

A Proposal for the PhD in Architecture Toward the “Nocturnal Sky,” and Toggling Between Research and Practice

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THE NOCTURNAL SKY

If we accept the premise that architecture is an academic discipline in addition to being a professional one, then what is its object of study? What does it mean to teach, research and know architecture, today? Such questions have a history. Gottfried Semper, for example, had similar concerns in the nineteenth century. He was critical of an over-specialized education that thwarts the creative artistic spirit, one that “kills the very faculty that is actively responsible for the perception and, equally, the creation of art.”¹ Semper thought, instead, that the “thirst for knowledge” must assume “the character of research and active, independent activity.”²

The object of this activity was to find an empirical theory of style in an age of industrial reproduction. Neither pure nor abstract, this theory would consist of the “inner law” governing those “constituent parts of form that are not form itself but rather the idea, the force, the material, and the means – in other words, the basic preconditions of form.”³ Semper’s *Style* is contemporaneous with other key texts of the nineteenth century such as Marx’s *Capital* and Darwin’s *The Origin of Species*. If the former deals with the reproduction of money and the latter with the reproduction of species, Semper’s *Style* deals with the reproduction of culture. The model for such reproduction is nature. The very first line of his “Prolegomena” reads:

The nocturnal sky shows glimmering nebulae among the splendid miracle of stars – either old extinct systems scattered throughout the universe, cosmic dust taking shape around a nucleus, or a condition in between destruction and regeneration.⁴

Such appeal to nature is the very mandate of the theory of organicism. Caroline van Eck has defined the latter as a “strategy of invention and interpretation, through which the meaning of architecture can be formulated.” In *Organicism in Nineteenth Century*, Van Eck gives a comprehensive account of organicism from its origins in antiquity to its ‘crisis’ at the beginning of the twentieth century. She argues that the crisis is marked by the dismissal of the core tenet of organicism that goes back to Aristotle, namely that architecture should imitate nature, and that such “imitation should take the methods of nature, not her forms, as its object.”⁵ Van Eck brings as an example Louis Sullivan, who emphasized functionality rather than purposiveness of form, and referred to esoteric doctrines rather than concepts of classical antiquity.⁶

However, rather than marking the end of organicism, modern architecture, in theory and practice, consisted of different figurations of it. Organicism, or the concern for style, never lost its spell, even when it expanded beyond its perceived or imagined Eurocentric origins and became global.⁷ Though nature as model may have disappeared, the model as nature and the methods of imitating (according to) such models did not. Le Corbusier, for instance, would write of the Modulor Grid in anthropomorphic-organicist terms: “With this grid for use on the building site, designed to fit the man placed within it, I am sure you will obtain a series of measures reconciling human stature (man-with-arm-upraised) and mathematics...”⁸ It is as if, like an organism, the man-with-arm-upraised self-generates (into) a grid of proportions through proportions and geometry. Then this grid

matches the proportions of the human body from which it was generated with (the measurements of) a variety of objects. The grid 'lives'... Like classical organicism, it functions like a justification for stylistic choice without being a particular style of building, or to paraphrase Derrida: a Style that is not a style, a Center that is not a center, an interior by not being in it.

Yet, what if this rhetorical and epistemological interiority is absolutely contingent rather than necessary? Contingent upon what? An exterior, or in the words of Quentin Meillassoux, the "great outdoors."⁹ The latter stands for an impersonal reality that is independent from our human relation to the world, an impersonal reality that is "exempt from the constraint"¹⁰ of the knowledge that – to quote Kant – "we have put into [this reality] in accordance with its concept."¹¹

Perhaps Semper's "nocturnal sky" is or points toward precisely such "great outdoors." But so is Le Corbusier's rock in Brittany, where he finds the "right angle," the "lieu de toutes les mesures," (the point of all dimensions):

I am in Brittany; this line is the limit between the ocean and the sky; a vast horizontal plane extends toward me. I appreciate the voluptuousness of this masterly restfulness. Here are a few rocks to the right. The sinuousness of the sandy beaches like a very soft undulation on the horizontal plane delights me. I was walking. Suddenly I stopped. Between my eyes and the horizon, a sensational event has occurred: a vertical rock, in granite, is there, upright, like a menhir; its vertical makes a right angle with the horizon. Crystallization, fixation of the site. This is a place to stop, because here is a complete symphony, magnificent relationships, nobility. The vertical gives the meaning of the horizontal. One is alive because of the other. Such are the powers of synthesis.¹²

So is Bernard Cache's map of Lausanne, a "great outdoors," where he finds the image of inflection:

This map is a pure form because on its surface no signs or markings appear at all. The orographic design is a design without destiny, a map without a plan. A world before man, even if we know that it is man-made. For we will see that this surface has the strange quality of being first though it is constructed and is never fully realized. What is this image? As it has no value, it has nothing obscure; as it has no meaning, it has no top or bottom, right or left; as it has no density, it is superficial, which is to say geographical and not geological; and it has no center, its boundaries are nowhere, for any scansion would allow for meaning to emerge and would constitute objects and singularities through discontinuity. In short, it is an open surface in the pure light of weightlessness. It is a thin film whose neutrality is reminiscent of the monochrome objects of Kurt Schwitters.¹³

Perhaps more, or less than models of nature, the "nocturnal sky," the "vertical rock," and the "geography of Lausanne" are what stop the model, what cut the self-reflexive organicist circuit: they are "ancestral" realities that literally predate our concepts, signs and language. Of course, these events eventually undergo habituation; we get used to them as they are interiorized in and through the subject-object correlation and its related techniques. For example, after decades of

digital experimentation, 'inflection' is fully naturalized discursively, technically, and perceptually. We take it for granted and we are no longer surprised by it. When such interiorization occurs, another "great outdoor" needs to be found, which often is the same "outdoor," but re-encountered, re-found, rediscovered. As Maurice Merleau-Ponty writes in "Eye and Mind:" "In a sense everything that may have been said and will be said about the French Revolution has always been and will henceforth be within it, in that wave arising from a roil of discrete facts, with its froth of the past and its crest of the future."¹⁴ Here the French Revolution is the object that will never be encapsulated definitively, under one methodological umbrella or one epistemological interiority, but is always open to time, to history. This "wave" is the "great outdoors." For example, in his recent work Bernard Cache is reconceptualizing curvature and inflection through the geometrical machines of Albrecht Dürer. Here the "great outdoor" is history, more specifically a geometrical discourse that precedes digital geometry, a complex curvature that predates digital complex curvature.

Finding or 'getting in touch' with the "great outdoors," in history, could very well be the 'calling' of a PhD in Architecture, insofar as it is uniquely poised to combine what Semper calls "research and active, independent creativity," and "direct intuitive thinking." This can happen, however, only if the PhD breaks with the so-called 'silo' syndrome: the disciplinary separatism between specialized research on the one hand and practice on the other. Such disciplinary 'siloing' also has a history. Manfredo Tafuri, for example, writing not so long ago, authorized a clear ideological and epistemological break between the historian of architecture and the architect-practitioner, by categorically denouncing the practice of operative criticism, that impure and speculative 'weaving' of historical research and design practice. This break is not so much the cause than the effect of what Meillassoux calls the "correlationism," the subject-object relation that originates with enlightenment and critical philosophy, and presumes that (architectural) object to be fully subsumed under such relation, thus surreptitiously rendering it as totally knowable and criticizable, and eventually blocking any access towards the "great outdoors."

We should reinvent operative criticism, or rather an operative pre-criticism, that reinvests the object with operational agency. Such redistribution of agency is an acknowledgement of the absolute fact that objects predate us, that we are always already thrown into a geography of objects, the geography being already an object among others. Can a PhD candidate also draw? What would be the agency and meaning of drawing in the articulation of research claims, hypotheses, or arguments? Bernard Cache, for instance is one of the few that combines geometry, computation and historical expertise. In his recent book *Toujours l'informe* he uses parametric and digital technologies of distant premodern curvatures premised on morphological variety and repetition.

Semper, on the other hand, attempted to read ancestral images through the operative potential of Eurythmy, Symmetry, Proportionality and Direction and at the same time expanded these classical concepts. In line with organicism Semper argued that these "principles of formal configuration [and] must be in strict accordance

Symmetry is only a piece, a fragment of the eurythmic whole that turns upon itself. If one imagines a cut through the earth, the section would be a circular disk, with the objects on the earth's surface arranged on the outer edge in radial formation directed toward the globe's center. A piece of the earth's meridian, which the architecturally disposed mind sees as eurythmically arranged, is a symmetrical series.¹⁷

The flower wreath in Figure 2 is such an example. A fragment of a regular wreath is cut by a plane indicated by the line cd along "the symmetrical arrangement of atoms takes place" Sempewboth relates the line cd with the earth's horizon. The axis cd results from the intersection of paper with earth plane, and the axis ab is at a right angle with the earth plane and parallel with the paper plane. The earth-model-space is folded into a paper-space with its own internal relation.¹⁸

Once paper-space is liberated from the earth model-space, it can

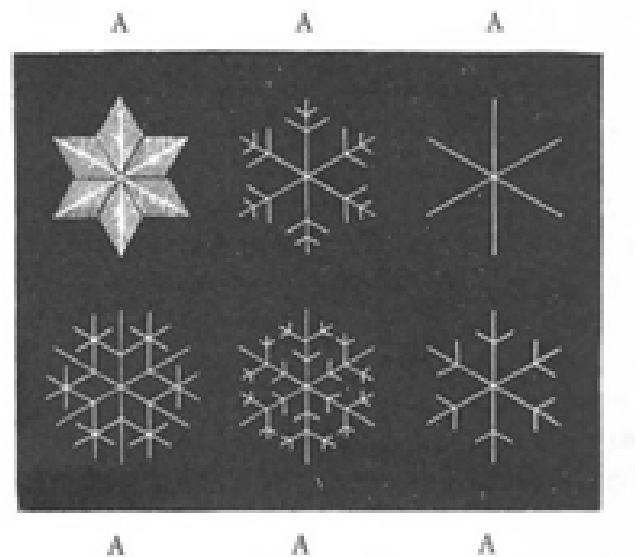


Figure 1. Gottfried Semper, Crystals (from *Style*)

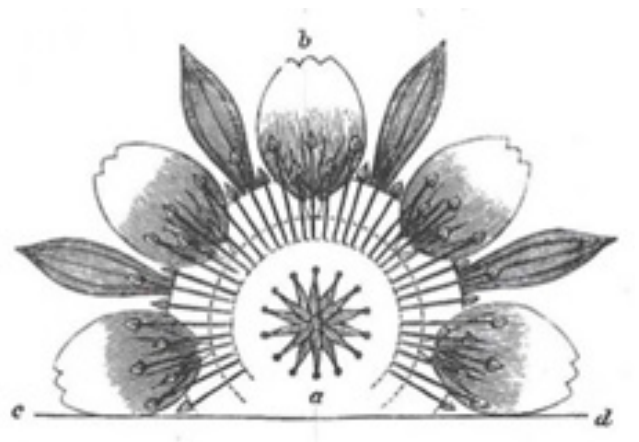


Figure 2. Gottfried Semper, Flower Wreath (from *Style*)

be transposed into different levels of the vegetal organization. What matters is internal relation between cd and ab, which can be used to describe the formation of the plant both on global and local levels:

The stem, taken as a whole, is to the branch what the earth is to the stem: namely, its closest macrocosmic relation, evident in the uniform distribution of branchings and in the massing of leaves on the branch with regard to the stem. At the same time, the branch directly relates to the center of the earth, with which it should comply in the arrangement and distribution of its subordinate members.¹⁹

The actual horizon line is a symmetrical axis for the stem, which here coincides with the proportional axis of the plant, while the plant as a whole has a eurythmic order in relation to the actual earth. Then the stem becomes a virtual horizon line or symmetrical axis for the branch; the stem also implies the intersection line of a virtual earth with the paper plane (Figure 1, 2).

Semper establishes an analogy between the organic laws of nature and the laws of art form. This analogy becomes more complex in the case of organisms with will and direction. Style is to artistic forms what life is to organic forms:

The vital force (or if one prefers, the physical force of growth), though it works in all directions, tends to follow one main direction, which in plants is generally directed vertically against the force of gravity. In most animals it is defined by the dorsal vertebrae, which are in most cases arranged horizontally, and thus it coincides with the direction of the will. With humans it is again vertical; it does not coincide with the direction of the will but forms a right angle to it. Therefore in organic formation two or three forces are active, depending on the evolutionary stage of the organism. In line with mechanics, we might postulate special force centers for them.²⁰

However, while the "principles of formal configuration [of the artistic form] must be in strict accordance with the laws of nature,"²¹ this analogy can be perceived or imagined only through the mechanical laws of inorganic matter, e.g. the paper-space. The degree of stylistic individulization is measured by the number of "right angles" or mechanical "force centers." The higher this number, the more complex, evolved, and individualized style is.

Semper's argument comes close to what André Leroi-Gourhan would write almost 100 years later in *Gesture and Speech*. The thrust of Gourhan's rather 'scandalous' argument is that the human was not primordially a monkey, but already human: "erect posture, short face, free hand during locomotion, and possession of movable implements – those are truly the fundamental criteria of humanity ... The brain was not the cause of developments in locomotory adaptation but their beneficiary." The feet and the erect posture liberated the hands from the task of locomotion and the mouth from the "difficult task of procuring nourishment for our bodies."²² Hands were available to grasp and use objects in order to perform technical tasks, which in turn opened up the possibility of language and speech. Due the angled relationship between the will (the mind) and locomotion (technics), the circuit between mind and hand is open to a series of technological changes and prosthetic modifications. It is open toward an uncertain future at the same time that opens toward history. What is imagined as an 'organic' unity of subject and object

is primordially mediated through a sequence of technical intercalations, erasures and liberations. Such technical mediation and angled relationship are also fundamental in the work of Le Corbusier. In his *Modulor*, for instance, while dealing with the supposedly 'traditional' topic of proportion and golden section, Le Corbusier also used different geometrical and standardization techniques, anticipated certain parametric technologies with his zip-a-tone images, applied different rhetoric strategies in the construction of his argument, constructed narratives that combine fact and fiction, showed paintings and postcards, drew sketches, and in the end, invited us to find the *Modulor* in Ronchamp, one of the least modular buildings in history.

Let us conclude then that, in general, the PhD in architecture should investigate precisely the angled relationship between the will and technics. In order for such investigation to take place the PhD student in architecture must be equipped an arsenal of techniques that would empower her to carry through and shift among different modalities of research and practice, of research of design and design by research. The argument in this paper has been neither to separate or break research from practice (like Tafuri did) nor to synthesize or find a 'common' ground them, but rather to tease out a disposition to toggle between the two, one that is as historical as it is technological, as much a premise as it is a promise.

Notes

1. Gottfried Semper, *Style in the Technical and Tectonic Arts*, trans Harry Francis Mallgrave and Michael Robinson, (Los Angeles: Getty Publications, 2004), p. 73
2. *Ibid.*, p. 74
3. *Ibid.*, p. 72 (my emphasis)
4. *Ibid.*, p. 71
5. Caroline van Eck, *Organicism in Nineteenth-Century Architecture: An Inquiry Into Its Theoretical and Philosophical Background*, (Amsterdam: Architectura & Natura Press, 1994), p. 19
6. *Ibid.*, p. 265
7. Such argument is also articulated by Detlef Mertins in: Detlef Mertins, "Bioconstructivisms," *Modernity Unbound*, (London: Architectural Association, 2011); "Introduction," in Kurt Behrendt, *The Victory of the New Building Style*, Trans. Herry Francis. Mallgrave, (Los Angeles: Getty Research Institute, 2000), p. 86
8. Le Corbusier, *The Modulor: A Harmonious Measure to the Human Scale Universally Applicable to Architecture and Mechanics*, trans. Peter de Francia and Anna Bostock, (Cambridge: The MIT Press, 1968), p. 37
9. Quentin Meillasoux, *After Finitude: An Essay on the Necessity of Contingency*, Trans. Ray Brassier, (London: Bloomsbury, 2012), p. 7
10. *Ibid.*, p. 3
11. Immanuel Kant, *Critique of Pure Reason*, trans and ed Paul Guyer and Allen W. Wood, (Cambridge, Cambridge University Press, 1998), p. 108

12. Le Corbusier, *Precisions: On the Present State of Architecture and City Planning*, (Zurich: Park Books, 2015), p. 75
13. Bernard Cache, *Earth Moves: The Furnishing of Territories*, trans. Anne Boyman, (Cambridge: The MIT Press, 1995), p. 18
14. Maurice Merleau-Ponty, "Eye and Mind" in Galen A. Johnson, ed. *The Merleau-Ponty Aesthetic Reader: Philosophy and Painting*, (Evanston: Northwestern University Press), p. 139 (my emphasis).
15. "Prolegomena," *Ibid.*, p. 92
16. *Ibid.*, p. 84-85
17. *Ibid.*, p. 87
18. This is no different from what in modeling software is called a construction plane.
19. *Ibid.*, p. 88-89
20. *Ibid.*, p. 91
21. *Ibid.*, p. 92
22. André Leroi-Gourhan, *Gesture and Speech*, trans Anna Bostock Berger (Cambridge: The MIT Press, 1993) p. 19, 25, 26.