situation. Here, skepticism of the temptations of metaphysical thinking (in this case, monism and absolutism) plays an indispensable role in making available the option of criticising capitalist society from *within* in order to overcome its shortcomings and to manifest its goods. The work of pragmatism in this context is to clarify, criticise and overcome wrongs and to clarify, liberate and extend goods within capitalist society.

'Everything we do and say is critical', Koolhaas has remarked, 'but architecture itself can't be critical of anything'.[33] Despite acknowledging the ubiquity of criticism, Koolhaas hopelessly attempts to quarantine architecture into a distinct realm of uncriticality by way of the artificial distinction of architecture and architect, product and producer. Apparently, this is the only way he can find to express a pragmatist desire for architecture to be understood in relation to *actual* (as opposed to merely imagined or idealised) circumstances; and to oppose an old image of mythical power and control for a new image of experimental intervention, however modest or limited, within an environment of largely uncontrollable social, economic and political forces.

To return architecture to the realm of praxis Koolhaas is fully justified in rejecting intellectual positions that recommend disengagement from current economic and political conditions and that consequently lack any genuine efficacy. But an

architecture that works within the conditions that it cannot avoid need not be uncritical, as Koolhaas and the champions of post-criticality influenced by him suppose. Post-criticality is a myth. It is really a criticism of a certain style of criticism mislabelled as post-criticism. What needs clarification, however, is the way a work of architecture *can* be critical since it clearly cannot model itself on discursive revolutionary criticism of which Marx's *Communist Manifesto* is perhaps the most famous example.

I suggest we reread the criticality vs post-criticality debate as not really about the possibility of a critical architecture but about the *form* criticism takes in the contemporary situation where the architect is confronted by the problems of not-knowing, minimal autonomy and yet, in spite of everything, the desire to create. This is really a question about architectural *agency*: how can an architect have a *voice* in the production of buildings, landscapes, urban plans and so forth, where the relevant information to take account of is overwhelming in range and complexity and one is working alongside other professions (engineers, builders, joiners, interior designers, project managers, landscape designers etc.) under economic and political conditions over which there is little, if any, control?

Michael Hays, a leading defender of criticality, has convincingly argued that we must locate the architectural agent somewhere in the conceptual space between the extremes of autonomous creation of form and agential nihilism – the fanciful notion that an architect is a mere 'cog' in a vast cultural mechanism. Although they differ in matters of sensibility, style and emphasis, it is hard to see how Somol and Whiting – leading proponents of post-criticality – *could* disagree with this characterisation. Surely they do not advocate the 'death of the architect' or, if they do, that has about as little plausibility as the 'death of the author' of French structuralist literary criticism.[34]

It has to be admitted, however, that Hays muddies the waters by employing the term 'oppositional' to characterise criticality.[35] This makes the difference between his position and that of Somol and Whiting appear starker than it might be. The important point is that a critical architecture need not be an oppositional architecture. Indeed one of the primary functions of criticism is to propose new solutions to problems by recommending 'alternative (not necessarily oppositional) arrangements and scenarios', as Somol and Whiting usefully put it.[36] Effective melioristic interventions into what is, inevitably, a dynamic social system do not require a radical opposition or overthrow of existing institutions or power structures.[37]

Koolhaas and his post-critical followers are right that neo-Marxist hopes of a revolutionary architecture (more extreme in its opposition to the *status quo* than anything Hays envisioned) is mere wishful thinking rather than productive engagement in the built environment and the complex web of forces that meet there. Richard Rorty sums up the pragmatist attitude towards neo-Marxism and other revolutionary 'solutions' to the problems of corporate capitalism by remarking, 'there is no science of history, nor any big discovery (by Marx or anyone else) of the one right, proper, adequate, context in which to place unemployment, mafias, merchants of death, globalized labour markets and the rest.'[38] But the alternative to the oppositional model is not acquiescence in a passive post-critical malaise. What we need is a new model for 'a practice [that] would find material for experimentation, critique, and theoretical speculation in the methods and procedures of day-to-day architectural practice', as Stan Allen articulates it.[39] Where is such a model to be found?

The architect and the ethos of craft

One promising proposal is to see architecture as a craft as Sennett articulates it in *The Craftsman* (2008). Sennett argues for a conception of craft

that transcends the instrumental, its value not being exhausted in satisfying some pre-determined function. The book's guiding idea is that *making is thinking*. Indeed we could expand this formula to say, *making is thinking and valuing*, according to which the product made inevitably expresses certain thoughts and values.[40]

The question how a profession like architecture (or science or business…) can be ethically or politically engaged can seem more difficult to answer than it is when asked against the background of an assumed fact/value dichotomy – another metaphysical obstacle to clear thinking. But, as James and Dewey convincingly argued, facts presuppose values of all kinds (e.g. cognitive, aesthetic, ethical, political).[41] As Sennett remarks, regarding the ethos of craft, 'Pragmatism wants to emphasize the value of asking ethical questions during the work process; it contests after-the-fact ethics, ethical enquiry beginning only after facts on the ground are fixed.'[42] The same goes for cognitive, political, aesthetic or religious values. Max Weber's misconception of science as a value-free activity has had an undeserved influence on the culture because it simply overlooks the obvious fact that science itself is a *value-laden activity,* whose importance depends on realising the *value* of objectivity, not to mention the democratic values involved in collective scientific inquiry.[43] As Charles Peirce, the original instigator of pragmatism, was one of the first to see, scientific inquiry – our paradigm of discovering facts – is a collaborative social activity that depends on instituting democratic *values* of open communication, freedom from dictatorial authorities, equal respect for others and toleration of criticism.[44]

Overcoming the fact/value dichotomy is only one example of a pragmatist method Sennett invokes to good effect: that is, the method of rejecting fixed metaphysical dualisms, and putting in their place, as required, flexible occasion-sensitive distinctions. From a pragmatist perspective, we can allow that although for certain purposes we might be able to draw a conceptual distinction between certain facts (e.g. urban population densities, the circulation patterns of a building) and certain values (e.g. beauty, justice, equality of opportunity), there is no hard and fast and universal fact/value duality written into the nature of things.[45]

Contemporary architecture is wedded to a genius (or 'star') model of production that stresses individual creativity, the ruthlessness of rankings and the impossibility of explaining the creative process. The mystery of creation is precisely what the term 'genius' is used to connote; as well as the completeness of the finished 'work' – not just a solution but *the* solution. The craft model, alternatively, stresses the value of cooperative endeavor, shared experience and collective trial and error; as well as the adaptability of the 'work' over time.[46]

Architecture has a unique and curious position in the history of aesthetics since it is for many, an oxymoron: an art *and* a craft! Much has been written about the intense paradoxicality of this condition – the clash between the Kantian idea of art as a 'useless' object of disinterested contemplation and architectural functionality, being a useful object of human habitation.[47] But, note, this problem *only* arises if we accept the post-romantic idea that there is an exclusive *ontological* distinction between art-objects and craft-objects.

Pragmatism usefully clarifies the conceptual landscape here by making clear that the distinction between art and craft is really a distinction at the level of *conception*. To think of it as an ontological distinction leads to the traditional confusion about the status of architecture we have just considered.[48] But there is nothing untoward about the very same object – a building, say – qualifying as art *and* as craft in so far as it fulfills the different aesthetic and social functions that each of these terms designate: say, that art *feels* like it makes the kind of

sense that demands articulation but, somehow, it makes more sense than we can put into words; whereas craft involves the skillful making of things which, at a minimum, satisfy certain predetermined ends.[49] Both have expressive powers, so there is no conceptual obstacle to the idea that architecture expresses thoughts and values (e.g. of the architect as artist or craftsman, or of a tradition or culture). Of course, like any other expressive medium, its power to communicate particular thoughts and values depends upon how critically attuned and sensitively appreciative its audience or users are.

As Sennett argues, pragmatism encourages us to think of 'experience as a craft', one that turns subjective feelings into objective (in this case meaning *inter-subjective*) values as one learns to skillfully master the impersonal standards of good craftsmanship.[50] *Experience* is a key term in pragmatist philosophy. The pragmatist treats experience itself as a site of *work*: one needs to learn which of one's hunches to trust – or, to use other metaphors, to develop an eye, ear, or nose for the valuable features of things – returning to re-experience persons, places, objects or relationships that excite our interest, however fleeting or inchoate, in order to better appreciate the ideas or values they express or excite. Learning to attend to the differences or discriminations that matter to us – which is, incidentally, what the eighteenth century aesthetic term 'taste' is all about – is a requirement for being able to clearly articulate these experiences, to make them communicable. In other words, one has to learn to learn from experience, including the experience of others.

There are four aspects to this process of learning to learn from experience that are of particular relevance to the practice of architecture: 1) *alert receptivity* – without the imaginary (fixed? a priori?) knowledge of theory, the architect must be attentively receptive to the multiple and dynamic demands, forces and constraints at work in the project – its full circumstances.[51] Such awareness is a precondition for the potent critical act of description of the problem, which is the fundamental starting point of any project or proposal; 2) *particularity of the problem* – like a craftsman, an architect should regard the problem that confronts him or her at a certain time and place as unique, taking account of a very particular and complex web of conditions and relationships. This is part of the reason that there is no ready-made (rule-governed, formula-driven, computational) solution to an architectural problem. Like a craftsman, an architect must put trust in her past experience and the set of embodied skills that grow out of it, and the good judgment one acquires to deal creatively with the problem at hand – including, of course, good judgment about the use of technology in the design process; 3) *improvisation* – since the problem is unique (to some extent at least) there is inevitably a degree of improvisation required. And in improvising one leaves something of oneself (not necessarily something personal) in inanimate things. 4) *quality* – good work is always critical.[52] Learning to discern good work is fundamental since good craftsmanship (in the widest sense) manifests intelligence, the skillful negotiation of many factors and conditions in the creation of something impressive, noble, or beautiful that did not exist before.

I have distinguished philosophical theories/ideologies from *criticism* in the sense of experimental intelligence, something that we can all be credited with but which, at the same time, can be improved upon through pragmatist methodology and heuristics. As the literary critic William Hazlitt said, 'We are nothing if not critical'.[53] From the pragmatist perspective all action, even habitual action, is permeated by criticism – though an agent need not be (fully) aware of that; and it may not be, often will not be, criticism at its best.[54] So when Saunders says: 'The central question is whether architects who in their work try to resist and criticize the norms of the general contemporary culture/society are

engaged in a futile and self-deluding activity',[55] we must answer, emphatically, *no!* What is futile and self-deluded is for an architect to expect pragmatism or any philosophy or theory to solve his or her problems in producing architecture. And if it did do that there would be no architecture because there would be no *architect* responsible for it.

Confusion about the role of philosophy or theory leads architects to embrace two misguided ideas: that philosophy can play no useful role in the production of architecture; and that unless one declares explicit allegiance to some ideology one is post-critical, beyond the bounds of criticism. The first misses the distinction I have drawn between philosophy-as-ideology and philosophy-as-method. The second overlooks the fact that we are always already critical. But being unaware of this fact or being uncertain or unconfident or confused about it makes it seem as if a post-critical stance is a possibility, perhaps even desirable. It also leads architects away from the pragmatist's central task (modeled on that of the craftsman) to work on their own experience, and improve upon their own experimental and social intelligence-in-action [56] Architecture is the embodied expression of intelligence-in-action in response to one's experience of the needs and opportunities of the built environment.

The genius model of architectural production is partly to blame for this situation where architecture is unsure of itself since it is only the star architect who has the freedom to create as they wish – most architects perhaps feeling they lack the requisite freedom from constraint to truly express themselves. The genius is also the one who creates completed works of art, by a process that, from the point of view of others trying to learn from their example, is a total enigma. What tends to get valorised are contingencies of fame (e.g. that one architect wins a prize when another, equally deserving, doesn't), flashes of artistic inspiration, and the immutability of the 'work' – architecture in its mode of art. The patient effort of intelligence applied to the particular problem at hand in all its experienced complexity and conditionedness and temporality – architecture in its mode of craft – tends to be overlooked. In this circumstance pragmatism can help to make the architect's implicit intelligence explicit, to make it more experimental, more democratic, and more articulate. And in the context of Sennett's articulation of a craft ethos for contemporary society, pragmatism can work to enliven our sense of the *value* of intelligence (i.e. criticism in the best sense).

Let me conclude by noting that when the greatest philosopher of the twentieth century, Ludwig Wittgenstein, wanted a symbol to stand for a body of careful critical thinking he employed an image of architecture as craft,

> In the elder days of art,
> Builders wrought with greatest care
> Each minute and unseen part,
> For the gods are everywhere.[57]

Notes

Thanks to Ursa Komac for encouraging me to pursue these ideas.

1. It is, in fact, not easy to distinguish analytic and continental philosophy in terms of content or historical influences. Analytic philosophy, long considered to be ahistorical and obsessed with science and logic, now takes an interest in art and culture no less than in the history of philosophy, including its own. And Kant, often seen as the godfather of continental philosophy, is also an important influence on the analytic tradition. The differences, then, are mostly matters of style and presentation; although it remains true that many analytic philosophers do not make contact with the post-Kantian Idealist tradition that plays a key role in continental thought.
2. Joan Ockman, ed., *The Pragmatist Imagination* (Princeton: Princeton Architectural Press, 2000); William S. Saunders, ed., *The New Architectural*

Pragmatism (Minneapolis: University of Minnesota Press, 2007).

3. A paradigmatic statement of critical architecture is K. Michael Hays, 'Critical Architecture: Between Culture and Form', *Perspecta* 21 (1984): 14–19. The post-critical position is perhaps best expressed by Robert Somol and Sarah Whiting, 'Notes around the Doppler Effect and Other Moods of Modernism', *Perspecta* 33, *Mining Autonomy* (2002): 72–77.
4. Joan Ockman 'Pragmatism/Architecture: The Idea of the Workshop Project' in Joan Ockman, ed., *The Pragmatist Imagination* (Princeton: Princeton Architectural Press, 2000), 16–23, 16.
5. The philosophical tradition of pragmatism is characterised by several distinct historical manifestations: classical pragmatism (Charles Peirce, William James, John Dewey) which we might date from the publication of William James's *Pragmatism: A New Name for Some Old Ways of Thinking* in 1907; post-1970s neo-pragmatism (e.g., Richard Rorty, Hilary Putnam); and post-1990s linguistic pragmatism (e.g., Robert Brandom, Huw Price). Henceforth I will use the term 'pragmatism' to refer to the philosophical movement as a whole without specific attention to these sub-categories.
6. Casey Blake, 'Afterword: What's Pragmatism Got To Do With It?' in *The Pragmatist Imagination*, 266–7.
7. See, in particular, the section titled 'Conclusion: The Philosophical Workshop' in Richard Sennett, *The Craftsman* (New Haven: Yale University Press, 2008), 286–291.
8. Ibid., 286–287, emphasis added.
9. What we should be careful to avoid are classical pragmatist theories of truth. In philosophy, originally the label 'pragmatism' meant a commitment to a broadly empiricist conception of meaningfulness that Peirce called 'the pragmatic maxim': 'Consider what [sensible] effects, which might conceivably have practical bearings, we conceive the object of our conception to have. Then, our conception of these [sensible] effects is the whole of our conception of these objects.' (Charles Peirce, ed. Justus Buchler, *Philosophical Writings of Peirce* (New York: Dover, 1965), 31). In essence it says that meaning is a matter of verification conditions, which are public, sharable and have practical consequences. Many people today associate pragmatism with the application of this maxim to the concept of *truth*, namely: Peirce's convergence theory of truth; and James's instrumental theory of truth. Since both these theories have serious flaws I see no reason to focus on this historical aspect of pragmatism's early reception when characterising it as a living philosophy today. For further discussion see David Macarthur, 'A Kant-Inspired Vision of Pragmatism as Democratic Experimentalism', in Gabriele Gava and Robert Stern, eds., *Pragmatism, Kant & Transcendental Philosophy* (London: Routledge, 2015), 67–84.
10. William James, *Pragmatism: A New Name for Some Old Ways of Thinking* (Cambridge, MA: Harvard University Press, 1907), 11.
11. John Dewey, *Later Works, vol. 1: Experience and Nature*, ed. Jo Ann Boydston and Larry Hickman (Charlottesville: Southern Illinois University Press, 1985[1925]), 304–305. Emphasis added.
12. See Richard Rorty, 'Introduction – Relativism: Finding and Making' in *Philosophy and Social Hope* (London: Penguin, 1999), xvii–xxxii.
13. For further elaboration of this idea see Macarthur, 'A Kant-Inspired Vision'.
14. Dewey's position is summed up in this remark: '[philosophy's] chief function is to free men's minds from bias and prejudice and to enlarge their perceptions of the world about them.' *Reconstruction in Philosophy* (New York: Henry Holt & Co., 1920), 21.
15. I read the contemporary pragmatist, polemicist and social critic Cornel West as sharing this outlook concerning the mission of pragmatism when he speaks of 'enabling methodological insights that facilitate history writing and cultural analyses of specific past and present architectural practices, not ontological and epistemological conclusions that promote mere avant-gardist posturing'. 'Race and Architecture', in *The Cornel West Reader* (New York: Basic Civitas Books, 1999), 462.
16. Somol and Whiting, 'Notes around the Doppler Effect', 75.

17. David Kolb, 'Has Architecture Lost its Bearings?' The text is a talk given at a Philosophy and Architecture Conference in Boston in 2012: http://www.dkolb.org
18. Maria Lorena Lehman. *Sensing Architecture*, 2012, http://sensingarchitecture.com
19. Quoted in Saunders, *New Architectural Pragmatism*, x.
20. Ludwig Wittgenstein, *Philosophical Investigations*, trans. G.E.M. Anscombe (Oxford: Blackwell, 1958 [1953]); and Iris Murdoch, *The Sovereignty of Good* (London: Routledge, 1970).
21. See Richard Rorty, 'Introduction' in *Consequences of Pragmatism* (Minneapolis: University of Minnesota Press, 1982).
22. For further discussion see David Macarthur, 'Metaphysical Quietism and Everyday Life', in G. D'Oro & S. Overgaard, eds., *The Cambridge Companion to Philosophical Methodology* (Cambridge: Cambridge University Press, 2016), 270–296.
23. Jørn Utzon won the design competition for the building in 1957; it was still under construction when Utzon was forced to resign, after a change of government, in 1966. The plans were significantly altered and the building completed under the direction of Peter Hall in 1973. Since 1999, with input from Utzon and his son Jan, various modifications to the building (e.g. the Utzon Room, a reburbished Western Foyer) have been made in the interests of public accessibility and expanded utility.
24. John Dewey, 'Experience, Knowledge and Value: A Rejoinder', in *Later Works: vol. 14*, 89. Emphases added.
25. Saunders, 'Introduction: Accept, Resist, or Infect? Architecture and Contemporary Capitalism' in *New Architectural Pragmatism*, vii–xvii, xi.
26. Ibid., xiv–xv.
27. Rem Koolhaas, *Delirious New York: A Retroactive Manifesto for New York* (Oxford: Oxford University Press, 1978); and *S ,M, L, XL* (New York: Monacelli Press, 1995).
28. Koolhaas, *S ,M, L, XL,* 500.
29. Rem Koolhaas, '"Life in the Metropolis" or "Culture of Congestion"', *Architectural Design* vol. 47, no. 5 (August 1977), 319–325.
30. Koolhaas writes, 'Manhattanism is the only program where the efficiency intersects with the sublime.' *Delirious New York*, 174.
31. Koolhaas, *S ,M, L, XL,* 970–971.
32. Ibid.
33. Quoted from an interview with Jonathan Glancey in the *Guardian*, 7 October 2011.
34. Roland Barthes, 'The Death of the Author' in *Image, Music, Text,* trans. Stephen Heath (London: Fontana, 1977). Barthes's claim that 'the author is dead' (i.e. that the author of a text is irrelevant to its critical interpretation) depends on two outmoded ideas: 1) a Cartesian conception of intentions as 'private' prior plans in the mind of the author; and 2) a monistic view of literary interpretation according to which the meaning of a literary work is given by the author intentions at the time of its composition (i.e. the author as the 'God' of his or her text – so that the death of the author is the death of the author-as-God). We might say Barthes makes the mistake of treating his (quite correct) criticism of a traditional and influential conception of the author as criticism of the author as such.
35. Hays defines 'critical architecture' in two different ways: (1) as 'one resistant to the self-confirming, conciliatory operations of a dominant culture and yet irreducible to a purely formal structure disengaged from the contingencies of place and time'; and (2) as one 'that claims for itself a place between the efficient representation of preexisting cultural values and the wholly detached autonomy of an abstract formal system'. In this paper I exploit the possibility that one might support the second of these conceptions while rejecting the first oppositional conception. Unlike the first, the second allows for re-evaluation, change and improvement of existing cultural values without having to resist them outright.
36. Somol and Whiting, 'Notes around the Doppler Effect', 75.
37. For example, Nadir Lahiji proposes a neo-Marxist recovery of radical political thought as the best critical response to the capitalist condition of alienation within which architecture becomes a mere image of

corporate power; everything and everyone being reduced to commodities. While pragmatists like Dewey think the problems of capitalism, alienation and marketing are real enough they question the proposed neo-Marxist solution for its inefficacious romantic idealism. 'Philosophy and Architecture: Encounters and Missed Encounters, Idols and Idolatries' in *The Missed Encounter of Radical Philosophy with Architecture* (London: Bloomsbury, 2014).

38. Richard Rorty, *Philosophy and Social Hope* (New York: Penguin, 2000), 220–221.
39. Stan Allen, 'Stocktaking 2004: Questions about the Present and Future of Design' in Saunders, *The New Architectural Pragmatism*, 101–106, 103.
40. It would be totally missing Sennett's point to see in his proposal a nostalgic call for a return to old world craft-making, medieval guilds or an age before machines. His book concerns the articulation of a craft *ethos* that is equally applicable to the modern technologically advanced workplace, e.g. Linux open-source programmers are appealed to as contemporary realisation of this ethos.
41. Of course, values also presuppose facts, e.g. about the human animal and our basic needs, what sustains us, what brings us pleasure and pain and so on.
42. Sennett, *The Craftsman*, 295–296.
43. Max Weber, 'Objectivity in Social Science and Social Policy' [1904] in *The Methodology of the Social Sciences*, ed. and trans. E. A. Shils and H. A. Finch (New York: Free Press, 1949). The point about the value-ladenness of science is elaborated in David Macarthur, 'Science and the Value of Objectivity' in Giancarlo & Sarin Marchetti, eds., *Facts and Values: The Ethics and Metaphysics of Normativity* (London: Routledge, 2016).
44. Charles Peirce, 'The Fixation of Belief' in *Philosophical Writings*, 5–22.
45. Sennett's conception of craft as an ethos also challenges the following potentially metaphysical dualisms in a similar spirit: theory vs practice; science vs art; head vs hands; work vs play; technique vs expression; and art vs craft. Whether a distinction is metaphysical or not depends largely on its explanatory pretensions.
46. Here the creative process, if not always or even usually communicable by way of language, is to some extent transmissible through the training, rules of thumb and hints that a master provides an apprentice – which may involve an appeal to non-linguistic resources like diagrams, models, demonstrations, repetitive practice exercises, etc.
47. See, for instance, Karsten Harries, *The Ethical Function of Architecture* (Cambridge, MA: The MIT Press, 1997).
48. Adolf Loos, for example, thought that *because* architecture is craft it *cannot* also be art – exceptions being tombs and monuments that play a symbolic role. See his 'Architecture' [1910] in *Adolf Loos: On Architecture,* ed. Daniel and Adolf Opel, trans. Michael Mitchell (Riverside: Ariadne Press, 2007), 73–85.
49. This is my rubric for art, which I realise is controversial. For the present point please substitute your favourite definition of art – so long as it is not an essentialist (i.e. metaphysical) definition.
50. Sennett, *The Craftsman*, 288.
51. Without the pragmatist attitude of testing one's theories against experience (in a broad and collective sense) on what basis should anyone accept a given 'theory'?
52. Joan Ockman, who shares certain features of the pragmatist outlook on architecture that I am recommending, writes, 'The complexities of contemporary practice demand not only strategic realism, but also critical discernment and conscience. Indeed, while architects have a minimal responsibility to do no harm, they many also aspire to do some good'. 'One for the Sandpile', in *Journal of Architectural Education,* vol. 62 no. 3, (2009): 26–27, 99, 27. My only problem with this remark is that aspiring to do good is not something *additional* to criticism; it is part of the *point* of criticism.
53. Quoted in David Bromwich, *Romantic Critical Essays* (Cambridge: Cambridge University Press, 1987), 9.
54. Michael Speaks appeals to a notion of 'design intelligence' that aligns remarkably well with Deweyan 'experimental intelligence' as I have explained it. He writes: 'Intelligence is today the source of all value added and consequently the source of all that is

innovative […] it is design intelligence, that "unseen" array of techniques, relationships, dispositions and other intangibles that allow post vanguard practices to innovate by learning from and adapting to instability'. Michael Speaks, 'Design Intelligence: Part 1: Introduction' in *Architecture and Urbanism* vol. 12 no. 387 (2002): 11–18. But Speaks goes on to say that intelligence is *not* a philosophical or specialised theory of anything. This is true enough but we must remember that philosophy-as-orientation precisely depends upon improving intelligence.

55. Saunders, 'Introduction' in *New Architectural Pragmatism*, vii.
56. Dewey once described philosophy as 'a criticism of criticisms'. *Experience and Nature*, 298.
57. Ludwig Wittgenstein, *Culture and Value*, revised 2nd ed., trans. Peter Winch (Oxford: Blackwell, 1998), 39. Wittgenstein, who in the early 1930s was listed in the Viennese city records as an architect, toyed with the idea of using these words of the poet Longfellow as a motto for his most famous work, the posthumously published *Philosophical Investigations*.

Biography

David Macarthur is an Associate Professor in the Philosophy Department at the University of Sydney. He works at the interface of contemporary pragmatism, Wittgenstein's philosophy of language and psychology and the philosophy of art. In addition to these topics, he has published articles in leading philosophy journals and books on liberal naturalism, metaphysical quietism, scepticism, common sense, perception, ordinary language, philosophy of architecture, and philosophy of photography and film.

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In this issue, the following papers were peer-reviewed: 'G.E. Moore's *Principia Ethica* and the Complex of Architecture'; 'What Difference Could Pragmatism Have Made? From Architectural Effects to Architecture's Consequences'; 'The Triumph of Function over Form: The Role of Analytic Philosophy in Planning and Analysing Modern Architecture'; 'The Pyramid and the Mosaic: Otto Neurath's Encyclopedism as a Critical Model'; '*Possibilia*: Possible Worlds and the Limitless in Architecture'; 'The Persistence of Buildings and the Context Problem'.

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