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Palimpsest

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(**Borromini**) The sketchbook continues to be important for the *parti* in the design process in architecture. The computer is an important tool in the development and execution of the design, and can also be important in the *parti*, for example when forms are generated from number sequences, but certain functions of the sketchbook cannot be replaced by the computer. The sketch can more completely represent the relation between the human mind, thought and psyche, and the architectural design. The best example of this is the quality of palimpsest in the sketchbook, where layers of forms and ideas overlay layers, and traces of partially erased layers rise to the surface and become part of the form. The quality of palimpsest can be found in drawings by Francesco Borromini in the seventeenth century, and Carlo Scarpa and Peter Eisenman in the twentieth century. The quality of palimpsest can be found in urban landscapes, Rome being the best example, where buildings or streets are composed of traces of past buildings or streets. Most importantly, the quality of palimpsest can be found in the human mind, where layers of consciousness are composed of traces, memory fragments of visual and aural forms, of previous layers. Through palimpsest the sketch can emulate the human mind, and be a tool in urban design and architectural composition which connects the built environment to the human mind. The sketch should thus continue to be a mechanism to produce increasingly creative, insightful, and meaningful design.

(**Plan**) I would like to examine a drawing by Borromini for the plan of San Carlo alle Quattro Fontane, Drawing No. 173 in the Albertina Museum in Vienna, to illustrate the potential for palimpsest in the drawing or sketch. The plan is a combination of three main operative geometries, the circle, octagon, and cross, as observed by Leo Steinberg. The circle represents the divine, in its infinity and perfection, the octagon represents the Spirit as creation, and the cross represents the

body of Christ. The interweaving of the three-part counterpoint in mathematical consistency is an elaboration of the Pythagorean juxtapositions begun by Leon Battista Alberti in the Renaissance. (**Worship Space**) The shape of the plan of the worship space is an unrecognizable, apparently unjustifiable geometric configuration, although it has been shown that it is the result of a rational geometric construction. Borromini chose to keep the construction of the shape a secret, in the tradition of the medieval guild, which Borromini would have learned in his training in Lombardy. The geometries are now understood through analysis of the drawings collected after his suicide.

(**Plan**) Borromini's logical geometrical progression disguised in an unrecognizable form is a reflection of the syncretic thought of the Renaissance, and a precursor to a quality of the Freudian construction of dream space in the twentieth century. In Freudian dream space, the manifest content of the dream, the pictorial content, appears as an irrational collage of images, while the underlying dream thoughts structure the dream in a syntactical manner analogous to linguistic structures. According to Freud, "The dream thoughts are entirely rational and are constructed with an expenditure of all the psychical energy of which we are capable." While "little attention is paid to the logical relations between the thoughts, those relations are ultimately given a disguised representation in certain formal characteristics of dreams."[1] In the plan of San Carlo, the relations between the three manifest geometrical shapes are given a disguised representation in the formal character of the plan. The plan is composed of a deep structure, an underlying conceptual or linguistic structure manifested geometrically, and a manifest content, its visual appearance.

In the construction of the plan, the architect begins with intersecting equilateral triangles inscribed in an oval, a geometric scheme published by Borromini's friend Athanasius Kircher to represent the concept of the coincidence of light and dark in the process of creation. The oval is generated from an ellipse created by the intersecting arcs of two circles, from whose centerpoints the intersecting triangles are drawn. The architect then draws a rectangle tangent to the oval, draws another rectangle halfway between the oval and the diamond on the minor axis, draws arcs on the tips of the diamond with the edges of the circles as midpoint, locates columns at the intersection of the arcs and rectangles, draws lines parallel to the triangle from the columns and

locates columns at the intersection of that line with the rectangles, and draws lateral arcs from the opposite points of the diamond. But then he stops short at the midpoint between minor axis and column, and draws another arc from the intersection of axes. The lines drawn from the column parallel to the triangles cut the corner of the rectangle. Borromini was called a *tagliacantone*, or corner-cutter, by Gianlorenzo Bernini.

The plan can be read in a variety of ways: as an undulating oval, an elongated octagon, or a circular Greek Cross. As in a perceived image, or dream image, or word in language, a single form can be interpreted in multiple ways, as a palimpsest. An irrational form disguises a rational process, as in dream images or forms in nature. The construction of the plan is in keeping with the Albertian use of Pythagorean ratios of numeric harmony and *eurhythmia*. It therefore corresponds to the laws of nature, as manifest in the structure of the mind, so that the mind is a microcosm of the universe. The construction of the plan is in keeping with the Albertian notion of *concinnitas* as well. According to Alberti in his *De pictura*, "It is the task and aim of *concinnitas* to compose parts that are quite separate from each other by their nature, according to some precise rule, so that they correspond to one another in appearance."[2]

(**Cusanus**) A diagram of intersecting triangles, or pyramids, appeared in the *De coniecturis* or *On Conjecture* of Nicolas Cusanus, and in manuscripts by Athanasius Kircher. The *De coniecturis* of Cusanus was well known to Kircher, who copied passages from it in his own writing. Cusanus described the intersecting pyramids as *figura paradigmatica*, paradoxical figures of light and dark, representing the progression from unity to alterity and alterity to unity. In *De Visione Dei* in 1453, Cusanus said "When I behold God in Paradise, [He is] supported by the wall of the coincidence of opposites."[3]

The base of the pyramid of Cusanus is the darkness of primordial origin, while the apex is the infinite oneness and light of God. In between the base and the apex is found all created matter, which is divided in the intersecting pyramids into the regions of the universe, the terrestrial, celestial and supercelestial realms, corresponding to the body, soul and mind of the human being. As the pyramids intersect, unity is everywhere contained in alterity and alterity is everywhere contained in unity. In the plan drawing of San Carlo, multiple geome-

trical forms are combined to produce a simple though unrecognizable shape; the final shape is composed of multiple symbolism in unitary form. The process of knowledge, represented by multiple forms, corresponds to divine creation, represented by unitary form, though the creation is unattainable by that knowledge. In the plan drawing of San Carlo, the unitary form is seemingly unattainable by the multiple forms from which it is generated in palimpsest.

(**Kircher**) Intersecting triangles of light and dark inscribed in a circle or oval appear in Kircher's *Prodromus Coptus Sive Aegyptiacus*, *Obeliscus Pamphilius*, and *Musurgia universalis*. The diagrams of intersecting triangles correspond to the creation myth of Pimander from the *Corpus Hermeticum*, a group of writings compiled by Marsilio Ficino and translated into Latin in 1471, thought to be the writings of Hermes Trismegistus. Hermes is invoked as the most ancient source of wisdom in Ficino's *Theologia Platonica*. Ficino's translation of the *Corpus Hermeticum*, entitled the *Pimander* after the first of the Hermetic dialogues, had a widespread influence in Renaissance art and philosophy. The creation myth in the *Pimander* describes the ascension of light and the descent of darkness in the formation of the four elements. The ascension in the realm of air and fire is nutritive, while the descent in the realm of earth and water is generative. Matter has the power of generation, as represented in the intersecting pyramids and oval, or egg of the universe. Light is the word of God which forms an ordered world perceptible only in thought in a palimpsest, revealing in the mind an archetypal form prior to creation, the *exemplaria intelligibilis*. The elements are copies of the archetypes, thus the sensible cosmos is a copy of the eternal cosmos.

(**Oval**) The scheme of intersecting triangles first appears in Kircher's writings inscribed in a circle in the *Prodromus Coptus Sive Aegyptiacus* of 1636, while Borromini was designing San Carlo. Kircher describes this figure, the *Sphaera Amoris* or *Sphere of Love*, as being composed of the Phi letter, a symbol of the material world; the letter V, showing love moving towards God; the upside-down V, showing love coming from God; and the letter O, expressing progression towards the material world. According to Kircher, "The force of love flows through unity to multiplicity. The first point or apex is God, and it progresses through the world divided into three levels, eventually arriving in matter, connecting the infinity of the heavens with the

strength of matter through all intermediate levels of nature."[4] This description of love comes from an ancient Egyptian tablet called the Bembina Tablet, according to Kircher, and it is an element of Hermetic philosophy, combined with the Celestial Hierarchies of Pseudo-Dionysius and the Platonic elements. In *Oedipi Aegyptiaci*, Kircher identifies the pictogram of intersecting triangles inscribed in an oval as the root of the thirteenth letter of the Egyptian alphabet, the name for which is love, through which the mechanisms of the universe are put into motion, as represented in the diagram. The intersecting triangles were then superimposed by Kircher onto a geometrical representation of the Celestial Hierarchies conceived by Cusanus, which corresponds to the vertical organization of Borromini's San Carlo.

The themes developed by Kircher in his Hermetic and Neoplatonic writings are translated by Borromini into a palimpsest of architectural forms, through the use of symbols and diagrams and geometrical transmutations which correspond to the philosophical themes as represented in the texts. Geometries in the plan are subjected by Borromini to fragmentation, juxtaposition, reversal, and distortion, as in images in dreams. As Freud describes, "Dreams feel themselves at liberty…to represent any element by its wishful contrary; so that there is no way of deciding at a first glance whether any element that admits of a contrary is present in the dream-thoughts as a positive or as a negative."[5] Such is the quality of the Baroque in the apparent proliferation of the signified or interpretation beyond the simplicity of the signifier or form, to represent the mind as a complex of interrelated significations, prefiguring the structuring of the unconscious through dreams by Freud in the twentieth century.

(**Freud**) Freud defined psychical structures as a dynamic continuum of causal relationships in a palimpsest, as enacted in the plan drawing of San Carlo. According to Freud, dreams "are to be explained on a dynamic basis—by the strengthening and weakening of the various components of the interplay of forces, so many of whose effects are hidden from view while functions are normal."[6] The psychical structure is to be explained in terms of the dynamic interplay of forces, but in an enigmatic representation, as the underlying rationale is unavailable to consciousness. Such is the nature of Baroque *stupefazione*, the inaccessibility of the unconscious as expressed by the unknowability of God in the structure of thought, as related by Humanist

concinnitas and the Neoplatonic *nous* in the higher level of the Soul with access to the divine Mind.

In the dream work of Freud, as a result of the complex network of psychical relationships which produce the dream images, and the mechanisms of condensation and displacement, dreams are composed of disconnected fragments of visual images, syntactical structures in language, and thoughts, the *Sachvorstellung* or thing presentation and the *Wortvorstellung* or word presentation, which are seen in a variety of logical relations to each other in a palimpsest of traces which is difficult to unravel, and which can appear to be irrational. The irrational appearance of a palimpsest of layers of rational relations between traces can be seen in Borromini's plan drawing. The palimpsest of dream images is seen by Freud as the condensation and displacement of figures and spatial relationships, such as foreground and background, and the coincidence of opposites, as in the *coincidentia oppositurum* of the pyramids of light and dark.

The network of logical relations which contribute to the composition of dream images is too complex to be unraveled in dream analysis. Displacement, condensation, fragmentation, substitution and the *coincidentia oppositorum*, are products of the complex network of logical relations, or the mnemic residues of such, in the *Vorstellungsrepräsentanz* in dream thoughts, which is too complex to correspond to any logical structure. The *Vorstellungsrepräsentanz* is the dream image, which is a representation of a mnemic residue or memory trace of perception, which is itself a representation of the perceived object. The simple image itself is a palimpsest of traces which are processed to produce it. In the process of the dream formation, the logical links which hold the psychical material together are lost. It is the task of analysis to restore the logical connections which the dream work has destroyed, as dreams are seen as the royal road to a knowledge of the unconscious activities of the mind, as Freud wrote in *The Interpretation of Dreams*.

The relation between the dream image and the dream thought, or manifest content and latent content, the surface aspect and the deep aspect, can be seen in the relation of the thinking subject to language, and to forms in art, like the geometries in the sketch. The dream image responds to the dream thought, the latent content, in the *Vorstellungsrepräsentanz*, as a form of psychical activity in response to per-

ceptual activity. The content of the perception is anticipated and rearranged, as the subject is anticipated in language; the word represents the image to another word as the signifier represents the subject to another signifier, and it is that series of relations which make both the dream and language intelligible. The representation of the image by the word, of the subject by the signifier, is a tool for intelligibility in architectural composition.

(**Berlin**) In composing a building on a site, the architect may incorporate actual traces in the site of past conditions, axes from previous planning into the architecture. This can be seen in the project for the monument at the Berlin Wall by Eisenman Robertson Architects, which incorporates the absent city wall of the eighteenth century, foundation walls from the nineteenth century, remnants of a proposed twentieth-century grid, and the Berlin Wall, for the purpose of combining a series of opposites: memory traces and traces of the absence of memory, unity and fragmentation, and addition and subtraction, as described in *Cities of Artificial Excavation*.

The layering of traces in the palimpsest involves traces of presence as well as traces of absence. A drawing, or a building, can contain "not only presences, but the memory of previous presences and the immanences of a possible presence," as described by Peter Eisenman,[7] thus "the introduction of this trace, or condition of absence, acknowledges the dynamic reality of the living city." Sigmund Freud, in *Civilization and Its Discontents*, uses the city of Rome, with the presence of traces of past presences woven into its fabric, in a palimpsest, to illustrate the survival of the memory-trace in the mind. "Now let us make the fantastic supposition that Rome were not a human dwelling-place, but a mental entity with just as long and varied a past history: that is, in which nothing once constructed had perished, and all the earlier stages of development had survived alongside the latest."[8]

The survival of the memory-trace in the mind depends, as does the ruin in the city, on the health of the mind over time. "Even for mental life, our assumption that everything past is preserved holds good only on condition that the organ of the mind remains intact and its structure has not been injured by traumas or inflammation." Freud admits of the limitations of "mastering the idiosyncrasies of mental life…by treating them in terms of visual representation," because more than one content cannot occur simultaneously in space, but in fact it can be seen that the

unconscious is both structural and spatial, and the overlapping of forms in space has the same consequences as cathexis and condensation in language. The palimpsest of traces of past presences on a site or drawing is then transferred to architecture as a reflection of the structure of the unconscious, and can enact the entering of the unconscious into conscious thought, in the absences of the trope or the rhetorical figure, or the visual signifiers.

(**Long Beach**) The project for a university art museum at the California State University at Long Beach by Eisenman was intended to conceive of a building as "an architectural artifact, a palimpsest of its own history," as described in *Cities of Artificial Excavation*,[9] so that the architecture can tell a story or a narrative of history, and can record "the traces of a lost and future civilization." The building is seen as "layered and shifting, continually exposing different surfaces," in a series of superimpositions which reveals previously unseen relationships and contrasting scales. Pieces of information become "marks of intelligence," glimpses of the ways that culture organizes itself. The reproduction of the traces is then purposefully dislocated from the site, to be seen as a conceptual construct in relation to real space and history. A palimpsest of traces in a city or site or drawing can only be a mental construction, the temporal and geometrical logic of reason superimposed on perceived space, as in the a priori intuition of Immanuel Kant, revealing the relation between the human mind, in perception, memory, and cognition, and the real world as defined by space and time. Palimpsest can be a quality of a sketch, drawing, building, city, perception, memory, or idea. Applied to art and architecture, it can contribute to work of meaning and consequence.

[1] Sigmund Freud, *The Interpretation of Dreams* (New York: Avon Books, 1965), p. 544–545.
[2] Trans. in Leon Battista Alberti, *On Painting* (New York: Penguin Books, 1991), p. 71.
[3] Trans. in John Patrick Dolan, ed., *Unity and Reform, Selected Writings of Nicholas de Cusa* (University of Notre Dame Press, 1962), p. 152.
[4] Athanasius Kircher, *Prodromus Coptus Sive Aegyptiacus* (Romae: Propaganda Fide, 1636), p. 256: "Unde, meo quidem iudicio, Amorem rectissime statuas, ut desiderium quoddam boni pulchrique, vel bonitatis per pulchritudinem ipsam conferendae vel accipiendae, videlicet, cuius potestas veluti unius sit magnitudinus dima natio, cuius punctum vel apex sit primus in Deo, progressus per mundum triplicem tripliciter distributum, finis autem in ipsa materiae, cuius denique quaedam sit infinitudo circa verticem, potentiae merae infinitudo circa meteriem, conexionis virtus infinita per omnes naturae intermedios gradus."
[5] Sigmund Freud, *The Interpretation of Dreams* (New York: Avon Books, 1965), p. 353.
[6] Sigmund Freud, *The Interpretation of Dreams*, p. 649.
[7] Peter Eisenman, "Architecture and the Problem of the Rhetorical Figure," in *Eisenman Inside Out* (New Haven and London: Yale University Press, 2004), p. 207.
[8] Sigmund Freud, *Civilization and Its Discontents*, trans. Joan Riviere (New York: Dover Publications, Inc., 1994 [1930]), p. 6.
[9] Peter Eisenman, *Cities of Artificial Excavation* (Montreal: Canadian Centre for Architecture / New York: Rizzoli International Publications, 1994), p. 132.