Kremlin Form

Architecture's engagement with urban form always operates within the aesthetic structures associated with the technologies of drawing, such as paper material, bounding frame, and the means of reproduction. In a course taught at the Southern California Institute of Architecture (SCI-Arc) in the fall of 2012, students were asked to conceptualize the Moscow Kremlin through instruments of annotation.

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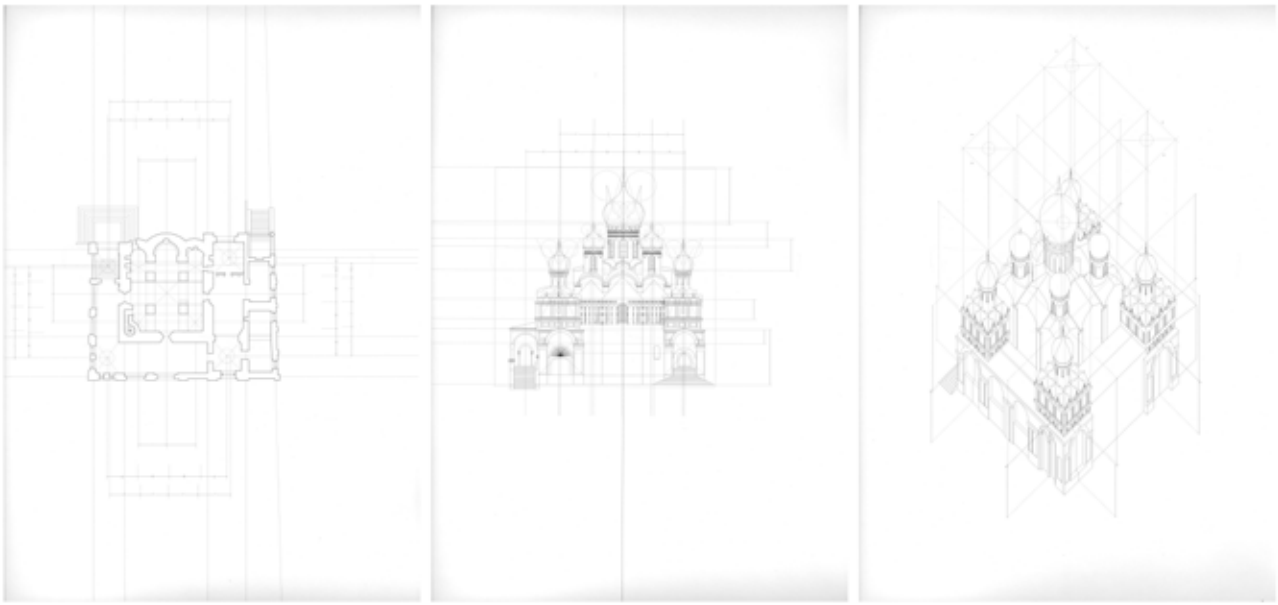
Though the site itself was out of reach, relying on drawings and photographs of the monuments and the walls surrounding them, the seminar constructed a survey of analytical drawings that were based on compositional rather than political or religious principles. These analogical recordings were neither objective documents of carefully measured forms, nor authored myths of imagined narratives. Instead, they aimed to dislocate the Kremlin from a closed political space in order to open it to architectural interpretation.

The process of the seminar was drawn from a comparative study of maps that inevitably contrasted the real with the limits of representation. Consider for instance Giambattista Nolli's presentation of Bufalini's Rome (1748) where the substrate of the map is represented as paper, held by two putti unrolling it in mid-flight. Again, in his *Nuova Pianta* of the same year, what was one monumental sheet is subdivided into twelve parts, each plate extending into a boundary that represents the space of overlap. In this seam, Nolli's famous figure/ground is left as line work and unrendered. Or jump forward to the final rendition of the "City in the City" series by Oswald Mathias Ungers (1977). Here, a figure outlines the city of Berlin, positioning disparate monuments into an empty field. Empty of parts but not of line work, the urban space is measured by a grid that exceeds the city's boundaries and only loosely relates to its outline.

These examples of urban drawing serve as case studies for what Jacques Rancière in another context called the "distribution of the sensible."[1] In each, the city is divided into parts: on the one hand, architectural parts that represent it through iconic objects; and on the other, technological parts that compose it into a new aesthetic unity. In place of the urban fabric, property lines, or infrastructure, a regulatory system based in conventions of drawing organizes and governs these freestanding entities. The representation that results from sucha a superimposition brings the city into an abstract realm.



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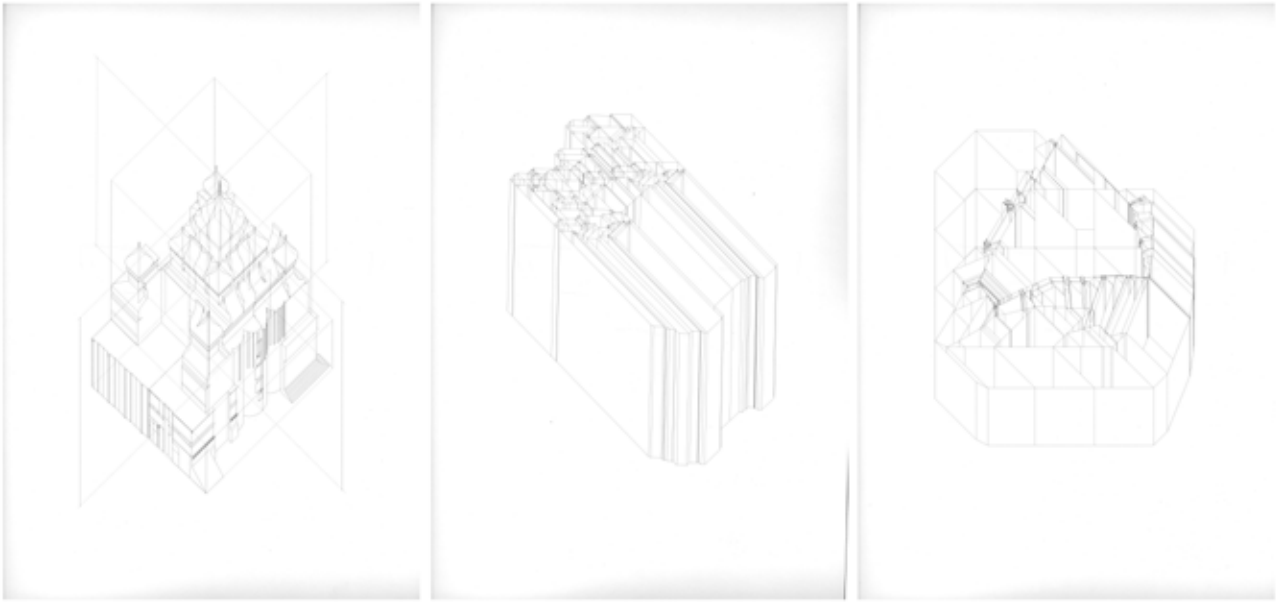
The Moscow Kremlin is at once a seat of political power and a UNESCO protected site. It is bounded on all sides by a 15th century fortified wall. Within this territory, buildings were constructed under a sequence of different political contexts in Russia's history. The accumulation of specific historic eras forms one dense urban environment. Thus, every object can be understood as both a building and a monument. The towers, assembly halls, churches, and museums, are independent structures with clearly defined façades and ticket lines. But collectively, the architectural monuments form one continuous urban interior that masks their historical complexity. Perhaps because there are no streets, perhaps because the ground is paved edge to edge in stone, the impression given within the Kremlin wall is of a monumental still life at an urban scale.

The Russian Churches are mostly described through immeasurable effects of the blinding golden cupola, the Rublev icons held within, and the smell of incense. Through these sensual images, existing narratives mystify what are in fact rather formally compelling buildings. The Kremlin cathedrals, in particular, are mostly nine-square grids. Upon each cell, a vault projects from a square pier, which, in turn, lands firmly on an intersection. To articulate the formal conditions of these objects, the seminar replaced the physical buildings with the regulatory structure of drawing. Formal lines of measurement, orienting grids, and proportioning diagrams were materialized as dividing planes that structured the site beyond the limits of any particular building. In turn, these flat surfaces became planes of projection, or as El Lissitzky may have defined them, the zero of the picture, where "we can describe the direction in depth by – (negative) and the forward direction by + (positive)."[2]

This basic construct of parallel projection defined a pedagogical strategy for partitioning an urban site in order to re-assemble its abstract forms into a unified whole. In reconstructing the Kremlin through the technologies of drawing – projection, extrusion, and geometric reduction – the seminar produced an analogous Kremlin, "an eminently structural object" with all the attributes of the original, but none of its iconic parts.[3] This project employed drawing to engage urban artifacts in order to reorient them toward aesthetic concerns. It offered a distinctly formal, i.e. architectural, interpretation of a historical site that would otherwise

Figure 1: Church of the Annunciation, Moscow. Plan, Elevation, and Axonometric, constructed. Benhachmi, Dahm, Eskenazi, Yan.



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remain inaccessible to new interpretations due to the overpowering influence of religion and politics. Existing accounts on this material have hindered architectural discourse from examining the significant role that the buildings and sites under preservation could solicit as catalysts for the city's formation. The analytical process developed in this seminar through geometry, measurement , and proportioning of bays, as well as the development of urban compositional strategies for the Kremlin wall can bring this historical site into contemporary architectural discourse. It is probably an equally critical factor that the students worked on the site without experiencing it, but from the distance of an archive, and that their work was done collaboratively. The seminar emphasized critical thinking, descriptive tactics, and representational techniques over personal experience, historical narratives, and inspired speculations.

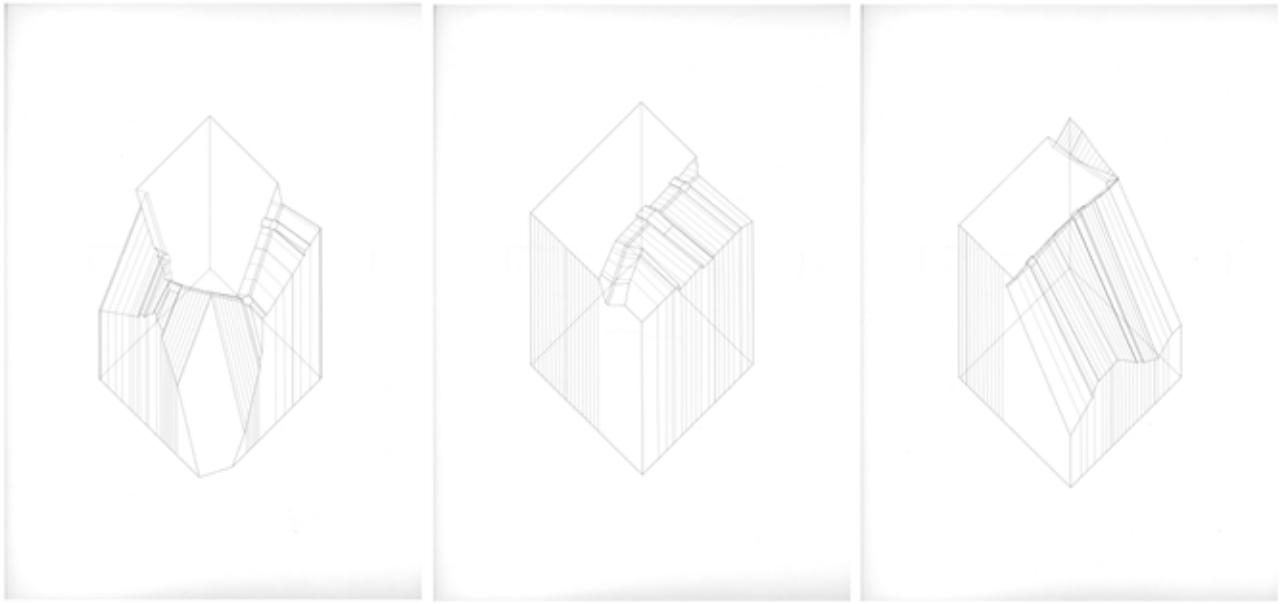
ASSIGNMENTS

1. Working in groups of four, analyze a Kremlin monument from the following list: Cathedral of the Dormition, also called The Assumption Cathedral (1479); Church of the Deposition of the Virgin's Robe (1488); Cathedral of the Annunciation (1489); Cathedral of the Archangel Michael (1508); St. Basil's Cathedral 1561. Begin by collecting existing documentation: photographs, plans, sections, elevations and axonometric drawings. Construct the drawings in a digital format, aligning them along programmatic, structural, and formal ordering systems. Construct missing drawings by looking at photographs. Annotate the drawings presented to include dimensions, angles, inflection points, mirror axes, and center points of regulating arcs.

2. Use the orthographic drawings and their defined parameters to build a digital model of the assigned church. Cut the model into four orthogonal quadrants. Construct ninety-degree axonometric projections centered on the four exterior corners and vertical oblique projections facing the long and transverse sections. All drawings should be composed of pure black vector lines. No shaded views, screen prints, or renderings may be presented in lieu of required drawings.

3. Construct an analogous object from the assigned church. Begin by defining two masses: one that projects a set of interior annotated geometries to produce a

Figure 2: Church of the Annunciation, Moscow. Analogous Objects & Kremlin Wall, constructed. Benhachmi, Dahm, Eskenazi, Yan.



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low fidelity interior volume, and another that projects an external set of annotated geometries to define an exterior volume. Both masses should be modeled as closed solid objects. In constructing the two masses, you may choose to treat the original church as one monumental form (a one-square), subdivide it along parallel striations, orthogonal lines (four-, nine-, sixteen-square), or diagonal lines in plan and/or elevation. Each such organization should introduce what Peter Eisenman calls "a critical datum." Consider the following questions: do the interior and exterior geometries align or misalign? Do they follow the same organizational grids in plan and/or in elevation? Do these grids articulate symmetries or differences? Do the two masses share a ground plane? Do they share a center? Are they centrifugal, centripetal, both, or neither? Subtract the interior mass from the exterior mass to produce your analogous object.

4. Extend the annotational logic to encompass the entire territory of the Kremlin. Begin by drawing the centerline through the wall as well as the outlines of the five churches studied in the first half of the semester, carefully locating them within the precinct. The grids of the Kremlin can be defined by an autonomous regulating system; the geometry of the wall, river and topography of the site; the orientation of the interior objects. Are the grids regular or irregular? Do they produce one center, multiple centers, or no center? What are their subdivisions? Are they related, unrelated, or partially related? Are they overlapped, collaged, cropped, or transitioned? Are they contextually specific or universal? Do they deform to fit the figure of the wall? Does the wall rotate or reorient itself to the grids? Project the geometries to construct the final rendition of Kremlin's form based on your analysis.

Figure 3: Kremlin Wall Projected in Nine Squares. Each drawing represents 1/9 of the Urban Whole. Benhachmi, Eskenazi, Yan.

CREDITS

Drawings presented in this paper are by Anass Benhachmi, David Eskenazi, Alex Dahm, and Chao Yan.

1. Jacques Rancière, "The Distribution of the Sensible: Politics and Aesthetics," *The Politics of Aesthetics* (Great Britain: Continuum, 2009), 12.
2. El Lissitzky, "A. and Pangeometry," 1925, in Sophie Lissitzky-Küppers, *El Lissitzky: Life, Letters, Texts* (London: Thames and Hudson, 1968), 350.
3. Roland Barthes, "The Ship Argo," *Roland Barthes* (New York: Hill & Wang, 1977).