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Book Review: Paul Emmons. *Drawing Imagining Building: Embodiment in Architectural Design Practices* Routledge, 2019

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What is *disegno*? The erudite Tuscan, Anton Francesco Doni, asked himself this question in 1549 and responded as follows: “I would say it is the industry of the intellect, enacting the execution of the work with its power ... *Disegno* is not anything other than divine speculation.”¹

Doni’s learned invocation of *disegno* to be a physical production as well as an immaterial idea, helps to establish the link, still with us today, between the inseparable processes of thinking and drawing. The power of *disegno*, for sixteenth-century commentators such as Doni, and later, Giorgio Vasari and Federico Zuccaro, was in theorizing the apparent ambiguity, inherited from Aristotle, between the changeable, material world of the senses and the eternal, unchanging realm of ideas, conceived in the mind. *Disegno* elevated the status of drawing beyond its origins in workshop usage, giving a basis for the evaluation of artistic practice as both a technical and intellectual pursuit.

The unstable translation of *disegno* into English as drawing or design is referenced directly in the title of Paul Emmons’ *Drawing Imagining Building: Embodiment in Architectural Design Practices* (Routledge, 2019), enticing the reader to explore its double-sided potential in the architect’s imagination.

The imminently connected acts of drawing and building, bound together through our imagination, organize the book and provide an underlying structure for a theory of architectural drawing practices before the digital age. Based on an immense range of historical sources and examples, Emmons' main argument is constructed around the concept of embodiment, which occurs in two ways: the physical body of the drafter in relation to the drawing and the imaginative act of projecting oneself into the drawing. This double-embodiment, Emmons argues, is cleverly captured in Claude Bragdon's delightful wooing of Sinbad, the architect's body imago, from the depths of the ink bottle (Fig. 1). The notion of the embodied drawing is set in contradistinction to the more predominant understanding of drawings as rationalist entities that merely convey predetermined, graphic information to an anonymous, rational mind.

Beyond the valuable contributions to our understanding of embodied practices, the book poses a deeply substantiated theory of architectural drawing, one that could provide a valuable reference for architects in the post-digital age. It offers a critical counterbalance to current discourse that views digital drawing as a break from the past and neglects the fundamental, historical conditions of how architects make and continue to imagine through their drawings. Promises from the early twenty-first century, such as the paperless studio or the abandonment of traditional orthographic drawings, simply have not materialized. Rather, many hand-drawing practices have quietly persisted, albeit in new ways and with new tools. While some may question the timeliness of a book on hand-drawing, perhaps it is precisely what is needed for inspiring the next generation of digitally savvy architects. In this way, the book provides a trove of nuances, references, and past practices that are ripe for reinvention. By outlining a theory of drawing embodiment, it presents a valuable index for future inquiries into new configurations and explorations of the digital body in architectural design.

Emmons's method relies on digging deeper into the clues left behind from ordinary, technical drawing practices in order to make visible undisclosed drawing rituals. The table of contents offers an immediate glimpse into this approach, establishing three chapters in three parts each. The organization progresses from the architect's initial imaginings through techniques of mark making and ends with the interrelation between drawing and building. Each chapter examines some area of technical drawing that normally escapes scrutiny, thus managing to unify what might be seen as quite disparate themes under a robust, almost cosmological world-view. The first part of the book traces historical assumptions about architectural drawing. 'Drawing genera' probes Vitruvius' three classic drawing types, *ichnographia*, *orthographia*, and *scaenographia*, what Emmons takes as 'Footprint plans', 'Upright elevations', and 'Immured sections', in respective chapters. The second part, 'Drawing marks', problematizes the architect's most common line types and symbols, looking at how different lines have been invented to represent actual but invisible projections, such as action and movement, materials, and spatial relations. The book closes with 'Drawing into building', where the gap between drawing and building is explored through architects' drawing tools, the criticality of scale and measure, and building site imaginings and conditions.

Throughout the text, abundant and riveting examples build a foundation from which the main theme of embodied drawing is explored in unambiguous and forthright language. Mining sources and texts normally overlooked, such as early twentieth century drafting room journals, Emmons liberates us from the burden of our inherited, Cartesian worldview of drawing terms and practices. Typical assumptions about rationalized drawing practice are systematically contextualized, prying open conventional thinking to help us see common terms and assumptions afresh. In his analysis of the upright elevation drawing, for example, Emmons rejects the common understanding that a fixed point perspective drawing recreates the experience of the building more closely than the face-to-face relationship of the right-angled eye. Inhabiting an elevation drawing through our roving eye, he asserts, allows us to imagine the architecture through the building's true size and shape. In a separate point, Emmons undermines the false opposition, inherited from rationalized practice, between poetics and instrumentality. By examining the premodern notion of the Thomists' instrumental cause, he effectively demonstrates how our drawing tools are intimately linked to the embodied imagination, and they are not simply the technical means of rendering what has been previously conceived in the mind.

What are typically seen as insignificant practices in the drawing room, such as the making of dashed lines or the representation of material symbols, are for Emmons significant indicators of tacit, embodied knowledge. Relying frequently on Charles Sanders Peirce and his taxonomy of signs (icon, index, symbol), he counters the prevailing understanding of technical drawing as a conventional language of arbitrary signs.² For example, in discussing plan drawings as a footprint rather than a horizontal section, which is an eighteenth-century understanding, Emmons shows how drawing the plan and plotting it on the building site were once closely linked, since drawing lines and dimension 'strings' were indexes of construction tools such as ropes and chains. Elsewhere, he reveals that the material symbol for glass, drawn in elevation as parallel diagonal lines, is not an arbitrary symbol but is in fact indexed to the act of imagining the light rays inside of a crystalline material.

Emmons repeatedly and convincingly demonstrates the critical role of such drawing practices for the architectural imagination. Ethically speaking, the embodied imagination can better resist external economic pressures on design, to see the betterment of the larger community. And, from a builder's point of view, embodied drawing strengthens architects' capacity to imagine in construction. This last point culminates in a particularly illuminating critique of the commonly repeated notion that drawings are 'translated' into building, a terminology inherited from Robin Evans' well-known essay from 1986.³ For Emmons, the conceptual framework of translation excludes from consideration the creative task of interpreting drawings during construction, and it has thus encouraged architects to apply increasingly universal tools and sophisticated technologies to close the 'gap' between drawing and building. Emmons proposes the alternative act of 'adapting' drawings to building, where architects actively participate in both designing and building through the creative interpretation of their drawings across different modes of thinking.

The text could have been augmented by more emphasis on certain details in the publication. The eighty illustrations are generally rendered quite small and are offered only in black and white. Magnificent images such as Masolino da Panicale's *Miracle of the Snow* or Andrea Vesalius' frontispiece to *De Humani Corporis Fabrica* suffer greatly from the book format restrictions. In addition, in weaving a complex web of periods and contexts, often with unexpected or curious examples, a great number of sources are consulted. The endnotes, however, are generally restricted to minimum bibliographic information only, and the curious reader will wish for more copious supporting statements, expanded information, or original language text. This is especially the case when examining complex terms in languages other than English.

A recurring point throughout the book is that, unlike other types of drawings that imitate reality, architectural drawings imagine a future reality. They are therefore projective, not mimetic. It is why, Emmons argues, in Renaissance personifications of *disegno*, the figure holds a mirror, tilted away from him, reflecting the future. The projective drawing conjures a second meaning as well, where the imaginal body inhabits the drawing of the future building. Historically, this bodily feat was intrinsically linked through architects' drawing tools, which resembled builders' tools. If in the post-digital age these tools are fundamentally Cartesian and architects no longer construct drawings by hand, understanding the role of embodiment seems more important than ever. As tools continue to expand and develop, both for builders and architects, the opportunity to cultivate our capacity to imaginatively project ourselves into future constructions is exciting indeed.

Images

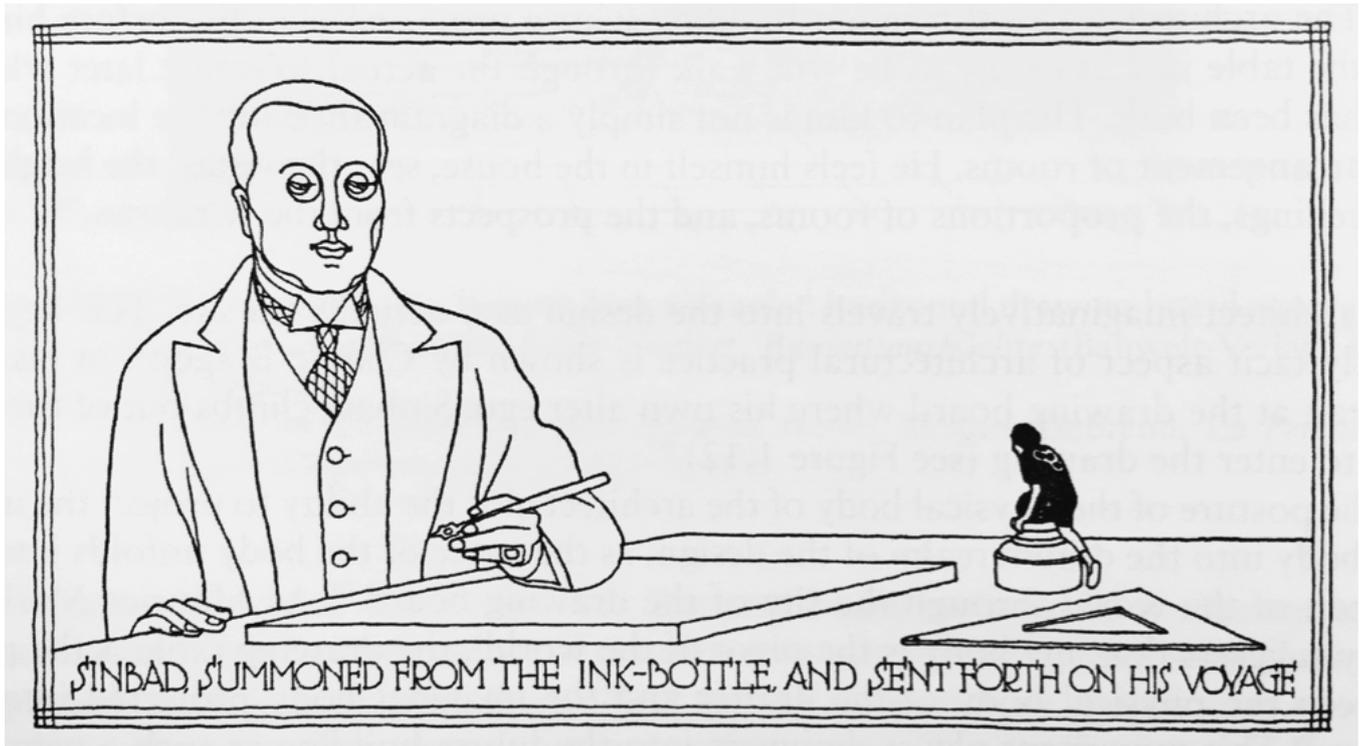


Figure 1. From: Claude Bragdon, *The Frozen Fountain: Being Essays on Architecture and the Art of Design in Space* (Knopf, 1932) 1.

Notes

- 1 Anton Francesco Doni, *Disegno del Doni, Partito in piv ragionamenti, ne' quali si tratta della scoltura et pittura ...*, 1549, fol. 8v.
- 2 Charles S. Peirce, *Collected Papers of Charles Sanders Peirce*, Charles Hartshorne and Paul Weiss, eds. (Harvard University Press, 1931-1958) 2: 303.
- 3 Robin Evans, 'Translations from Drawing to Building', *AA Files*, 12 (Summer, 1986), 3-18.

About the Author

Jonathan Foote, Ph.D., is an architect (MAA) and Associate Professor at Aarhus School of Architecture, Denmark. Previously, he taught at Cal Poly San Luis Obispo and Virginia Tech's Alexandria Campus (WAAC). His teaching and research concern the architectural translation between ideas and materials and the significance of the workshop as a site for imagination. He has published on the drawings and workshop practices of various architects, including Michelangelo Buonarroti, Francesco Borromini, and Sigurd Lewerentz. In addition to his teaching and academic work, Jonathan runs a design research studio, Atelier U:W, which partners locally and internationally on special projects in design and fabrication.