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CRITICAL PROXIMITIES

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ABSTRACT

In the field of architecture work with scale has traditionally been used to suppress the importance of size. Axes have been planned with a birds eye view such as is given by a plan on a drawing board. Today this ‘god trick’ is challenged by the awareness that we must work from within the material world, not upon it. We must create situated knowledge – and situated architecture – in what is called *The Critical Zone* and which we can only experience, understand and work with embedded, immanently. This article presents and elaborates on the challenges outlined to suggest how we – with an awareness that everything changes with size – can involve the concept of scale in our analytical and creative work with art and architecture in *The Critical Zone*.

INTRODUCTION

As a concept and tool, scale is often used to suppress the meaning of size: With the Renaissance and the development of the drawing techniques that promoted the notion that it was possible to complete a building on the drawing board, scale was used to ensure the identity between the drawing and the building. The identity was secured by emphasizing the importance of proportions, which are precisely independent of

size and therefore possible to transfer by scaling without alterations from drawing to building.

Already Galileo Galilei (1564-1642) became aware that size makes a crucial difference. He understood that a physical cube that is 10 in each side does not weigh 10, but a thousand times more than a cube, made of the same material, but which is 1 in each side. This fact can be neglected if the cube is a drawing. The two cubes are proportionally identical. In the physical world, however, it can be ignored but not denied. That was what Galileo experienced and acknowledged. He discovered that everything changes with size and thus came into conflict with contemporary dogmas of what an epistemological true understanding of ontology is. Galileo’s experience challenged the then sacred significance attached to proportions. He was placed under house arrest by the church and banned from publishing his findings.

Even today the understanding of scale and proportions related to the Renaissance seems to be prevalent. In fact, the Renaissance’s understanding of the relationship between drawing and building seems to have been strengthened with the introduction of the computer medium in the design studio. As Michael Tavel Clarke and David Wittenberg point out in their ‘Introduction’ to *Scale in Literature and Culture* (2017) “CAD tends to privilege architecture freed from its site-contextual considerations” which means “a strange, virtual subversion of Galileo’s founding insight that engineering must obey the physical constraints on scale determined by the properties of materials” (Clarke and Wittenberg, 2017:16).

With this paper, I will first briefly present the architectural understanding of the Renaissance and point out how its premises today are challenged by different theoretical approaches with renewed attention to the material world, including to all that of the world that is not conditioned by what man intends. On this background and with reference to art that has stepped down the pedestal to involve ‘site-contextual considerations’ I will – with an emphasis on issues of size and scale – consider challenges and opportunities in developing a conceptual dialogue with this art. It will be central to this conceptual dialogue to break with the notion that the goal is to establish identity between epistemology and ontology, which was a presupposed norm of the Renaissance and still seems to be prevalent. In other words, it will be central to this paper to show that recognition that epistemology and ontology are not identical is the precondition for a conceptual dialogue – including a dialogue

engaging the concept of scale – with what we experience in working with forces we do not master but must inhabit.

THE RENAISSANCE UNDERSTANDING OF SCALE: NEGLECT OF SIZE AND RELATIONS THAT MATTERS

The question of scale has since the Renaissance been related to the notion that man can truly recognize an essential identity between a larger and a smaller form and that size therefore makes no relevant difference. This understanding is characteristic of and explicitly articulated with every architectural treaty from the Renaissance. Instead of examining the differences between what we experience when working at a small and a large scale respectively, the identification and articulation of what forms of different sizes share was an overarching ideal for Renaissance treaty writers.

In continuation of the Platonic understanding of geometry – and of proportionality between the elements of geometry – as the tool to secure identity between epistemology and ontology, Renaissance theorists prioritized the importance of proportional relations exactly because proportions, independent of size, can serve to determine what is identical in shapes at different scales. It is with this attention Leon Battista Alberti rhetorically asks “if (as the philosophers maintain) the city is like a large house, and the house in turn like some small city, cannot the various parts of the house – atria, xysti, dining rooms, porticos and so on – be considered miniature buildings?” (Alberti, 1988:23). For Alberti architecture was a concern of the mind and “it is quite possible”, he wrote, “to project whole forms in the mind without any recourse to the material” (Alberti, 1988:7).

According to the anthropologist Tim Ingold, Alberti’s normative architectural thinking is exemplary of the *hylomorphism* that – rooted in the thinking of Plato and Aristotle – has characterized the Western World for the past two millennia. Ingold emphasizes that this *hylomorphism* is characterized by “an ontological claim, namely that things are constituted in the rational and rule-governed transposition of preconceived form onto inert substance” (Ingold, 2010:93).

CRITIQUE OF THE OLD HYLOMORPHIC MATERIALISM

Bruno Latour often addresses the question of scale. Unlike the *hylomorphic* tradition, Latour argues that we use scale attention to create understanding of the differences, rather than the identities of what we experience at different levels of reality. Latour is explicitly critical of the understanding of zoom, which in one sliding motion makes us neglect the differences between different scales. He insists, that “it cannot be said that the small or the short lie within the large or the long, in the sense that the largest or the longest contain them but with fewer details” (Latour, 2017:94).

Latour has inspired the so-called *New Materialism* and the *Object Oriented Ontology* (OOO) which insists that what we create from knowledge of the object is *not* identical with the object. An object is always more than we know. Our knowledge is limited even about what we ourselves create. While Latour has told it was liberating for his thinking, when he in his work on the significance of Pasteur’s discoveries of microbes acknowledged that “nothing can be reduced to anything else, nothing can be deduced from anything else, everything may be allied to everything else” (Latour, 1988:163) one encounters among new materialists an insistence that “epistemological questions should be kept separate from ontological ones” (DeLanda/Harman, 2017:91).

In their dialogue on New Materialism, assemblage theory and OOO, Manuel DeLanda and Graham Harman agree that there are aspects of ontology that epistemology will never be able to determine and identify and that will thus remain untouched by epistemology. However, this does not mean that we must give up either the work of science or philosophy, including the work of involving – and reflecting on – for example mathematics and geometry in our creative work with the world. While Harman points out that there is a difference between “real dogs and trees and perfect mathematical models of them”, DeLanda states: “Math models are never of actual objects. (...) A math model captures dependencies between the way properties change (that is a piece of information worth having), but to do so they must simplify enormously the phenomena they model” (DeLanda/Harman, 2017:102).

It is my opinion that DeLanda and Harman despite various disagreements, point out that the knowledge we create must be aware that it is situated. But I at the same time agree with Ingold, who has pointed out that neither Harman’s ‘object thinking’ nor DeLanda’s ‘assembly thinking’ is aware that the world consists not only of objects – or of assembled objects and what Ingold calls ‘containers’ – but also of relations and connections – lines – between the objects. According to Ingold our understanding of the world depends on our ability to describe and work with relations and forces between containers (see Ingold, 2015:7,16).

Ingold marks a similar critique in his dialogue with Latour. Ingold acknowledges that Latour has tried to “rebalance the hylomorphic model” and have insisted that “the material world is not passively subservient to human design” (Ingold, 2009:95). But it is at the same time Ingold’s view that Latour in his attempt to “move beyond (...) the polarization of subject and object, remain trapped within a language of causation (...) that can conceive of action only as an effect set in train by an agent” (Ingold, 2010:96). According to Ingold, Latour does not grasp that the world we are to inhabit is not “made of subjects and objects” (Ingold, 2010:96), but by forces that carry, weigh and draw on what we have called subjects and objects. We, our objects and containers exist in a world of forces.

It is my view that Latour increasingly has become aware of what Ingold is pointing to. With his attention to what he calls *Gaia* and thus to mappings of what happens between

organisms – and with his recent work with *The Critical Zone* – Latour’s work testifies that he is *in line with* Ingold’s critique of “Western ontology (...) that *denies* that meaning does lie in the relational context of the perceiver’s involvement in the world” (Ingold, 1992:51). In other words, it is my view that Latour is in line with Ingold’s insistence that we should “work from within the material world, not upon it” (Ingold, 1994:68).

SITUATED KNOWLEDGE

Inspired by Donna Haraway in particular, Latour is aware that the notion that it should be possible from a position above and outside to describe the world we live in is both erroneous and limiting. We must instead show that our always limited perspective immanent in matter is richer, more realistic, less limited than perspectives laid from outside. But it is not only Latour’s realization that our knowledge is situated that is inspired by Haraway. To me, she has also been a crucial inspiration for how Latour with the concept of scale seeks to point to possibilities for creating objective and productive knowledge about an ontology we do not know in itself.

It has thus inspired Latour that Haraway has insisted on not giving up the possibilities of creating objective knowledge even though she emphasizes that this knowledge must recognize that it will always be situated: “So objectivity turns out to be about particular and specific embodiment and definitely not about the false vision promising transcendence of all limits and responsibility. The moral is simple: only partial perspective promises objective vision. (...) Feminist objectivity is about limited location and situated knowledge” (Haraway, 1988:582/83).

It is with this understanding that Haraway calls “the view of infinite vision”, linked to all sorts of visual techniques that give us the impression of being able to see through everything in one sweeping zoom for “an illusion, a god trick” (Haraway, 1988:582). We can use a map to orient ourselves in the world, but the map created with the investment of different knowledge does not resemble the world as it has been customary to imagine since the Renaissance. The map does not mimic the world but can be involved in a motivated strategic study of the world, as Latour has highlighted (Latour, 2010). This realization – i.e. the movement *from* the notion that the map mimics or resembles the world *to* the understanding that the world is neither an image nor a map – is a crucial inspiration for ongoing mappings of *The Critical Zone* and its life: “They [the maps] produce situated, embodied knowledge” (Aït-Touati, 2020:11 (my translation)), write Frédérique Aït-Touati, Alexandre Arènes and Axelle Grégoire with reference to both Haraway and Latour in *Terra Forma*, which is a manual for potential mappings of *Gaia*.

Latour is in line with Haraway’s awareness that knowledge is situated and states: “It’s very odd to present a city from above. I mean, who is seeing cities from above? One never actually sees the city. (...) One never sees a building as a whole. You do not see it when it is not there, and once it is made, you do

not see it because it is just opaque. So the opacity of a building is a very interesting thing” (Latour, 2008:127).

In *Staying with the trouble* (2016) Haraway argues that “it matters what relations relate relations” (Haraway, 2016:35). In my reading, Haraway hereby points out that it makes a difference whether we – “with a bird’s eye’s view such as is given by a plan on a drawing board” (Le Corbusier, 1986:177) – *relate relations* with emphasis on proportions and thus disregard the meaning of size, or whether we *relate relations* without neglecting that we are embedded in a material world of forces where everything changes with size. It makes a difference if we acknowledge that in actual fact axes are “seen from the ground, the beholder standing up and looking in front of him” (Le Corbusier, 1986:177).

The challenge then becomes whether we can name relationships with the concept of scale that the hylomorphic tradition has used the very same concept to neglect? It is my contention that it is this possibility that Latour seeks to affirm, stating that “scale is what is produced, not what you should have as your own meta language to describe it” (Latour, 2008:129).

SCALE DOES NOT EXIST

With Philippe Boudon – who has influenced Latour via the architectural theoretician, Alena Yaneva (Yaneva, 2005; Yaneva/Boudon, 2008; Latour, 2008:127) – one can point out that “scale does not exist” (Boudon, 2009). Scale is what we produce when we carefully relate – and name – different relations. “If *scale* does not exist, there must exist *scales* instead.” (Boudon, 2009). It is Boudon’s – and Latour’s – understanding that the way we measure size depends on a choice and that the choice of measure relates to – is motivated by – what we find relevant.

Everything changes with size, but the world does not have measures in itself, and what and how we measure depends on what we choose as relevant. The choice of measure – and the reflection on what is relevant to measure – is linked to creation, and it is the relation between 1) size, 2) measure and 3) relevance Boudon and Latour name with the word ‘scale’. That is why scale is not a meta concept, but what we concretely produce; the concept of scale becomes qualified with the relationship the concept concretely denotes, thus for instance relationships between knowledge invested in a strategic map and reality (*cartographic scale*) or the relationship between a building and its neighboring building (*neighboring scale*). And we can name what I see from the ground looking in front of me – that is, the relationship between my vision and what I see – *perception scale*, when we are concerned with what size (length) this relationship has.

Inspired by Boudon, we can link this three-part relationship between 1) size, 2) chosen measure, and 3) naming with emphasis on the ‘relevance’ of the relationship between 1) and 2) to the semiotics of Charles Sanders Peirce (see Boudon, 1999). Peirce distinguishes between *firstness* – which

characterizes our as yet indeterminate encounter with ontology; *secondness* – which seek to determine our relation to what we do not know in itself, but nevertheless experience; and *thirdness* – which names the relationship between firstness and secondness with a concept. Scale – the name of different relationships with emphasis on relevant measures – thus becomes an aspect of a creative process that for instance may involve an assemblage of materials and therefore an awareness that in a world of forces everything changes with the size. But the creative process has as its goal more than we can name, and scales are – as Latour points out – not a meta concept, but what is produced. Or with the architect Louis Kahn: “A great building must begin with the unmeasurable, must go through measurable means when it is being designed and in the end must be unmeasurable” (Kahn, 1991).

The Norwegian philosopher Arnfinn Bø-Rygg has commented on *The Nordic Pavillion* in Venice created by Sverre Fehn, who was a student of Kahn: “What Fehn did was to scale the material, the space, the light, the shadow to each other” (Bø-Rygg, 2013). With a reference to Hölderlin and Heidegger Bø-Rygg stresses that Fehns architecture gives measure to a world in which everything changes with size but have no measure in itself. Heidegger doesn’t talk about *The Critical Zone* but “calls the space between the earth and sky (or heaven) the ‘dimension’”, Bø-Rygg writes. He continues: “All forms of art and architecture are a means to measure this Between, the dimension. To dwell poetically, to create art, is to take measure. ‘Is there a measure on earth?’ Hölderlin asks. To which he answers: ‘There is None.’ (...) It is not something that can be pre-determined. Heidegger is far from associating our measure to the familiar and safe, to what we can control. To measure the dimension is then to dwell in the open, in what Hölderlin calls ‘the Unknown’” (Bø-Rygg, 2013).

We hereby respect the realization that was emphasized by DeLanda and Harman in their dialogue: “Epistemological questions should be kept separate from ontological ones.” But we are also moving beyond the New Materialism and OOO insofar as we examine the relationships and forces between objects. With reference to Ingold and his critique of the hylomorphic tradition, we are aware that it is a problem when design only takes places in our consciousness without recourse to the material world as was the ideal of Alberti. Our work must involve a continued recognition that we are working within the world and its forces.

With Ingold we go further than both DeLanda, Harman and OOO that still only pay attention to objects and do not acknowledge that a life is unfolding between the objects – and between the objects and us – and that we have to work with an awareness of these relations even if it can’t be via a god trick from an imaginary elevated position. Ingold points out that we should not just name the objects “as nouns, but as verbs, as ongoing” (Ingold, 2015:16) in order to become aware of how they relate to each other. Instead of attaching ourselves to hylomorphism’s notions of matter as dead, Ingold encourages us to be aware of the life of matter and thus of how matter creates knots of relationships in which we can participate and

live: “The world of things, I propose, is a world of knots, a *world without objects*, or in short, a WWO” (Ingold, 2015:16).

It is my view that Latour shares Ingold’s attention when he points out that the challenge today is to understand how we can live “with myriads of viruses, bacteria, animals and other life forms.” The challenge is not how we “indicate a distance from the situations that require judgement”, but how we with critical attention strive to “gain a new proximity with the situations we have to live in” (Latour/Weibel, 2020:9).

Frédérique Aït-Touati and Emanuele Coccia have highlighted what they experience as “an extremely coherent approach in the intellectual path” (Aït-Touati, 2021:5 (my translation)) which runs between Latour’s early work on Pasteur and his later work on *Gaia* and *The Critical Zone*. As already stated in connection with his work on Pasteur’s discoveries, Latour emphasized that his - Latour’s - ambition was neither to explain anything *with* nor reduce anything *to* something else. The aim was rather to relate what may be relevant to relate. The ambition was *not* to explain anything with the microorganisms that Pasteur discovered, but to understand how the microorganisms via Pasteur’s discovery became an actor we could relate to and, for example, involve in the planning of our cities, as the attention to the microorganisms’ existence and movements could motivate sewerage in cities burdened by various bacterial related diseases: “It was not a question of moving from a world without microbes to a world populated by microbes, but to allow the transition to a political scene where microbes are recognized as having the capacity to act and therefore to exist as social actors, just like humans or institutions” (Aït-Touati, 2021:5).

The crucial thing about the discovery of the microbes was not that we could thereby explain something on a larger scale with something on a smaller scale. The crucial thing was whether we could involve what we epistemologically experience from and understand by different big and small lives in the planning of, for example, our cities. The question that is raised today with attention to *Gaia*, that is, with the understanding that the many forms of life continuously create their own environment, is whether we can, for example, plan our cities so that lives of different sizes - and which surround us everywhere - may cooperate in an appropriate manner. The question is whether we can find out to inhabit *The Critical Zone* with respect for the life forms that is the prerequisite for and environment of our own life.

SITE-CONTEXTUAL CONSIDERATIONS

In his essay on his own site-specific work, *Spiral Jetty* (1972), Robert Smithson (1938-73) writes that “size determines an object, but scale determines art” (Smithson, 1996:147). This consideration has for some time – and with a traditional understanding of scale – been misunderstood to the point that it should mean that with art there is no decisive difference between image, text and physical work: “There is no pure *Spiral Jetty*, no work uncontaminated by language or other supposedly nonsculptural media,” (Shapiro, 1995:7) Gary

Shapiro writes in his comprehensive book on Smithson's art, *Eartwards, Robert Smithson and art after Babel*, which has been of great importance to the Smithson reception. Photographs of *The Spiral Jetty* are somehow identical to the physical work, and scale is used to suppress attention to differences instead of promoting it.

The sculptor Richard Serra – who helped Smithson with the realization of *Spiral Jetty* – has in oppositions to Shapiro's understanding stated, that "what most people know of Smithson's *Spiral Jetty* is an image shot from a helicopter. When you actually see the work, it has none of that purely graphic character. (...) If you reduce sculpture to the flat plane of the photograph you are denying the temporal experience of the work, you're not only reducing the sculpture to a different scale for the purpose of consumption, but you're denying the real content of the work" (Serra, 1994:129).

Smithson died shortly after completing *Spiral Jetty*. But Serra has continued to work in accordance with Smithson's understanding that works of art that "came of the pedestal" are "in exactly the same behavioral space, that you are in", which is why one must work with the sculpture "in relation to time and space, and not as something removed you deal with as a kind of icon or worship" (Serra, 2001). For Serra, everything changes with size and the work with sculpture involves what I with Boudon and Latour have called scale, that is, an awareness of relationships that does not neglect but affirm the importance of size. This is why Smithson states that "size determines and object, but scale determines art." About his work with the sculptural installation *Weight and Measure* (1992) – which was a temporary site-specific work of two rectangular steel volumes of different sizes in Tate Museums *Duveen Gallerie*, designed by architect John Russell Pope in 1939 – Serra has stated: "Scale in relation to place has to be worked out with mock-ups *in situ*. One has little retention for scale relationships. The problem of scale cannot be solved through design solutions; you cannot preconceive scale and draw it up in graph paper" (Serra, 1994:275).

Art historian Richard Shiff has pointed out how Serra works with a sense of what we with Peirce has called our *firstness* relationship with the world and which relates to the fact that we are embedded in and cannot control it from an elevated position (Shiff, 2015). For Serra, it is crucial that what we experience when we move in one direction is different from what we experience when moving in the opposite direction. The order of the factors *does* matter. It is this indefinite *firstness* experience – which relates to any encounter with sculpture and architecture that is not just an image or an container – Serra gives measures and thus relates to with awareness of different relations, such as the sculptures relationship to its surroundings (neighboring scale) and to the perceiving person (perception scale). The work *Weight and Measure* relates to the spatiality in which it is placed and thus crates another spatiality in its site. And it is conceived with attention to the viewer's movement and thus to the fact that it is only by virtue of movement in time and space that one experiences that the two rectangular volumes that Serra has

placed in Pope's classical architecture and which immediately – from where one enters – appear identical, have both different sizes and different weight.

While Pope's architecture is created in compliance with the proportional theories of classical architecture, which ignore the scale of architecture and thus the significance of its concrete size (Oxvig, 2013), Serra with his cubes creates an understanding of what Galileo became aware of: Everything – also the weight – changes with the size. Serra makes us sense the size of Pope's space by using his cubes to draw attention to the importance of size and weight, first by the cubes and then by their surroundings.

Serra works with and awareness of what we can determine by objective measures and name with different scales, but which we at the same time have been accustomed to neglecting by the notion that there is no difference between epistemology and ontology. With his sculptures, Serra gives us experiences of what it means that the work – and matter – is more, not less than we can overlook, understand and control. With his works, Serra is in close dialogue with insights, which today are involved in studies, mappings and descriptions of *The Critical Zone* and thus with what it involves when Latour encourages us to 'land on Earth' to critically work with a new proximity: with that which is close to and surrounds us.

In other words, the ambition of this paper has been to point out that the theoretical work that Anna Tsing calls for, when she in accordance with Galileo, points out that "scalability is not an ordinary feature of nature" (Tsing, 2015: 38), can advantageously be unfolded through a conceptual dialogue with, what art that stepped down the pedestal and into the world has given us the opportunity to experience. The ambition has been to point to a possible – and necessary – collaboration between philosophy, science and art in a situation where, in Tsing's words, "it is time to turn attention to the non-scalable, not only as objects for description but also as incitements to theory" (Tsing, 2015: 38).

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