

Field Notes From *The Instruments Project*

Field Notes From *The Instruments Project*¹

John J. May
University of Toronto

Launched and codirected by Zeynep Çelik Alexander and John J. May at the University of Toronto, *The Instruments Project* has engaged six collaborators—Lucia Allais, Ed Eigen, Orit Halpern, John Harwood, Matthew Hunter, and Michael Osman—over the past three years, in a series of meditations around a set of contemporary technical gerunds: rendering, scanning, modeling, specifying, sensing, among others. Through sustained attention to instrumental processes that are, by design, simultaneously material and metaphysical, the project works toward establishing the technical dimension of architecture, landscape, and urbanism as a legitimate site for historical inquiry and philosophical reflection (more information can be found at [www.theinstrumentsproject.org](http://theinstrumentsproject.org)). What follows is not a comprehensive summary of the project, but simply a kind of progress report that examines its relation to the concept of “crisis.”

At its inception, *The Instruments Project* was in part motived by what appeared to be an ongoing and deepening crisis of architectural representation. In the first place, entire regions of contemporary architectural reasoning are now obviously disturbed by a subtle but palpable discursive confusion, which resides not at the level of logical analysis (closed systems are always internally rational) but rather is buried much deeper, in the raw, preconceptual substrate from which

the contemporary architectural mind fashions an understanding of itself and its world.

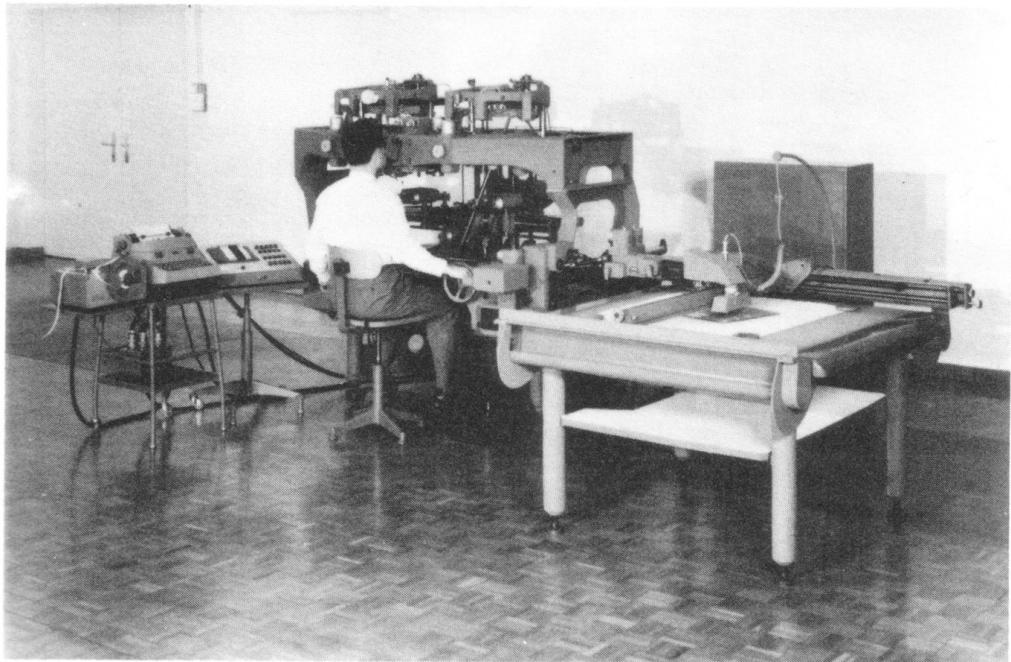
Having strained to digest and incorporate the capacities and contradictions of contemporary scientific civilization—that is, having (explicitly) reframed urbanism as *environmentalism* and (tacitly) recast *autonomy as automation*—the design fields seem unable to articulate, even for themselves, the material and epistemic conditions under which they labor. The entire

critical-conceptual framework of postwar architectural discourse has evaporated (not because it was *proven wrong*; it has simply been *rendered obsolete* by technical transformations beneath its language), taking with it even those theoretical postures that define themselves through opposition to that framework. So-called disciplinary debates have become, in most cases, episodes in an ongoing theater of historical reenactment, shadowboxing matches between semantic anachronisms.² (The words “digital,” or “ecological,” for example—by covering over and stupefying massive and delicate tectonic shifts in lived life—now obfuscate far more than they explicate, subsisting within our language as shiny but hollow vagaries.)

This condition is deepened and intensified by a more generalized ambivalence regarding the modern technosciences—principally the sciences of mind and environment, but also the vast catalog of managerial practices that lean upon those sciences for guidance and legitimacy (environmental management and control engineering, urban planning, building sciences, etc.). After the twentieth century, those fields are no longer able to deny or explain away their own objective pasts and must now speak from both sides of their mouth, often condemning and promoting one another in the same breath.³

Ultimately, these are not specific “problems” in search of solutions, but rather belong to a generalized condition of contemporary existence that can only be grasped through a project of extended philosophical-historical reflection,

Figure 1. Santoni's "Stereocartograph, Model IV" (1933), an early analog example of the use of stereography in the production of accurate terrain contour maps from aerial photographs.



one that patiently exposes to view the elaborate technical underside of contemporary architectural reasoning, such that it might be made to see beyond and outside itself, if only ever partially and incompletely. *The Instruments Project* is an attempt to initiate that task.

III

In tandem with this first set of conditions (the erosion of our language), architects must now also confront on a daily basis the fact that forms of visualization specific to scientific knowledge have come to dominate—and now literally *precede*—architecture's own historically embedded forms of representation (viz., parallel and perspectival orthographics). This dominance has had the destabilizing effect of initiating a kind of perpetual amateurism into the field, because by the time a specific technical routine has been mastered, it's already outdated. Worse still, architects are suspended in this state of breathless amateurism at exactly the moment when we are trying to assert, more forcefully than ever, our status as techno-environmental cultural experts.

How have processes of technical

imaging—scanning, sensing, modeling, and so on—so rapidly and thoroughly displaced our entire internal history of representation as the primary site of reasoning and experimentation? In our work we have had to confront what may or may not be eventually regarded as a fundamental breach in the history of representation: on the one hand, there seems to be a period in which representation in general—and scientific representation more specifically—was governed by *photo-mechanical* means of registration, and, on the other hand, a later period in which representation was governed by processes best described as electrical, or at most electro-mechanical. If electricity was present in the former phase, it was merely as a continuous power source; in the latter period (as is now well-known), discrete, differential electrical signals are bearers of specific instructions and messages (information), either for other electrical functions or for mechanical ones. We have at times been tempted to call this a divide between *mechanization* and *signalization* but have just as often discounted that as too simplistic, if only because the two are inseparable in any

contemporary technical system.

But if we provisionally accept this divide, we can see that on one side are processes of image production in the form of either graphical or photochemical registration. These processes finalized themselves during the act of mechanical witnessing: graphical means were quantified, and photochemical means were visual. Only through great labor—collaging, tedious manual measurement, and so on—could the two methods be made to speak to one another, and even then only approximately.⁴

On the other side lies electrical imaging, in which the variable energy dispensed by a visible field is converted into discrete electrical signals.⁵ Here the great labor process is collapsed into a single automated process that takes place behind or below the threshold of perception, through miniaturization (pixilation) and/or instantiation ("real timing" and telematics). Calculability and visibility are made coextensive through a process of automated, signalized "mathematization," in which the world and a specific statistical view of it are made to merge indistinguishably.⁶

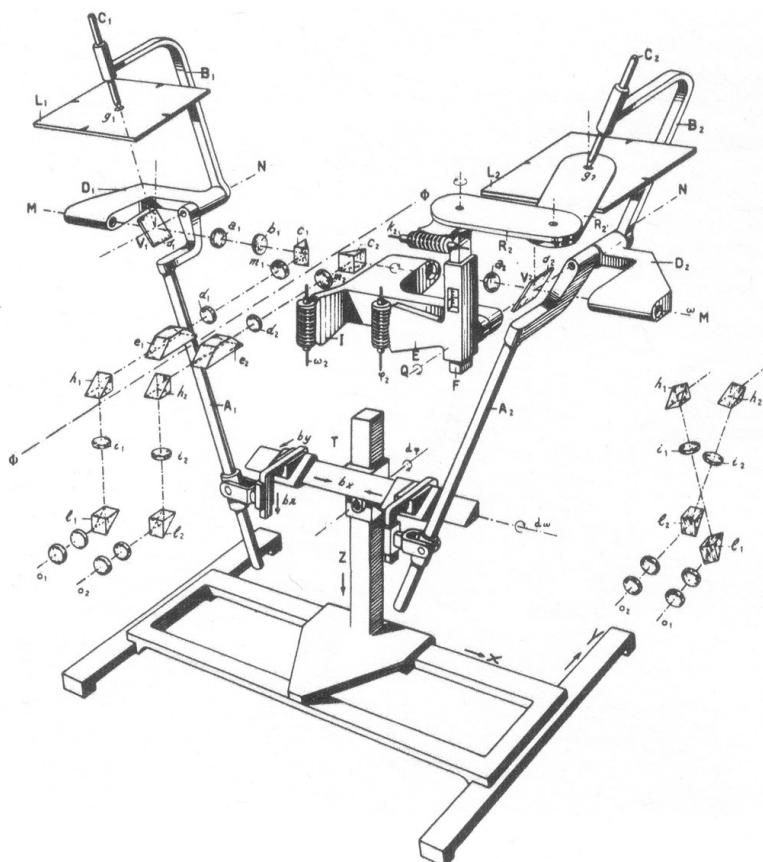


Figure 2. Zeiss semi-automatic photogrammetric plotting assembly (1961).

The question of how exactly architecture today designates things or conditions as either *natural* (viz., “organic,” “essential,” “innate,” “dynamic,” “generative,” “emergent,” etc.) or *unnatural* (viz., “built,” “artificial,” “machinic,” “constructed,” “historical,” etc.) has emerged as one of the principal anchors binding the various branches of *The Instruments Project*. And because this question nearly always, in architectural practices, takes the form of technoscientific visualizations, the “neo-naturalism” we have described⁷—this often elegant mixture of technical acumen and philosophical oblivion, in which *signalization* displaces *signification* as the primary epistemic mortar in architectural reasoning—is as much image as concept. We might even be justified in hyphenating those terms; perhaps neo-naturalistic reasoning is best

understood as a rapidly growing repertoire of technical *image-concepts* (building information models, tool paths, brain scans, thermal maps, geographic-information systems, ecological performance models, etc.) in which discursive concepts are reduced to labels. Image-concepts do not merely make specific claims about “nature”; deep down in the details of their technicality they make more generalized philosophical claims about *the nature of nature*. They silently posit an entire cosmological theory of life in every scene (in general, that the world is a statistical object and is therefore best understood as an ever-growing body of electrical data). We have provisionally named this condition “neo-naturalism.” It is an event beyond good and evil, but for which our fields are philosophically and politically unprepared.

III

Complicating this account, however, is a somewhat distinct consideration concerning our contemporary use of images, which can only be roughly outlined here:

In the current moment, there is another kind of image-making that's becoming very important, that [is] neither an “ideal,” nor “mechanical,” nor “expert-altered” image. The surgeon, the electronics fabricator, or somebody working with toxic materials—they're all using the image to manipulate something. I think that images actively used as part of manipulation mean we are no longer concerned with *re-presentation*, but rather with *presentation*. [Now] images are a part of the primary intervention into the world. ... We are no longer wondering if our *re-presentation* of the

thing matches something out there. Today, more and more, we want images that do things. An evidentiary image is no longer sufficient for many scientists. We want images that help us organize information, that are accessible, that may not be a copy of something “out there” at all. ... Images become tools, like a video-monitor image used by a distant doctor to conduct tele-surgery. When images are there to cut, fold, connect, manufacture, their purpose is to help us do things beyond the classical task of categorizing and confirming.⁸

In other words, what appears at first glance to be a “crisis of representation,” in which our technical capabilities have drastically outpaced our ability to conceptually re-present reality, is in fact not at all the case. And this concept we’ve called “neonaturalism”—by which we indicated the passage from an evidentiary regime rooted in historical signification to one rooted in electrical signalization (data-as-information)—is in fact precisely wrong when viewed from *inside our* contemporary technical systems.

Unlike historical time, which was concerned with representing the past as a way of *determining the future*, real time presents all possible futures at once (or at least as many as can be counted, computed, and “parametricized”) as a way of *managing the present*. There can be no “crisis of representation” within the techniques of real-time presentation, and we are not so much entering a new evidentiary paradigm as moving beyond any recognizable conception of evidence.

Put differently: what we have been calling *neonatural representation* may well be a kind of brief transition phase on the way to *autonatural presentation*—one in which an older, presignalized techniques of data (viz., “paperwork”)⁹ gradually cleared away signification and, in doing so, laid the psychological groundwork for a condition in which all of the old *significant* questions (ontological, epistemological, metaphysical)

are now preemptively superseded by a technics that always immediately presents the world as a field of data without bounds. As that world emerges, the old gap between representation and intervention—the gap in which concepts such as *evidence*, *objectivity*, *precedent*, and *history* made their home—recedes further and further from view, as more and more forms of presentation take up residence behind or below ocular perception.

Within the gaze of presentational, real-time technics, the very concept of “crisis” is (automatically, by design) excluded; it is not so much erased as simply deleted, in a gesture, “illuminating and eliminating itself like night.”¹⁰ It remains to be seen whether real-time principles like simultaneity and instantaneity can be made to bear any resemblance to history, or whether the managerial image-concepts of presentational intervening can somehow take the place of the countless “historical-philosophical images of the future” that animated not only the political philosophy of progress but also the substrate of historical reasoning more generally.¹¹

Author Biography

John J. May is a partner with Zeina Koreitem, in MILLION\$, a Los Angeles-based design practice with projects in Beirut, New York and California, and Assistant Professor in the Daniels Faculty of Architecture, Landscape and Design at the University of Toronto.

Notes

- 1 A modified version of this text was delivered in a lecture at the Princeton University School of Architecture in November 2014.
- 2 See John May, “The Logic of the Managerial Surface,” *Praxis* 13 (2013): 116–24; or Zeynep Çelik Alexander, “The Core That Wasn’t,” *Harvard Design Magazine* (Fall 2012), 84–89.
- 3 “If we were previously concerned with externally caused dangers (from the gods or nature), the historically novel quality of today’s risks derives from internal decision. ... Science is one of the causes, the medium of definition, and the source of solutions to risks. ... In the reciprocal interplay between risks it has helped to cause and define, and the public critique of those same risks,

techno-scientific development becomes contradictory.” Ulrich Beck, *Risk Society: Towards a New Modernity* (London: Sage, 1992), 155.

- 4 Lorraine Daston and Peter Galison, *Objectivity* (New York: Zone Books, 2007).

- 5 John May, “The Becoming-Energetic of Landscape,” *New Geographies 2: Landscapes of Energy* (2010), 23–32; and May, “Sensing: Preliminary Notes on Statistical-Mechanical Vision,” in “Monster,” *Perspecta* 40 (2008): 42–53.

- 6 On the “mathematization of nature,” see Edmund Husserl, *The Crisis of European Sciences and Transcendental Phenomenology*, trans. David Carr (Evanston, IL: Northwestern University Press, 1970), 9, 23–59; or Michael Lynch, “The Externalized Retina: Selection and Mathematization in the Visual Documentation of Objects in the Life Sciences,” *Human Studies* (1988): 201–34. <AQ: Provide volume and issue number for Lynch.>

- 7 See Zeynep Çelik Alexander, “Neo-naturalism,” *Log* 31 (Spring 2014): 23–30.

- 8 “In that world, which is more engineering or surgery or sampling, the fundamental question is not, as with the classic from particle physics: ‘Does this exist?’ Instead, it’s: ‘Does our evidence demonstrate to a reasonable probability that there are particles of the type that we’ve described?’” Peter Galison, quoted in “The Lives of Images: Peter Galison in Conversation with Trevor Paglen,” *Aperture* 211 (2013): 36–37.

- 9 See Ben Kafka, *The Demon of Writing: Powers and Failures of Paperwork* (Cambridge, MA: Zone Books, 2012).

- 10 See “Peter Galison and John May: A Conversation around Artifacts,” in *Thresholds 43: Scandalous*, ed. Ann Lok Li and Nathan Friedman (forthcoming, 2015).

- 11 Michel Foucault, *The Birth of the Clinic: An Archaeology of Medical Perception* (London: Routledge, 1973), 195.

- 12 Reinhart Koselleck, *Critique and Crisis: Enlightenment and the Pathogenesis of Modern Society* (Cambridge, MA: MIT Press, 1988), 9.