*Geometries of Rhetoric:
An Introduction*

Abstract. Guest editor Robert Kirkbride introduces Nexus Network Journal vol. 12 no. 3 devoted to “Geometries of Rhetoric”.

We grasp and transform the world through interplays of quantification and qualification.

Although these modes of analysis and expression are often placed in contrast, for example as the mathematical and verbal arts, human inventions manifest a weave of alphanumerics. Mythic parables, geometric proofs, memory arts, poems, algorithms, buildings and cities emerge from the intercourse of measure and explication. This special issue of the *Nexus Network Journal* considers architectonic examples of past, present and potential geometries of rhetoric.

Several themes emerge across the collection that illuminate architecture’s multifaceted role in nourishing thought, memory and identity.

The cross pollination of geometric and literary figures is deeply embedded in our cognitive habits, instruments of inquiry and the constructed environment. Through time, thought has reflected on the visible processes and products of material craft to explain and train the invisible workings of the mind.² Recursively, material craft embodies a tradition of splitting ideas into categorical parts and compositional units for reassembly. Buildings, mosaics, tapestries, and inlays are assembled from bits of information according to a larger composition, imbuing everyday experience with a deep-seated appreciation of the fragment within a larger whole.

Conic sections, explored in ancient Greece by Menaechmus and Apollonius and re-examined in Renaissance Italy by Federico Commandino, among others, generated literary figures of speech that allude to their geometric principles; in addition to circular logic, the *parabola* invited the “comparative” allegory of *parable*, the *hyperbola* inspired the “exaggeration” of *hyperbole*, and the “omissions” of the ellipse characterized *ellipsis*. These tropes informed rhetorical structures in philosophy¹ and popular forms of literary and designed ornament, colored by such hybrid media as *emblemata*.

Consequently, the mutual influence of splitting and joining in mental and material craft is engrained in language and our methods of investigation.³

It is precisely for this reason that, according to Dan Rose, “nothing is docile,” and the human passion and prowess for manipulating the stuff of the world, including the peoples who produce and consume that stuff, demands reconsideration. In “A Strange Catalogue of Things,” Rose brings an anthropologist’s eye to “the expanse of consumer stuff that threatens to engulf us and causes severe environmental and social degradation.” Over the past three centuries, he argues, the human sciences have failed to generate theoretical ballast to the exuberant explosion of applied research in the natural sciences, with direct consequences for the design professions. Put simply, our technological

capacity to make has outpaced ethical questions about *why* we make, resulting in the devaluation of natural resources as mere raw materials for human use. Several ideas in this article reappear elsewhere in the volume.

In “Chiasmus, Artificial Memory, and the Arts of Arrangement” Donald Kunze traces a “deep structural” axis of metaphor and metonymy” from Simonides’s foundational myth of the memory arts, through Giulio Camillo’s memory theater, to Jacques Lacan’s *mid-speak* (*mi-dire*). In this legacy of elliptical logic, truth is understood as partial rather than monolithic, with memory playing an inventive rather than recapitulative role: “artificial memory was from very early times regarded as a kind of machine that actively created meaning rather than passively stored facts.” To this end, architecture has offered mental and material prosthetics for dissecting and reconciling the inner workings of the imagination and the facts “out there, in the world,” holding the promise that “every project is but a fragment of other possible projects.”

An overlapping vein of inquiry distills architecture’s capacity, as palpable artefact and generative process, to weave one’s personal, sensuous experience of the world with broader institutional and historic narratives. In “Geometries of Reading, Light of Learning,” Shannon Mattern asks: “What geometries express and foster the kinds of encounters and qualities of presence that define *Library*?” Through a close reading of Louis Kahn’s Phillips Exeter Library and users’ experiences, Mattern scrutinizes how the elementary geometries embodied institutional rhetoric about knowledge and learning, and their impact on multi-sensorial modes of “reading” and non-geometric, non-linear forms of media.

The anatomical theaters used by Andreas Vesalius to produce his *De humani corporis fabrica* (On the workings of the Human Body: 1543), and Giulio Camillo’s memory theater (1540’s), which expounded on the workings of the imagination, facilitated complementary activities. The former revealed empirical truths through dissection of the human (worldly) body; the latter expanded the realm of metaphoric truth and meaning, as a combinatorial device for rhetorical composition. Camillo’s theater has found an echo in the literary stratagems of the *Oulipo*, a group of writers who explore narrative structures produced with rigorous mathematical constraints and playful anti-constraints (see, for example, “Queneleyev’s Table”).

Similarly, in “Encountering the Geometry and Gesturality of Andrew Lambé’s House,” Dorian Wiszniewski investigates the dimension of time and seriality in architectural research and production. Drawing on “methodological artefacts” produced during a recent project in Leith, Scotland, he unfolds a building’s narratives as experienced and reinterpreted through the speculative process of design development and construction, noting: “We never experience architecture as a whole; we experience it a bit at a time, and the same can be said of geometry and narrative.”

Through the images and footnotes in her photographic essay, “From Circle to Ellipse,” Angela Grauerholz offers that “spaces are measurable, but the experience is not.” Reflecting on fountains, monuments, and sculptures – commonplace figures in urban planning that are often circular in plan but never to the eye – she observes: “Photography tells us about our experience, enabling verification of discrepancies between the real and the perceived.” It is within this discrepancy, or gap, or *ellipsis*, “that our imagination steps in to fully inhabit the space to be comprehended.”

What imaginative architectural interventions might enhance the beauty and ecological commonsense of human habitats? In “Friendly and Beautiful: Environmental Aesthetics in Twenty-First-Century Architecture,” Sherine Mohy El Dine Wahba echoes Rose’s call for a more balanced valuation of aesthetics and ethics, offering a method of comparative analysis to promote “formal geometry as qualitative criteria for a more integrated approach to conceiving environmental control systems in buildings.” Her contribution is among a cluster of articles that propose new research and design methodologies, including several that seize upon recent advances in digital technologies.

In his essay on tenth-century Hindu temples, Sambit Datta highlights how their form and ornament materialized at the intersection of text canons and astronomical mandala geometries. Noting that “computational modeling provides a robust methodology for researching the genesis and evolution of geometry in temple architecture,” he speculates that virtual reconstructions would allow greater insight into the temple builders’ concepts of nothingness and infinity.

In “Computational Organicism,” Brian Holland advocates the exploration of algorithms and biomorphology in tandem with the theorization of an evolutionary architecture, noting: “‘Breeding’ buildings in virtual environments presents a radical reconfiguration of the architectural design process.” Meanwhile, in pursuit of “a language for the narrativization of urban development,” Matt Demers draws on Rene Thom’s morphologies of catastrophe theory and Michel Serres’s model for applying them to narrative processes, proposing that “the confluence of narrative and topology could yield a qualitative yet stable spatial representation of the dynamic development of the human environment.” Foreshadowing further investigation, he includes a brief case study for Chandigarh, India.

As a bookend to the inquiries of Rose and Kunze, and a fitting conclusion to the volume, Jack Rees tackles the “conflict between what I believe and what I know.” Carefully, he distinguishes between the brain’s subsymbolic, tactical responses to localized sensorial experience, and the mind’s capacity for symbolic, strategic planning. While unpacking the differences between thinking in text and thinking in images, he underscores the sophistication of human cognition and its byproducts, noting that “early robots did not so much navigate through a space as bump their way through an obstacle course,” and acknowledging that “what is remarkable [about good search engines] is not how relatively poorly they currently function, *but that they work at all.*”

Where is the limit between the individual imagination and the world of facts “out there,” beyond the self? Whether manifest through a laptop held in our hands or the city borne in our minds, architecture designates that threshold explicitly, as sites of shared inquiry, and implicitly, as the experiential materials of self-edification. Between our perceptions and the perceived, we bump our way from place to place, from day to day, trying to not hurt ourselves and others too badly.

Notes

1. See [Saiber 2005: 25] for analysis of these structures in the works of Giordano Bruno (1548-1600).
2. See [Kirkbride 2008: ch. 3, §27].
3. “Tectonics [and techne] deals with the arrangement of ‘distinct units’ that the tecton [Homer’s shipbuilder/housebuilder] first shapes with his tools and then places and joins together. This dual, seemingly antithetical, activity is what defines tectonics. Since tectonics is literally at the

root of architecture (*archi-tektonike*), this dual mode of operation is also at the core of architecture” [Karvouni 1999: 106].

References

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<http://www.gutenberg-e.org/kirkbride/>.