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THE ANALOGICAL SURFACE:
CITY, DRAWING, FORM AND THOUGHT

Cameron McEwan
ABSTRACT

This paper, and its accompanying suite of drawings and montages, approaches surface through Aldo Rossi’s notion of the analogical city. It does so in three ways: firstly, as the surface of the city, secondly as the surface of the drawing, and third as the analogical surface of thought between city and drawing. The first surface emphasises plan-based representation centred on an analytical gaze looking from above or outside to the city as a whole. The second is a quasi-perspectival and frontal surface with the analytical gaze looking at the city from the inside. The third surface is the conceptual hinge between those two positions. Through these three readings of surface I will discuss analogical strategies of formal, representational and disciplinary critique (including critique of scale, situation, form, space, figure and ground). I will discuss how the process of the critical removal of form creates an analogical space for projective possibility, and how the accumulation of form amounts to an erasure of form in Rossi’s work. The accompanying drawings and montages operate specifically in dialogue with Rossi’s analogical city, but function more broadly as a move toward developing the formal knowledge of architecture as a cultural and critical project.

BIOGRAPHY

Cameron McEwan teaches architectural design, history and theory at the Grenfell-Baines Institute of Architecture, University of Central Lancashire, and is a Trustee of the AE Foundation, an independent organisation for architecture and education. Cameron studied architecture at Dundee School of Architecture followed by a PhD on the architect Aldo Rossi and the Analogical City at the Geddes Institute for Urban Research. Cameron’s work is focused on the relationship between architecture, representation and subjectivity to engage the city as a critical project. His texts and drawings have been published in JAE, Urban Blur, Outsiders for the 2014 Venice Biennale, and elsewhere. Published March, 2018.
In the 1960s and 1970s Aldo Rossi developed the notion of the “analogical city” through a close reading of the architecture of the city. This idea is most lucidly figured in his drawings and collage studies, but one of the first times Rossi puts forward the idea is in his reading of a painting by Canaletto, in which three projects by Palladio are displaced from their real sites and montaged into a view of Venice. In *Capriccio con Edifici Palladiani* (c. 1756-59) Canaletto disarticulates Palladio’s buildings from their respective situations, liberating the figures from their grounds, and re-situates them in the city. This liberation of figure from ground opens up the potential for substitution, replacement and a critical re-situating of architectural form; at the same time, the “void” left behind by this process of disarticulation is a void containing generative possibilities. As in Canaletto, Rossi’s urban studies disarticulate the city, its pieces, parts, spatial structure, typical forms and elements—the urban artefacts, primary elements, monuments, and locus described by Rossi in his canonical book *The Architecture of the City*—to allow them to be re-articulated in transformed combinations from project to project. These re-articulations, as in Canaletto’s work, leave behind a creative void. This void is often unacknowledged in Rossi’s concept of the analogical city, but it forms an analogical space of projective possibility that, I will argue, opens up a space for thought on the city. This space for thought is opened up through (the space of the) drawing, but is not limited to the drawing. There is a clear analogical relationship between city and drawing in Rossi’s collage work (buildings on a ground surface become analogous with forms on a paper surface at proportionate scale), but this relationship is not a normative convention. Rossi called both the city and his drawings architecture, and as a result their relationship is always unstable. Both the drawing (as architecture) and the architecture of the city become alternative ways to produce architectural thought. Through the operations of liberating and situating form, Rossi’s drawings act as a surface upon which to project and accumulate formal knowledge of and architectural thought on the city.

An important part of Rossi’s thought on the analogical city was his implicit critique of the concept of “ground.” In the following text “ground” is understood in three ways: first, as the surface of the city, second as the surface of the drawing, and third as the analogical surface of thought between city and drawing. The first surface emphasises plan-based representation, where an analytical gaze looks from above or outside to the city as a whole. The second is a quasi-perspectival and frontal surface, with the analytical gaze looking at the city from an inside position. The third surface is the conceptual hinge between those two positions. Through these readings of surface, analogical strategies of formal, representational and disciplinary critique (including critique of scale, situation, form, space, figure and ground) will be discussed. I will investigate how the critical removal of form creates an analogical space for projective possibility, and how the accumulation of form amounts to an erasure of form. The accompanying suite of montage and drawing studies operate in dialogue with Rossi’s analogical city in particular, and function more broadly as a speculation into the formal knowledge of architecture as a critical project.
"...logical thinking is thinking in words, which like discourse is directed outwards. \"Analogical\" or fantasy thinking is emotionally toned, pictorial and wordless, not discourse but an inner-directed remembrance on materials belonging to the past. Logical thinking is \"verbal thinking\". Analogical thinking is archaic, unconscious, not put into words and hardly formulable in words.\"
THE SURFACE OF THE CITY

A close reading of the 1801 plan of Milan reproduced in The Architecture of the City reveals elements and principles that become explicit in Rossi’s theory of and projects for the city; it can be understood as an analogical surface. Against the mass and grain of urban fabric the plan, produced by Giacomo Pinchetti, shows large urban forms including: Giovanni Antonio Antolini’s unbuilt Bonaparte Forum proposal (1801) as a huge circular form enclosing the Castello in the top left, the Lazzaretto Leprosarium (c1500) as a monumental square in the top right, Filarete’s courted Ospedale Maggiore (1456), the Rotonda della Besana (1732) and the polygonal form of the city walls. In the first instance these large-scale buildings and urban elements stand for the urban artefacts and primary elements that Rossi discusses in The Architecture of the City, but once disarticulated from the urban fabric it is possible to speculate about their influence on Rossi’s thinking as an inventory of analogical forms, and on the critical possibility of the voids left behind by their removal.

By way of introduction, we might examine Rossi’s reflections on Antolini’s Bonaparte Forum. Rossi notes:

In an analogical system designs have as much existence as constructed architecture; they are a frame of reference for all that is real. When architects study the city of Milan, they have to take into consideration, as a real element, Antolini’s unbuilt project for the Bonaparte Forum. This design is real in the sense that it was subsequently translated into a series of artefacts that cannot be explained without its existence and form.

Here Rossi is referring to a series of later projects by Cesare Beruto, completed in the 1880s, that revive the circular form of Antolini’s proposal to organise the area around the Castello. There is a two-fold analogical procedure at work here. Firstly, Antolini’s Bonaparte Forum is itself an analogue of Milan; it distils the radial form of the city and redeploys it at the scale of the building. Secondly, in re-situating the form of the Bonaparte Forum Beruto’s projects become analogues of the Bonaparte Forum, but at a different scale and constructed and developed in a different time. Integral to these analogical processes are operations of scaling forms, distilling forms into geometric elements, and the transformation of elements. Central to these actions is a loosening (indeed, a complete dissolution) of the relationship between figure and ground, firstly the ground of the drawing and subsequently the ground of the city. In the disarticulation of Milan, geometric forms (square, circle, triangle, polygon) are cut out of the plan in accordance with the major urban figures mentioned above. Here the production of form entails the removal of form from the city, to make an analogical space. On one hand, the white space cut into the plan can be read as an interruption to the continuity of the city and as the production of a void in the urban fabric. In this light this ‘cutting into’ the city surface is similar in its intent to the manipulation of photographs by artists such as John Stezaker and John Baldessari, whose photomontages destabilise notions of figure and ground through the introduction of a large cut into the surface of their images. In architecture, a similar approach is taken in Dmitry Busch, Dmitry Podyapolsky and Alexandre Khomyakov’s Cube of Infinity project, where a blank cube is introduced into the centre of the drawing of a city. There is an unstable division, centre and hierarchy to these images and projects. We are asked to question whether the white space, as cut or cube and often equal in scale to the background, is figure or ground—a white neutral figure on a dense background, or a background figure placed in relation to a white ground, or a white loaded figure on a neutral background. On the other hand, the white space montaged into studies of Milan intentionally inverts figure and ground relations. The figures of the Bonaparte Forum, the Lazzaretto, and the Ospedale are released from the ground of the city and become potential analogues for future projects. They become analogical forms that can be transformed, substituted, reproduced or re-situated in another city, another surface, or another project. After historical accretions and contextual specificities are removed, these projects can be read as fundamental geometric elements such as the circle, the square and the grid. Within the framework of an associative and syntactic analogical thinking process, these geometric forms can be manipulated in a great many ways. For instance, a circle can be extruded to become a column at one scale, a rotunda at another scale, or a centralised city plan at a larger scale; the square can be extruded into a Loosian cube at one scale, a monumental courtyard at another, or an urban grid at the territorial scale.

We can say therefore that the forms ‘released’ by Pinchetti’s plan of Milan become explicit elements in Rossi’s design projects, including the Turin Centro Direzionale (1962), Cuneo Monument to the Partisans (1963), Parma Theatre (1964), San Rocco (1966), Scandicci Town Hall (1968) and Modena Cemetery (1972-83).
instance: the Lazzaretto can be read as related to the cubic form of Centro Direzionale, Rossi’s Cuneo project or the colonnaded wall surrounding Modena Cemetery; at Scandicci Rossi re-articulates the circular Bonaparte Forum, a fragment of the Ospedale and the axial principle of Beruto’s Castello project; while for the San Rocco housing district project Filarete’s Ospedale, with its series of large and small courtyards, reads as an analogue. Rossi’s Parma theatre project, pyramidal, cubic and drum elements are positioned in a loose figural relationship reflecting the freeing of forms from the fabric of the city. In the suite of montages attached to this paper, entitled “Re-situating Analogical Form,” projects by Rossi, Beruto and Filarete are reinserted into the voids of Pinchetti’s plan of Milan according to their associative and syntactic order. Scales are altered and their positions alternate within the voids.

The preceding reading of Pinchetti’s plan of Milan speculates about its possibility as an early manifestation of Rossi’s concept of the analogical city; we can say that it acts as an index for Rossi’s wider thinking on the city and it is put forward here as an example of the city understood as a conceptual surface for analytical and projective thinking. The analytical gaze identifies and classifies the urban artefacts of the city, then distils their forms into geometric elements in order to develop a grammar of forms for possible combination and recombination toward projective ends. There is a dialogue between the actual city of Milan and the architecture of the city, built, unbuilt and demolished—the Bonaparte Forum, the Lazzaretto, the Ospedale, Sforzinda and others—enabled by a syntactic and associative analogical process. In this way the plan becomes an inventory of analogical forms that contribute to an accumulation of formal knowledge on (and drawn from) the city. At the same time, the plan reveals a space left behind, a generative void created by the removal of form. This space, this void, is the space of analogical thought.
02: Analogical Milan.

03: Surface Cuts.

04: Resituating Analogical Form.
THE SURFACE OF THE DRAWING

In 1979, the Institute of Architecture and Urban Studies (IAUS) held an exhibition of Rossi’s drawings under the title Città Analoga, the Analogical City; thirty drawings from the exhibition are documented in the associated exhibition catalogue. The drawings present the material of Rossi’s analogical city as an inventory of forms and typical elements. They also bring forth the combinatorial and compositional principles and critical strategies of the analogical city. Here, I investigate this line of thinking through two suites of drawings.

The first suite of drawings, reproduced here as a table (Analogical Inventory), are studies of Rossi’s drawings for the Analogical City exhibition as they were reproduced in the catalogue. The studies disarticulate Rossi’s drawings into the elements and forms that make up an inventory of the analogical city. The drawings identify geometrical forms, urban types and domestic objects including: hollow cubes, truncated cones, pyramids and cylinders, which read as tapered or stepped towers and blocks, over-scaled columns, drums, industrial silos and chimneys, stairs, colonnades and formally reduced versions of Rossi’s own projects or parts of his projects. Urban scaled domestic objects are also identified, including chairs, coffee pots, cups, newspapers, match boxes and cigarette packets. The urban scene is often activated by airships, animals, bodies, skeletons and shadowy figures, which are redrawn and inventoried.

The second suite of drawings are montages (Analogical Surfacing). In this suite, Rossi’s drawings of the Analogical City are grouped into three sets of ten, each combining Rossi’s drawings, which are centred on the page and redrawn together one after the other (excluding any shadow hatching or shading). The resulting montage is an accumulation of formal knowledge on the analogical city. From these drawings it is possible to extract the themes and concepts through which the analogical city drawings can be understood. The following points are a summary:

1. Frame. The frame of the drawing is duplicated as a line, or a series of lines, bounding the drawing surface, defining an edge and suggesting an interior and exterior, a separateness before a possible unity.

2. Focus. The focal point of the drawing tends to be centrally positioned and toward the top of the image producing a triangular visual organisation.

3. Frontality. Many of Rossi’s drawings depict the front surface of buildings or objects, often treated as an elevation, which recedes into the drawing. Frequently, multiple fronts accumulate on multiple horizons.

4. Horizon. With each frontally composed object, a new horizon line is drawn, which is either implied visually to extend out, or is explicitly drawn as a single line. Forms regularly interrupt the horizon. A miniature skyline is often drawn on a background horizon line.

5. Figure. Figural forms accumulate in Rossi’s drawings, producing an assemblage of forms, skylines or concentrated patterns. In some drawings there is a figure-figure relationship (such as there is in Piranesi’s Campo Marzio plan), while at other times there is a clear distinction between a singular figure and the empty ground of the surface.

6. Ground. The ground of Rossi’s drawings is often a blank surface. However, this surface always has a double meaning that refers on one hand to the surface of the city upon which architecture-objects and fabric are positioned and accumulate, while on the other hand implying the surface of something else such as a table top, desk or drawing surface. This double meaning produces a destabilising understanding of context, scale, surface, situation, form and object. The famous drawing entitled Domestic Architecture is perhaps most exemplary of this schism. In this drawing towers are positioned adjacent to, and at the same scale as, coffee pots and human figures; it is unclear, or left undecided, whether the ground surface of the drawing is that of a table or city, an ambiguity highlighted by the fragment of shadow drawn to the bottom left implying a table edge.

7. Series. Rossi’s drawings, and his projects in general, are a means to study the relationship between his new and former buildings. Through the repetition of elements and forms each of Rossi’s drawings are in dialogue with the preceding and succeeding drawing, to Rossi’s preceding and succeeding projects, as well as to architecture and the city as a whole. Through the
series an argument about architecture, its language and principles is put forward; it is through (and against) this argument that Rossi sets out his critical position on architecture and the city.

8. Inventory. Rossi’s drawings are an inventory of analogical forms and elements. They represent the possibility of accumulating and transforming the formal knowledge of architecture, formulating principles of architecture and a coherent language for the city.

While the first suite of drawings disarticulate Rossi’s analogical city, the second suite re-articulate the analogical city. In the former process, the drawings are used to analyse, catalogue and clarify the forms that constitute the analogical city. I follow the gestural mark-making of Rossi’s hand. A critical tension is developed through the intentional limiting of graphical techniques in opposition to the multiplicity of techniques used by Rossi, which often include the hatching and patterning of surfaces, shadow, the use of thin and thick lines, a variety of media both applied to the surface, such as pen and ink, etching, collage, watercolour, oil, chalk, pastel, and to form the surface, including Rossi’s use of wood, metal plates and paper. In the latter process, forms and elements are assembled and overlaid. Lines are built up. The compositional and critical principles that underlie Rossi’s drawings and thought are revealed by means of the overlaying of multiple drawings. Rossi has written, “the construction of form and its destruction are two complimentary aspects of the same process.” Here, the process of erasure and removal are endowed with a generative and projective possibility. These drawings, in this same vein, simultaneously erase and construct form through the accumulation of form in a manner we might align with Canaletto’s painting of Venice and Pinchetti’s plan of Milan. Parts of the drawing (parts of Venice) are erased to make room for a re-situated architecture (here by Rossi, in Canaletto’s work by Palladio) to construct an analogical city. In all cases, either presence or absence (figure or void) rupture the city and open up both projective possibility and a space for analogical thinking.

THE ANALOGICAL SURFACE AND THE FORMAL KNOWLEDGE OF ARCHITECTURE

The analogical surface is the conceptual surface of thought, a hinge between city and drawing and a frame within which formal thinking can oscillate between analysis and projection. Rossi once said that the lucidity of drawing is the lucidity of thought. In Rossi’s drawings we see thought given exterior collective character as a public act, open to question, counter-positioning and critique. The drawing becomes a “real abstraction”—a thought made into a thing to give form to analogical thought, toward the collective formal knowledge of architecture. In doing so, the world is given an object of knowledge and a surface on which architecture inscribes its own accumulated formal knowledge. It is by means of the mass accumulation of forms and elements, images, ideas, thought and principles, that a dialogue is established with the architecture of the city and its history, and that a critical approach to the city—the analogical city, the contemporary city, any city—can be developed. In establishing such a space for critical thought it might be possible to reclaim architecture’s position as a cultural and critical project, and to push back against a contemporary world that allows ever less space for the critical intelligence of architecture.
Analogical Inventory.
07: Analogical Surfacing.
08:
Analogical Space.
NOTES


3 See Rossi's discussion of his drawings of Modena Cemetery in the catalogue Aldo Rossi in America where he writes that annotating different elements and colouring its parts, the drawing acquired "complete autonomy from the original project" representing an "analogical disposition" of the design: “Rather than summarising the project for the Cemetery, it proposed another project.” See Eisenman, Peter (ed.). 1979. Aldo Rossi in America: 1976-1979. IAUSS New York: MIT Press, p.18.


8 In A Scientific Autobiography Rossi writes that his experience of the buttressed structure of Milan Duomo and walking along the centre of the rooftop is present in the central street element of his projects for Modena and the school at Fagnano Olona, both of which have long extending elements that stretch out from a central spine. Refer Rossi, Aldo. 1981. A Scientific Autobiography, trans. Lawrence Venuti. Cambridge, MA: MIT Press, p.58.


11 It is interesting to remember that words such as ‘define’, ‘decide’, and ‘design’, which are all implied in the concept of project and the notion of the operative, share the prefix de- from the Latin for “off” meaning “to cut off” or to separate and isolate. To destroy and to design share a conceptual unity.


FIGURES


04 Resituating Analogical Form. Montage studies by the author resituating various projects including: Beruto’s transformation of the Milan Castello into the void left by the removal of the Foro Bonaparte and alternating with Filarete’s Sforzinda, rescaled and the circular plan element of Scandicci; Milan Castello resituated and rescaled for the square site of the Lazzaretto Leprosarium and alternated with Rossi’s Centro Direzionale and a duplicated version of San Roccoco; a fragment of Rossi’s San Roccoco courtyard housing is positioned within the void left behind by Filarete’s courtyard Ospedale; the circular element of Rossi’s Scandicci is placed within...
the space formerly occupied by the Rotonda della Besana and alternates with a scaled reduction of part of Beruto’s Castello complex.


06 Analogical Inventory. A table of drawings by the author to develop an inventory of the elements and forms from Rossi’s Analogical City, identifying geometrical forms, urban types and domestic objects.

07 Analogical Surfacing. A suite of montage-drawings by the author to develop an accumulation of formal knowledge on the analogical city out of which it is possible to extract the following concepts through which the analogical city can be understood: frame, focus, frontality, horizon, figure, ground, series, inventory.

08 Analogical Space. A suite of montage-drawings by the author. Points of intensity in the drawings are identified and cuts are made along the lines of connection to reveal triangular and polygonal surfaces. Figure and ground is destabilized and a question is raised about the nature of the white space as on one hand the insertion of form and on the other hand as the removal of form. The voided figure can be read with projective possibility.

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