# Idempotency of the Architectural Imagination

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ABSTRACT. *My response to John Hendrix's question, of how the psychoanalytical Unconscious contributes to the question of the architectural imagination, takes the form of a challenge to the idea of the term "imagination" as it is encountered in the majority of writing by architecture educators and theorists. To avoid completely divorcing these uses, however, I turn to the (scientific) requirement of argumentation, namely that it be put into a form that can be refuted.[1] But, to do this, I must connect education's general quality that requires all who succeed in being educated to "get it" in the same way that we say we "get" a joke or saying. This brings into focus the role of the imagined space that is a cut present in every experience of architecture or art as such, a space where the specific role of "idempotency" acts to create an inner circulation involving a "toroid" relation of demand and desire.*

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Figure 1. The architecture school "critique" is the official site where the Architectural Imagination is found to be present or absent. The unpredictability of imagination as pedagogy's *agalma* — an indefinable Good, vaguely related to "talent" and "discipline/ work," must be submitted to a discourse form that combines the Master Discourse's ironic demand for recognition with the Hysteric's discourse's strategy of creating an Other who is to be humiliated. That this takes place in the University Discourse's expectation that the "Enjoy" command of the Other will not be understood, even by the Other who presents it, leaves the final Lacanian discourse form, Analysis, to answer the question of how the Unconscious is involved in the Architectural Imagination, in the teaching, practice, and experience of the built environment.

The Architectural Imagination, or rather "imagination that functions in relation to architecture," has many meanings, which should be sorted out here in a general way. In the context of teaching architecture, the Pedagogical Imaginarion constitutes an unpredictable and agalma happily possessed or depressingly not possessed by students, demonstrated in projects that surprise or bore us with their surplus or lack of imagination. Imagination is identified mainly by surplus or lack. It is difficult to demonstrate in a quantifiably definite way. Imagination is > or < x, but x cannot be defined.

I don't want to overlook this vernacular, seemingly non-psychoanalytic use of the imagination, because I think it holds some important keys. Mainly, this is the way by which imagination is present is something unpredicted or lacking, whose surplus or lack is evident at the time of the critique. There is no reliable correlation with students' intelligence or verbal skills. It is all the more astonishing when a student who has not been able to talk about his work intellectually produces something sophisticated, and equally disappointing when a "bright" student has produced mediocre results.

The architecture school's Pedagogical Imagination, a fabled agalma, claims authenticity in relation to the more general Architectural Imagination. This seems traditionally to be divided into what must be experienced locally, phenomenologically, at the level of physically visiting a site, and what can be "demonstrated" by photographs and, especially, drawings (plans,

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[1] John Hendrix, "The Contribution of Psychoanalysis to Architecture: A Project Proposal," unpublished manuscript, March 2021.

elevations, sections) of a project — sometimes uniquely so — as a quality of Design. This imagination is all the more an "agalma" in that the ability to detect it is held to be an acquired skill, possessed by those with teaching or design experience who "know what to look for."

Pedagogical Imagination and Architecture Imagination's two forms, Local and Design are configured within the two architecture professions, teaching and practice, so intimately that it would be difficult to distinguish imagination from the "generic good" of any architectural experience, cooked up in so many different ways that any relation to psychoanalysis would be nearly impossible.[2] The professional use of imagination in relation to experience with the built environment and its production creates a resistance that is matched, from the other side, by psychoanalysis's equally resistant specialized use of "the Imaginary," as distinct from and often having nothing to do with the Architecture Imagination. This is the third domain of the Lacanian triad, the Real, Symbolic, and Imaginary. Thanks to the Lacan's fable of the Mirror Stage and emphasis on perception's role in early development of the subject, the Imaginary has nothing to do with creativity or ingenious design but, rather, with entry into the Symbolic relations of society and culture, where gaps in the Symbolic's ability to represent the Real, either of trauma or experience in general, are "papered over" by fantasy constructions that are mainly imaginary (perceptual) contexts for Symbolic suppression. Analysis aims to "traverse the fantasy" in order to get to the Real of the Unconscious, and does not valorize the imagination of the Analysand, except perhaps negatively. "To be imaginative" in psychoanalysis has a negative sense, of resisting analysis, of clinging to fantasy constructs, delusions, or Symbolic affiliations. While it is clear that, in architecture, the Real plays a significant role in the esthetic value of buildings, both in their design production and our experience in them, that the imagination in architecture seems more to do with trauma and that essential feature of psychoanalysis, love.

Would it not be better, then, to allow the Architecture Imagination to part company with the psychoanalytical Imaginary at this point? Doesn't the "embodied value" of the former reside entirely at the level of the Real, both in the form of latent qualities and active experiences? Why confuse an attempt to understand this obvious connection with a terminological overlap? This seems to be the mandate of the Lacanian RSI. We may continue to use the term Imagination, but we are then no longer able to speak the language of psychoanalysis. We either shift to a consideration of the Real as Imagination's key factor or remain within a "phenomenological" valorization of the Imaginary as unambiguously good — what an architect *should* or *must possess*, and what a building, to be "architectural," must demonstrate, either in graphic representation or actual direct experience.

I would like to take the unlikely, and resistant, option of remaining with the vernacular use of Imagination, the one that seems to have little hope of connecting to Lacanian psychoanalysis. I do this not to endorse the phenomenological habit of endorsing its good. Rather, it is precisely the *good* I would wish to reclaim for psychoanalysis, but this will not make anyone teaching or practicing architecture happy unless they are willing to accept a radical revisionary — and specifically Lacanian — condition. The only advantage of this mandate is a negative one: it is reductive. I adopt this strategy on two grounds. First, I wish to *know* about the imagination in architecture, to have a *science* of it. Personally, I see no other option,

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2 To prove this point, the reader need only to expose him/herself to the range of titles of books on architecture and architecture education involving the word "imagination." The majority of these employ phenomenology implicitly or explicitly, as in Dan Willis, *The Emerald City and Other Essays on the Architectural Imagination*, Sophia Psarra's *The Venice Variations: Tracing the Architectural Imagination*, or Matthew Mindrup's *The Material Imagination: Reveries on Architecture and Matter*.

since the standard of discourse is truth that is collectively realized, through the processes of argumentation, demonstration, and rhetoric — what we mean when we say "convincing someone of something." This goes beyond the mechanical goal of "making someone see." As with education and joke-telling, the aim is for participants in some intellectual discussion to all "get it." Resistance to an idea is not just presumed, it is essential. The movement from a state of "not getting it" to "getting it" must come with some degree of astonishment or surprise. Dan Collins has argued that "getting it" is not just key to the main goal of education in general, it is what ties this goal to psychoanalysis.[3]

"Getting it" is the aim of my argument about the Imagination, which will be to say that the Imagination is about "getting it," so the first task of this project is to admit an unavoidable (or desirable?) circularity. I will have to use what it is I would isolate and describe in order to isolate and describe it: the classical Gödelian set-theoretic error of self–reference. Not only will I admit to this error, I will incorporated it into my central thesis: that the architectural imagination involves the same "error" of self–reference, and that any examination of it doubles or compounds the error, bringing us to the point of including that the architectural imagination, far from being resistant to psychoanalysis, goes straight to the heart of psychoanalysis's defining quality, i. e. that it is "self–referring." To make it clear that this is a scientific claim, let me put it in the most refutable form: Any approach to the architectural imagination will necessarily have to address the issue of self–reference, and (to make it even more refutable) address it in reference to *Lacanian* psychoanalysis.

## Science as Such

With the new "mandate" of my thesis, that the architectural imagination, in all its separate "phases," requires Lacanian psychoanalysis, I seem to have narrowed my chances of succeeding with almost any audience, Lacanian or otherwise, in arriving at the point of a collective "getting it." This maximizes the scientific quality of refutability, making my conjecture aim to be "the best" by being "the worst." In this case I am endorsing the Positivist Carl Popper's *modus tolens* definition of what makes science science, although clearly for Lacan as well as for my other source of inspiration, Giambattista Vico, Positivism is the clear enemy. I take this back to what makes something imaginative. There is always some element of surprise, some deviation from what is expected or determinate. This deviation is what makes science science; it is also what makes something imaginative.

We say that Lacan's theory of discourses is imaginative, in a colloquial way that has nothing to do with the psychoanalytical Imaginary, the Imaginary of the RSI system. It is imaginative because, in addition to the economy that limits the sequence of elements (master signifier, other signifiers, the *objet petit a*, and the barred subject) as well as the field (Agent, Other, Production, Truth) across which they rotate as a circle. This produces effects we could not anticipate with any other system of generalization about something as complex and variable as human discourse. It reduces, to the point of absurdity, but then expands possibilities that, thanks to the reductionism, are discussable, debatable. The system of four *mathemes* (Master, Hysteria, University, Analysis) pulls the key terms of psychoanalysis into registration. It allows us to *count and compare* them. Although Lacan suggests that the four discourses are "just for

[3] Dan Collins, "Psychoanalysis and Education," *Lacunæ* 17 (December 2018): 84–94.

starters," he puts forth the challenge that, should anyone attempt to name a fifth, sixth, or other form, that it equal or surpass the clarity and economy of the system he has devised in Seminar XVII.[4]

"Getting it" becomes the new standard of science which, in the case of the Architectural Imagination, applies both to the method of study and the study object. In other words, "science" has pointed us to a convergence of what custom has required us to keep separate. Even the local challenge put forth by John Hendrix, "what is the psychoanalytic status of the Architectural Imagination (so that we can improve it in relation to architecture education and practice)" — I am re-stating this in my own terms — requires us to involve some kind of science, some kind of argumentation and discourse. But, it has been assumed that we can "maintain objectivity" in our discourse, that we won't have to *use* the imagination in order to *analyze* or *explain* how it works. But, I have shown that this Gödelian catastrophe has already happened; that the imagination and the Imaginary both involve making a science that involves its own destruction — as a formative principle! Let me call this science's "unavoidable psychosis." Following Norbert Wiener's contention that computers necessarily require a complexity that will develop into crisis and self–destruction, I will agree with Aaron Schuster. This self–destruction applies also to the neurotic subject's own etiology.

The subject *as* subject, the psychoanalytic neurotic subject, is not just "set up to fail" by consistently following the "rules of the game," the psychosis of neurotic failure is a fractal presence, not a remote possibility that one could possibly forestall or avoid entirely. Psychosis is *inner*. It is *elemental*. It is *constitutive*. The idea of a "psychotic" limit of neurosis, a point at which language will simply give up its relation to the paternal signifier (a stabilizing feature that creates cicularities as well as circuits that "gap" chains of signifiers and clusters of symptoms) exists for the "system as a whole" but only because it is *always and already* present, in a scale-independent (i. e. "fractal") way, in every instance of self–reference. I call in evidence from all over the Lacanian "landscape," but in particular I would throw the spotlight onto topologies of self–intersection and non-orientation: the "Möbius cut" Will Greenshields has credited with the logic relating demand and desire in Lacan's discussions of the torus. The torus, I would argue, leads us to conclude that there is, in the key relation of demand and desire, the relation that makes them a *system* and not just a version of a Kantian antinomy; not just a *coincidentia oppositorum* but a circuit(ry) that requires us to apply an energetics model (cf. Freud's 1895 essay on "The Possibility of a Scientific Psychology") to the basic cleft in language between the act of speaking (*énonciation*) and the contents that speech puts forward (*énoncé*). This is the same "container–contained" paradox involved in statements such as "This sentence has three erors," where the third error is that the sentence has only two errors.

My key move here is to note that a circuit — any circuit — has the Freudian ambition, to maintain homeostasis. But, I will replace the term "homeostasis" with a less–familiar word, "idempotency." This is not to move away from the energetics of homeostasis but to join it to the idea of demand, which Lacan says is nothing if not repetition. The term idempotency is common in IT parlance. It relates to the programming strategy of defending a web site from what are called "denial of service attacks." This is when hackers mount a flood of incoming demands for whatever a web site uses to engage users. The

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[4] Vico made the same challenge to the reader of his *New Science*, that they should "remake" his science in their own way, to see if it could be made with fewer or more or different components that would improve the economy or effectiveness of his system, the "ideal eternal history" by which cultures, individuals, and even individual events passed through a series of developmental/ semantic stages (gods, heroes, men). The challenge amounts to requiring that those who would oppose Vico's claims offer an alternative better able to achieve the *jouissance* of "getting it" — of seeing, in improbable circumstances, the presence of an order.
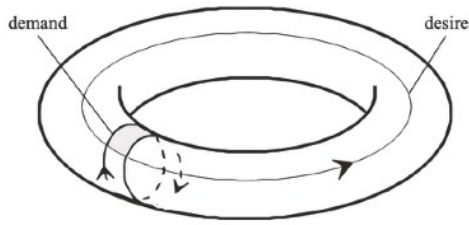
Figure. The torus, as Lacan demonstrates in Seminar IX, is both self–intersecting and non-orientable in that the repetition of demand (demand is "repetition as such") creates a *virtual* circulation around an otherwise unrealized void (the "hole in the donut"). Because desire is by definition unknowable, even by the Other that is the site of desire for the Lacanian subject, it can manifest itself *only* as a void that is *virtually* present, but the result of this virtuality is an effectiveness that returns demand's repetitive circulation to itself, a version of the *récit fort* or "strong narrative" in literature.

simultaneous calls for service will crash the system. The only defense involves two steps: (1) recognizing the leading edge of the DOS attack and, immediately, (2) neutralizing subsequent demands. A numeric parody of this defense is the palindrome: an attack of 12345 would be neutralized by 54321, so that each successive element of the attack would be matched to a negation that would, in this parody, create a constant, i. e. the number 6.

A circuit has idempotency in its circularity. On the surface of a torus, one can draw "local circles" of varying sizes, but there are two circularities that are implicitly self–defining: the spiraling motion around the tube of the torus and the circle around the central void that this spiral "inadvertently" defines. One motion requires and implies the other, so although they are distinctive and separate, they are also self–including and conjoined. They are "self–intersecting" and "non-orientable" although the torus itself is not in the class of the Möbius band or Klein bottle on this account. Yet, in Seminar IX, Lacan asks how we cannot fail to realize that the subject thinks, imagines, acts, and in general lives in a toroid, thanks to the torus's ability to graphically demonstrate the relation between demand (= repetition) and desire (which is that of the Other, who is not certain about what this desire actually *is*).

Idempotency and the torus are synonymous in this sense. They maintain stability in the face of external challenge: stimuli that are now "allowable" because the circuitry is idempotent. Like the palindrome, the torus is able to convert any and every accident into a value that not only maintains the circuit but keeps it circulating at a constant (idempotent) energy level.

How is it that the question of Architectural Imagination has become an issue of Freud's (failed?) attempt to discover an energetics account of neurological structure, a matter of psychosis, or the imposition of a new term hitherto strange to Lacanian psychoanalysis, idempotency?[5] The "middle term" between the "here" of idempotency and the "there" of Hendrix's original question is self–reference. The imagination in architecture teaching and practice involves self–reference, to the degree that we credit the imagination both with coherence and autonomy. The "ahah" that imagination in works of art and architecture inspires is the requirement that we don't "understand" the effects of the imagination; rather, we "get it" in the same way we "get a joke" or "get the point" in education/teaching. The imagination does not require anything outside of what it *itself* structures, or is capable of structuring. This makes every occasion of the "ahah" into a universal that is non-restrictive. Animals painted on the walls of Magdalenian caves are beautiful to modern tourists, sometimes with the *same effect* (a kind of Stendhal Syndrome) as that experienced by the original audience! Botticelli's *Birth of Venus* has, reportedly, not lost its power to paralyze and even kill in the some five hundred and fifty years since it first surprised its viewers. Put into

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5 I put a question mark after "failed" because it is my contention that Freud's attempt to localize psychoanalysis at the level of neurophysics led to the unavoidable confrontation with the real effects of the death drive, which I would call, following Lacan, Freud's central and most significant achievement.

Figure. Aeolus enacting the idea of a "denial of service attack" and, simultaneously, the Saussurian analogy of semiology as wind blowing over water. The wind creates the froth of sea–foam that is personified by Venus, a *jouissance* native to water but activated only by the external stimulation of wind. Beauty (*venustas*) can be seen as an idempotency defense, a stabilization without stasis, an ongoing active meeting of expectation with a negational response that continues the "flow" of an independent circuit, namely … [the same Name that stabilizes the "cyclopian" reverence of the paternal signifier thanks to the sacrifice (negation/re-naming) of the Father Himself. "The king is dead, long live the King").

"refutable terms," I would go further: the imagination is *nothing but* the capacity of a work of the imagination to kill. Capacity is not always actuality; anxiety is not always fright. The Real of an effect can be, and must be, able to be *attenuated*. We do not need to fall dead at the feet of Botticelli's demonstration of his imagination to know that we might do so. The threat of death is sufficient, in the same way that the danger of the proximity of the stranger is felt in the anxiety about our neighbors and the fantasies we construct about them.[6] In this way, fright, in the form of a catastrophe of over-proximity in the case of neighbors or a work of art, must be diluted by fantasy that stages anxiety in ways that "meet the denial–of–service attack of fright" by constructing "palindromic" defenses that *idempotently* negate/neutralizes the attack by creating circuits/circles that disperse and attenuate the full, destructive charge of external stimulation.

## Drop-Dead Beauty

The Stendhal Syndrome is rare in actual cases of death at the feet of a work of art.[7] However, this is an extreme, over-exacting standard. There are other cases in ethnography where beauty causes some form of paralysis, and here we look to paralysis as such as the key form. Paralysis need not take its literal form to be an active component of experience, and in particular the experience of works of the imagination, art, or of beauty. We "stand transfixed" before paintings of great beauty. The majesty of a scene, natural or man–made, *holds* us in awe. Figures in mythology, most famously Psyche and Medusa, were said to be so beautiful that those who beheld them were unable to move. Fascination in general is a boundary behavior which prevents us from either moving toward or away from an object. The god Eros, according to Hesiod's *Theogony*, loosens the limbs.

An even more interesting connection relates to the dream's function in sleep. For sleep to be *effective*, the dream must make possible the sleeper's total paralysis. The dream makes this possible by allowing the dreamer the illusion of movement that, like ordinary waking movement, acts as a figure across a fixed field or ground. But, in sleep, it is the sleeper who is fixed. The dream must be *moved across the dreamer's*

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[6] Carol Owens and Stephanie Swales, *Psychoanalysing Ambivalence with Freud and Lacan on and off the Couch* (Abington, OX, and New York: Routledge, 2020).

[7] For a contemporary popular culture example of the Stendhal Syndrome, watch the opening scenes of the Italian film *The Great Beauty*. A Japanese tourist at the Janiculum fountain overlooking Rome wanders away from his group as they are listening to a visiting choir perform. He wants to get a panoramic photo fo the city below but is suddenly struck by the enormity of its grandeur and falls dead on a heart attack. The penetration of the barrier normally protecting the viewer from the viewed here has given away its optic secret, in the same way that the telephoto lens of the photographer Jeff Jefferies in Hitchcock's *Rear Window* redefines the "neighborly" version of the fourth wall separating him from the wife–murderer Thorwald.

*immobilized consciousness*, while the dreamer is unconscious of this figure–ground reversal. Idempotency is clearly the *aim* of the dream: to extend the sleep of the sleeper so that paralysis can have its full neurological and physiological benefit. There is no doubt that the mind and body are in a cooperative venture, but that the success of this venture depends on the efficacy of the *cut* that allows for the figure–ground reversal, the movement of the dream's *field* across the paralyzed figure, the dreamer.

A new but secondary virtuality is created by this reversal. Thanks to the flip, the dreamer can, in paralysis, continue to enjoy the benefits of sleep. But, also thanks to the flip, the dream can "enjoy" its Euclidean virtuality, where people, places, and things appear as they do in waking reality. This "first" virtuality is illusory in the sense that it presents itself as whole thanks to the subjective inferential addition of the invisible components of a scene to the visibles that face the viewer. The depth dimension is added as a secondary effect of motion and the temporal muscular engagement with space. It does not "exist" in the perceptual organs as such, which, as Lacan notes, are two-dimensional. Euclidean virtuality adds invisibles to visibles to create "sense certainty" — the fantasy of perceiving a reality, and not just a subjective, idiosyncratic (and, hence, unsharable) view *of* reality. This would make perception experiences unsharable; but the one thing we know about perception is that it presents itself as a perception *of* a shared reality. We do not experience isolation or alienation in perception; we experience ourselves and our viewpoint as a part *of* a shared reality.

Secondary virtuality aims to preserve this sharability, which is why we freely encounter other people, places, and things in dreams. Given that the sleeper is immobile, the dream must move its entire frame of contents about the dreamer's fixed point of view without the dreamer's awareness of paralysis, although there are occasional overlaps in this transfer that create experiences of delayed or dysfunctional movement: wading through water or running without getting away from some threat. It could be that anxiety in dreams comes directly from such unavoidable overlaps, some technical failure of the dream management apparatus in moving the dream about the dreamer while preserving the dreamer's illusion of moving about the dreamscape.

The challenge presented by idempotency — a word that does not appear anywhere in psychoanalytical literature — is that its presence in sleep is undeniable, and the required reversal of the dreamer's figure–ground status is a logical consequence. Given dreaming's central role in relation to the fantasy of the psychoanalytical subject, and given the dream's proximity if not centrality to the functions of the Unconscious, we *must accept the challenge* of having to know how idempotency figures in (1) the RSI system Lacan constructed to "map the territory" of subjectivity and (2) the Unconscious, not just in relation to the imagination, in the course of responding to Hendrix's challenge, but to the *primary central feature* of the Unconscious, which I argue is its relation to the Death Drive as an "idempotency machine" for dealing with the unavoidable contamination of random, infinitely variable stimuli from both outside and inside the subject's body.

"Body" here is meant as a locus with extimacy capabilities. This is to say that the body, like the torus that it actually *is* in its organic form, constitutes an inter-relation of two voids, one defined in terms of repetition (cycles that are the geometric form of demand), and one that is the ambiguity of the desire of the Other, an exteriority that is simultaneously intimate and objective (on account of its ability to *be* the subject's own demand, its "eigenvalue" so to speak) and, at the same time, subjective but alien, in the form of the void created by the Other's interpellation, the location of the Other's desire at the empty center of

the subject. Body is both external and internal. It does not form a binary with the subject as mind, will, or any other "thoughtful" agency. It is not the external world. The external world, for Lacan, is "where the Unconscious happens." We know this through an adjacent proof of the reciprocity of hallucination with decline in perceptual abilities. People suffering from gradual blindness experience an increase in hallucinations on an almost 1:1 inverse ratio. The less we see, the more we *think we see*. This proves that the perceptual world has been, in effect, a *place–holder* for imaginative, self–constructed content. The hallucination seems to come, indisputably, from an external, undeniably real, source; but it is clearly generated by the subject's own neural apparatus, to replace what is being lost by failing perceptual sense organs.

If we are to place idempotency into this tight network of neural and psychic relationships, we must see it as what Will Greenshields has called a "Möbian cut." I would like to show how this cut is intrinsic to the torus, and possibly extend the torus to a variant known as the "spindle torus."[8] I would also like to prove that the torus is equivalent to the surface that Lacan defined *as the surface of pain called architecture* and identify this with the Architectural Unconscious, which has its main manifestation in the modality of the Imaginary but secondary manifestations as fantasies and, in the defining experiences of architecture education and practice, in the > and < (shortfalls and unexpected presences of) imagination that structure the *astonishment* that is key to (specifically architectural) creativity (as opposed to the security and shelter functions of what is distinguished as "building"). The cut is not simply the site of idempotency functions in waking experience or dreaming, it is the subject's aspect *as barred*, as a composite Conscious/Unconscious being. This is the mark, the brand, of the psychoanalytic subject as such. Idempotency is thus foundational for psychoanalysis in general, as well as for architectural imagination specifically.

## Spotting Idempotency

How would one "spot idempotency" in architecture? Here, I must venture to construct a conjecture. The conditions for this must be set out in advance to avoid the impression that idempotency is being used as an answer to the question of "what is architectural imagination." This question cannot be answered without specifying whether architecture is being considered (1) as something within humans' complex integration of their psychic nature within relations of habitation/occupation; or (2) an ideal that is isolated in "the schools" where architecture is taught as an academic subject, i. e. as a component defining the ideal student and/or, later, the ideal practitioner. In schools, creating a work of architecture, a designed space or

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[8] Lacan has already broadened the scope of the torus's capabilities by comparing to the cross–cap, involving physical cuts into the surface that demonstrate different and unexpected properties as the cut is made. See Seminar IX, April 11, 1962, p. 168 in the Gallagher translation; or April 4, 1962, p. 164: "You can clearly see what the configuration here demands, you can clearly see: it is a middle term between demand and desire. this middle term has a name, it is called the phallus. The phallic function as absolutely no other meaning than to be what gives the measure of this field to be defined within the demand ad the field of desire, and moreover, if you wish, that everything in analytic theory, Freudian doctrine, tells us about this consists precisely in telling us that it is through this when all is said and done that everything is arranged. … "I do not know the desire of theOther: anxiety, but I know its instrument: the phallus, and whoever I am, I am requested to pass this way and not to make a fuss; which is called in everyday language continuing on daddy's principles; and since everyone knows that for some time now daddy no longer has any principles, this is where all the trouble beings; but as long as daddy is there in so far as he is the centre around which there is organised the transference of what is in this matter the unit of exchange, namely: I mean the unit which is established, which becomes the basis and the principle of every support, of every foundation, of every articulation of desire, well then, things an carry on, they will be exactly stretched between the *mephunai*, "would that he had never begotten me!" at the limit and what is called the *baraka* in the Semitic and even properly speaking biblical tradition, namely the contrary, which makes me the living, activing prolongation of the law of the father, of the father as origin of what is going to be transmitted as desire.

building, is axiomatic. In subjectivity's relation to qualities of the built environment, it is not. The architect who takes seriously the latter would ethically consider how buildings are dysfunctional and even toxic for human well–being and decide either not to build or to destroy existing buildings. My conjecture is concerned to take architecture in the broadest sense, as something relating to human well–being; and, thus, the toxicity of architecture must be taken seriously, as well as its status as a possible work of art. There is, consequently, the *deus aut dæmon* paradox. A building's evil may constitute its genius. This is evident in what is, anecdotally, considered to be architecture's second major project, the Dædalan Labyrinth. Architecture's first major project, the Tower of Babel, would seem to echo this ambiguity, in light of the Assyrian prototype (the ziggurat–temple) of the Hebrew version (the unfinished/destroyed assault on heaven).

Any theory of idempotency in architecture would not be able to exclude these *meta*-architectural examples. If anything, it would require itself to relate to them in a particularly vivid way. Idempotency would have to function as, itself, a *meta*-theoretical complex of related ideas. It would have to function *locally* in terms of effectiveness in material practices (ethnologies, rituals, customs, etc.) and, at the same time, maintain a *global* status as principle, rule, or law. An example would be the way the Möbius band is something that can be used, as a material object, to demonstrate the principle of non-orientation and self–intersection. Idempotency in fact could in this sense be considered as a "virtuality of effectiveness" that is simultaneously material and theoretic, or "Real" in the sense that the theoretic in this case is that which *escapes* capture within the Symbolic and Imaginary in the same way that the Möbius band defies perceptual expectations and "Euclidean" relationships.

At the same time, the local–global requirement should be something that architecture (as a normal aspect of human occupancy rather than a pedagogical objective) accomplishes in "normal" ways: folk practices and cases of "architecture without architects," human construction in the broadest sense, which is not by any means restricted to function of shelter and security. One could say that, when shelter and security interests are minimal, architecture is maximal, and *vice versa*. Architecture's primitive nature is its affinity with universal aspects of order in relation localized configuration of resources that is sometimes as simple as an arrangement of stones or sticks. To know architecture requires a reduction to minimal conditions where, after removal of what is not specifically architectural (functions that can be supplied by optional means), architecture remains and is undiminished. The idempotency thesis must be that, in such minimal conditions, idempotency as a factor remains, also undiminished.

*1 — Idempotency and the Sorites Paradox*

To begin with, I must make a connection that will seem to be arbitrary and unwarranted. Idempotency is an insulation function, something that prevents random stimulation from disturbing the homeostasis of a (minimal) circulation of energy. In the situation of sleep, where the body must remain completely paralyzed for a period of time, the dream neutralizes sounds, lights, or movements that would awaken the sleeper. To do this, the dream must, in effect, be *moved across the fixed dreamer*, while at the same time the dreamer dreams of moving freely across a fixed ground. The dream exists thanks to the dreamer's unawareness of this figure–ground reversal, although the failure of this illusion can be imagined as a vertigo condition, the effect of feeling that "the room is spinning."

The sorites is about emergence, commonly identified as the problem of "one grain more" or "one hair less" — the point at which grains of sand become a pile or a person experiencing hair loss becomes bald.[9] This may be seen as a situation where the "signifier has arrived, either late or just in time" to name a condition. One imagines the signifier as a lawyer rushing into a courtroom in disarray, briefcase stuffed with documents, taking his/her coat off clumsily and apologizing to the judge and the client for being delayed in traffic. Although the signifier (a pile of sand, a bald person) seems to arrive after the realization of the condition of piling or balding as such, it *retroactively* accounts for the condition in the same way that the late lawyer is able to represent the client effectively, either by exonerating him/her or getting a continuance. Sorites is the full process of the accumulation without representation terminated by the sudden "just–in–time" moment of signification retroactively converting the entire prior events through a process of *identity*. In Lacanian terms, one could say that a (non-organized) signifying chain, S2, whose only property is consecution (its temporal or spatial "chain-ed-ness") suddenly reveals a hidden order, an S1 that is a "unary trait."

The sorites model of identity is an instance of a local–global "extimacy," in that the particularity of S2s as signifiers is precisely what is involved in the retroactive effectiveness of S1 as a unary trait. Like the running–late lawyer, it may be the case that the appearance of being unprepared has actually been the key to effectiveness — that the impression of S1 being inadequate to S2 is "a part of the plan." However, sorites has never been used to explain any aspect of Lacanian psychoanalysis. I will show, however, that sorites relates to psychoanalysis in a very basic and even foundational way. There are various possible ways of going about such a demonstration, but I choose to pursue a "topological" route, where sorites has an obvious relation to not just Lacan's interest in surfaces that are non-orientable and self–intersecting, but where this interest specifically involves architecture, as he refers to the "surface of pain," the void, the Baroque, and anamorphosis in Seminar VII, *The Ethics of Psychoanalysis*.

To give the reader for whom this claim's originality may seem strange, excessive, or both, take as an example the Möbius band, which intersects itself by twisting so that the two demonstrable "sides" of the strip become a single side, and that an arrow denoting direction on one "side" meets up with its counterpart (a point of "self–intersection") in an upside–down position ("non-orientation"). A sorites could be considered to begin as the Möbius band's strip, a sequence of separate surfaces, each bearing a directional arrow notation. When some mark is made along this strip to follow the sequence materially, a point is reached that counts for a discovery of non-orientation. What would be a completion in a non-twisted strip, a 360º journey, turns out to be only 180º, thanks to the ambiguity added by the twist. Realizing that a full inventory of the "space" of the Möbius band requires another 180º series of recording marks is the emergent "sorites moment" — the point at which the grains of sand become a pile or thinning hair becomes a bald person. The 180º arrival is "too late" in the sense that, at this point, the prospect of having to double the task has already been made apparent. *I would claim that this lateness is the model for all forms of astonishment in architecture, astonishment that, in vernacular or professional or academic conditions constitutes what makes architecture architecture.*

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[9] Although Slavoj Žižek has referred to the sorites process, he has never (to my knowledge) cited it by name or gone into the definition of the sorites paradox in symbolic logic. See *The Most Sublime Hysteric: Hegel with Lacan* (Malden, MA, and Cambridge, UK: Polity Press, 2014), Chapter 2, "The Retroactive Performative, or How the Necessary emerges from the Contingent," 21–34. Žižek productively emphasizes the "too late" aspect of sorites I cited in the case of the lawyer arriving at the courtroom disheveled but, thanks to his appearance of being unprepared, all the more effective.

Lateness comes with a certain "theatricality involving guilt." The lawyer has rushed into the courtroom before an annoyed judge and even more annoyed client, but this admission of fault is all a part of the lawyer's plan to win the case. It works only in a retroactive temporality, a psychoanalytical *aprés coup* that connects a moment of stumbling/bungling with a "foundational"/traumatic origin that has hitherto been unknown/unknowable, a Real in relation to the chain of signifiers that will, suddenly, have an emergent identity through a unary trait, the "pile" of the "pile of sand." The guilt accrues to the master signifer, S1, which appears "out of the blue" in a force–field configuration that Lacan specified through his *matheme* of the metaphor.

What could "guilt" possibly mean in this case? Guilt is an architectural primitive. The ubiquity of sacrifice in foundation rituals of buildings and cities reveals a universal recognition of the need to expiate a primal transgression that is an inescapable component of construction.[10] In whatever configuration foundation rites take, retroactive reference to an original trauma sets up an *aprés coup* geometry, which we have anticipated in the example of the astonishment of finding, after seemingly completing the circuit of the Möbius band, that we are only halfway finished our trip. Imagine that the strip has become a surface separating a stage and auditorium. Imagine that we have poked a hole in the fourth wall to *verify* the representational status of the performance. Imagine that our expectation of a 1:1 or indexical relation of representation to represented, the A=A of identity in other contexts, has suddenly been revoked. Another space, corresponding to the original virtuality of representation but "inaccessible" in the same way the remainder of the circuit of the Möbius band is accessible only "retroactively," connects to a Real of the performance that goes beyond the "I know very well, nonetheless …" of fiction's willing suspension of disbelief. The hole through the Möbius band's surface does not defeat its 2-d projective status, which is its non-orientability and self–intersection. Rather, it *confronts* itself in an act of self–surveillance. This is the "guilt" of the desire to know, the inevitable failure of science that is in fact the substance of science in relation to the project to identify what has emerged from the chain of signifiers, the S1.

This calls a halt to any project that attempts to interpret the meaning of architecture by simply adding new meanings to old ones, a procedure of what Dan Collins has called "interpretation by punctuation" — an attempt to know something by a process of supplement, which in architecture is the "captioning" strategy of criticism: adding context, conjectures about process, explanations of functionality, etc. in the course of critiquing a design.[11] Instead of this supplemental program, which by definition can never be terminated (there is always something more to say), interpretation by the *cut* is like the punch through the Möbius strip, which fails to prove what is most obvious, that the strip has two sides. The punch is one species of the genus cut. Other species involve scissors, to show how one projective surface "has sown together" other kinds of surfaces; boundary analysis, such as tracing the edge of the Möbius band; or the

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[10] In most cases, buildings involve the internment of a sacrificial victim, whose innocence simultaneously justifies the sacrifice and absolves the sacrificers. The victim's soul is believed to protect the building from spiritual threats and secure its material integrity. At the collective level, sacrifice is required to consolidate the religious components of constitutive groups allied by a new urban political and religious structure. In Rome, this tradition was condensed into the story of the hero Curtius, whose voluntary sacrifice was credited with the solidification of the forum, which had liquified. In reality, the Forum Romanum was created by draining a swamp occupying a site medial in relation to seven tribes occupying its seven hills. Used as a common burial ground, the site had to be reclaimed both physically (by draining) and spiritually, to avoid angering the spirits of the dead. In a sense, every building risks intrusion into the space of the dead and requires protective measures. Sacrifice to secure a structure appeals to spirits who might be offended at the appropriation of the space that was formerly theirs, simply by the feature of soil as "that which contains the spirits of the dead," as its *sub-stance*.

[11] Dan Collins, "Stealing Money from Offices," *Lacunæ* 16 (July 2018): 105–124.

structural analysis of narratives, such as that carried out by Lacan with the story of Apollo and Daphne in Seminar VII.

Another form of interpretation by the cut involves telling a joke involving retroaction. The shortest example I know how to give is the joke about Mrs. Bloomberg, whose husband is near death. At his bedside, she asks him what is his last wish for her, which she will carry out faithfully. The dying Bloomberg says, "Marry Friedman." "But, Friedman is your worst enemy!" replies the astonished wife. The husband confirms: "Yes, that's right." Without saying so, a signifying chain has been retroactively re-associated with an S1, a signifier that reveals the truth of the situation, in this case, the sad revelation that Mrs. Bloomberg's marriage was not all she had thought it was. The pile of signifiers, the chain, has been cut without destroying its form, a form of extimacy that shows the chain to have twisted in a non-local way, a globally effective way, but the moment where this meaning has emerged is indeed local. It is intensely local, in the way that all jokes are intensely local in that they have transferred the job of realization to the listener, the site where the joke actually "happens."

Sorites, the emergence of the global at a locale that escapes determination (we keep subtracting grains of sand to find out just *where* the falling grains had become a pile), is the logic of the guilt that must be expiated through sacrifices made to protect a building, city, or even a nation from attack, to *insulate* a delimited space with a boundary that is sufficiently tricky to avoid normal disturbances. Yet, the work of art prepares for another breach in this defensive boundary, a breach that will reveal the structure of the work and, in the process of this revelation, destroy the 1:1 indexicality that had allowed, in the theater example, the audience to imagine it was seeing an amusing entertainment on the other side of the proscenium. Here, a double construct is made with the addition, to the virtuality of illusion, a virtuality of effectiveness, an addition that moves, in the theatrical example, from the auditorium in which spectators have been temporarily paralyzed by the spectacle of fictional representation, to the globalizing moment when the representation "exceeds itself."

With visual art, this moment can be fatal. As in cases of the "Stendhal Syndrome," art lovers have been known to fall dead before the astonishing beauty of a work. This extreme masks lesser cases, where spectators have been merely "transfixed" by an artwork's majesty. I would claim that these kinds of paralysis are not exceptions but in fact part of a generic, required quality that is evident in "2d flat art," paintings and photographs. This is known as La Gournerie's Effect: the general corrective reaction to the distortion that occurs when viewing flat art from oblique rather than direct frontal positions, giving the viewer the sense of standing "in front of" the artwork.[12] In other words, the spatial freedom the viewer of a flat work of art hanging on the wall of a gallery is perceptually narrowed. The viewer is "held" by means of an illusion that, even though free to view the painting from a variety of angles, he/she is actually always "standing in front of it." Researches show that this correction also exists for spectators in a theater who may be sitting in "bad seats" but imagine themselves facing the stage more directly than they actually are. The "sweet spot" that can take the form of a normative optimal view *or* a specialized position to see an anamorphic (blurred) image can be imagined to be one and the same. The normative angle, $\partial$, is orthogonal, but when a "hole is punched through the fourth wall analogized as a Möbius band," this $\partial$ becomes the anamorphic $\partial$, set close to the surface of representation. The anamorphic $\partial$ is constructed as a

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[12] "Affine Distortions of Pictorial Space: Some Predictions for Goldstein (1987) that La Gournerie (1859) Might Have Made," *Journal of Experimental Psychology* 14, 2 (May, 1988): 305–311.

literal angle close to the painting's plane, as in the case of Hans Holbein's double portrait, *The Ambassadors* (1533). The sixteenth century witnessed a number of forms of this re-assignment of the $\partial$, in forms such as cylindrical mirrors or stretched-out murals (Convent of the Minims in Paris). Even images merged by spinning or rotating could be considered as a special case of anamorphic $\partial$, the ø-phenomenon of cinema or, before that, thaumatropes.

How is it possible that an image seen head–on can also be considered as anamorphic? There are two components to my answer. The first is given by Holbein himself, in a web of reticular lines connecting the angle of the blurred skull image to the horizon and the vertical connecting the *memento mori*'s viewing point with the crucifix half–covered by the green curtain at the upper left corner of the painting. The 27° angles of these intersecting lines refers to the over–exact date Holbein gives for his *vernissage*, April 11, 1533, 4 p.m. This time specified the moment when the sun, on Good Friday of 1533, was exactly 27° above the horizon. Luca Paccioli, a friend of Holbein's, had predicted this exact moment to be the time of the Apocalypse, which of course didn't happen literally, but Holbein considered how the Apocalypse might still have happened in the same way that a frontal view of the painting might also be considered as anamorphic. The Apocalypse destroys time in the same way the frontal view "orthogonalizes" the portrait's viewer–viewed relationship by adding $\partial$ as a corrective, an *orthos*, in a moment allowing for a Stendhal transfer of meanings that exceed the standard run of signifiers, S2 … S2. The $\partial$ becomes in effect an S1 that drops in out of the blue, the blue sky of the Apocalypse, to afford the viewer a "corrective" image antipodal to the obvious display of wealth of the two French noblemen.

We might generalize this theoretical view of an anamorphosis that is viewed "straight on" by saying that the Stendhal Syndrome is a latent potential within every work of art, and that it is in fact what, in its latent potentiality, makes a work of art a work of art. This leads to the second component of my argument about head–on anamorphosis related to the functioning of the fourth wall. If the fourth wall can be analogized by the Möbius band's non-orienting, self–intersecting 2d surface, we are saying in effect that the fourth wall is an immersion of a 2d surface into a 3d space, the theater — or, rather, the building that will *become* a theater thanks to this immersion. The building before the immersion is a building; after the immersion it is *architecture*. The fourth wall's transformation is akin to the sacrificial ritual of securing a building or city. It is an "impossible symmetry" without which the building is just an object in a "Euclidean" 3d space, without the transformative phenomenon of immersion. Immersion charges up the signifying chain that is the utility and solidity, the *utilitas* and *firmitas*, of the ordinary building.

The thesis that — when one "encounters" the fourth wall of cinema and theater, one discovers a 2d surface in what should be a 3d space, but that this replacement forces the recognition that the 2d-ness has "prevailed" in its transformation of spatial use, from building to architecture — is proven by the less important local case of the Möbius band, which also "forces" recognition. What is the physics of this force that pushes against our expectations? Or, rather, what is *our force* that resists this recognition? What *drives us* to persist in our Euclidean expectation that the fourth wall is no more than a convention separating the fictional space of the stage from the space of passive reception? This is our insulation, our political self–administered paralysis that keeps us in our seats, watching and listening to the extent that *imagination takes control*. This could be defined precisely as an "enchantment point," beyond which the dream takes control of our limbs as well as our senses, and where any meagre prop becomes *even more effective* when we detect its artifice, making it immune from exposure as "just a prop." The phony–looking plastic Fellini

used to imitate sea-waves in his film *Casanova* was intended as a cheap trick, and when a production assistant asked Fellini if it was coming across as too artificial he replied, "No! It is not artificial enough!"

The secure lock of the dream around the Imaginary can be experienced using one of those computer–generated patterns that, when viewed by eyes focused on a distant point, create a binocular depth sensation. The eyes at first resist, wanting to see the pattern as a dull repetition of micro–waves and blotches. This materiality of the ink suddenly disappears when the eyes (and brain) "relax" into the depth function, and the *jouissance* of depth keeps the eyes from re-asserting their Euclidean belief in the flat materiality of the ink pattern, which ironically holds the key to the plunge into the third dimension. This is not a proof of the third dimension's reality but, adversely, its artificiality, its presence as a voluntary "prosthetic" device. At this point it is impossible to avoid the conclusion that Imaginary involves a neural "lock," an idempotency function that is present in the artifice of the fourth wall in cinema, theater, and 2d works of art.

How might this "lock" work in architecture, which lacks the advantage of tradition that places the spectator in a fixed position? What happens, in other words, when the spectator is no longer allowed detachment but is pulled into the very *mise en abîme* that the brain/eyes enjoy when standing before the patterned ink or the immobilized viewer enjoys, thanks to his/her paralysis, sitting in the auditorium seat, "pulled into orthogonality" by the La Gournerie phenomenon, set up to be smacked in the face (or worse) by the Stendhal Syndrome? This positioning, paralysis, and knock-out punch are clearly the pain–for–pleasure's–sake of *jouissance*, the *jouissance* of art, specifically. How does this *jouisssance* survive the trip past the fourth wall, into the interior of an architecture that is buzzed solid by artifice, the prosthetic?[13]

Sorites is not simply the occasion of retroactive realization cited by Žižek in connecting it to Hegel's *Aufheben* — the way synthesis is already "inscribed" into antithesis in the form of a primordial cut. To say

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[13] See Mark Wigley, "Prosthetic Theory: The Disciplining of Architecture," *Assemblage* 15 (August, 1991): 6–29. Wigley makes a fatal move when he quotes Freud but goes simplistic: "The dwelling is a prosthetic extension, an 'auxiliary organ,' but one worn as a substitute for the woman's body, 'the first lodging.'" (Freud, *Civilization and Its Discontents*). The temptation to use analogy rather than metaphor has enticed the author to strip the idea of prosthesis from the context where Freud presented it as a combination of two "imponderables" that constitute an *aporia* for architectural theory: (1) a fairy-tale state of semi-consciousness, i. e. the condition of the metaphor in mythic thought; and (2) the Promethean paradox, which has remained opaque for all who would ignore the clear parameters that Vico uncovered in *The New Science*. The correct formula is metaphor>paralysis>interiority>prosthesis. "Prosthesis" is in this case the material directives of divination that fix locations of ritual as much as they enforce a rigid determinate sequence of actions. The mental (meaning, also, a neurological *stasis*, related to the brain's energetic goal of maintaining low-level energy circulation by deflecting external stimuli) mandate of metaphoric *thinking* obliges perception to submit to self–hypnotic paralysis, evident in types of praying and meditation. These idempotency strategies achieve a literal interiority that is, extimately, objective — the objectivity sought by the penetration of the fourth wall. Once "inside," mythic interiority of the Promethean state is, as the myth of Prometheus lays out, "chained to a rock" on behalf of the auspices represented by the eagle's continual harvesting of the liver. This is a literary version of Paul Schreber's psychotic experience of being obscenely enjoyed by God, evident in many mystical anorexics' explanations of their voluntary starvation, "so that God will have more to eat" (Simon Weil, *Waiting for God* [1950] (Abington, OX: Routledge, 2020). By accepting Freud's definition of prosthesis as < or > extensions of normal motor-sensory abilities, Wigley adopts William Ware's purely technological notion of prosthesis, extended to architecture directly, omitting any reference to the Promethean condition. Wigley then feels justified in giving a detailed account, not of prosthesis as a theoretical concept, but of the foundation of the architecture program at MIT: an analogy that must be accepted for (merely) comparison purposes, to suggest that architecture programs are *grafted* onto the university in the same way artificial devices replace limbs lost in battle. Wigley's retreat into the history of the education of the professional becomes a model. Any comparison is "gratuitous" and must be accepted by the reader as a mere device (an artificial limb), but the important point is the question of loss/lack that is more effectively addressed in Lacanian terms. This calls for a *retroactive* realization, the loss (Promethean paralysis) is lost to scholarship as much as it is a primordial loss in the human consciousness. But, for all this, the loss to scholarship is, like the function of loss in cultural evolution, is submitted to "interpretation by punctuation" (Collins, 2018, 105).

"But, wait! There's more!" must seem churlish. Žižek has, in fact, put his finger on the essence of the phenomenon he seemed to forget to recognize by name. Sorites is a way to reconstitute, out of scrambled eggs, perfectly intact yolks and whites enclosed by a smooth calcium oval. This magical act of reverse entropy is the essence of emergence as force in evolutionary biology, demonstrated by Walter Bock, Stephen J. Gould, and others who offer a way to avoid the spiritualism of Bergson's *élan vital* and materialism of Maturana and Varela's autopoiesis. Bock famously showed how latent traits could be "stored" and held in reserve for the right moment when, thanks to some disaster or other in the environment, they would suddenly become key to survival. Sudden appearance was, like the anamorphic image popping out of blurred obscurity in *The Ambassadors*, a product of the point of view rather than divine intervention of an unseen hand. The surprised observer forgets his/her place, because *forgetting one's place* is the way idempotency enforces its conditions required for surprise. This can be done by hypnosis or, more simply, a tradition of turning down the lights when the curtain goes up. If Holbein's anamorphic skull is properly described, one could say that it is, to borrow from Nabokov, an "invitation to a beheading": something seemingly gratuitous that brings about something admittedly astounding.

Sorites first scrambles the eggs, then it unscrambles them, then it reconstitute's the perfect porcelain shell. The soft-porn photographer and author Lewis Carroll (also an ordained minister) was additionally an original logician devised a "pre-" Boolean system using a "biliteral" diagram whose ++,+−, −+, −− pattern strongly resembles Lacan's *mathemes* of sexuation.[14] Graphically, the diagram reproduced the effects of the standard Aristotelian syllogism. A uniliteral expression contained only one letter or attribute, for example "Some $x$ exist" or "No $y$' exist." A biliteral proposition contained two letters, such as "No $x$' are $y$." Carroll devised verbal puzzles presenting lists of biliteral propositions: "All well-fed canaries are cheerful"; "No children can sit still"; etc. The "answer" to each "puzzle" was embedded at the beginning, and surrounded by self–canceling combinations. George Spencer-Brown used his Calculus of Form, a non-numerical notation system, to demonstrate the trick. The predicator and predicated parts of a "master/slave" element ("Socrates is mortal") were separated and concealed among any number of other biliteral propositions, also separated and dispersed. Then, a reduction process found and reunited the matching halves — all but one, of course, the perfectly smooth shell of the egg that had been "scrambled."

The separated twins, the original biliteral proposition, was gratuitous. Like the famous Macguffin of Hitchcock (the unprovable, hypothetical element that permits all other relations of characters and actions to "make sense"), the original biliteral proposition has no intrinsic value. It has value *only as a structural justification* for the process of disorder/re-ordering. Its entire value is *retroactively realized*. Like the Hegelian sorites, the moment when the falling grains of sand become the pile is *always* and *radically* pushed back into a past that the thinker must acknowledge *as his/her own*. Whoever kneels at the feet of Holbein's *The Ambassadors* must simultaneously admit to his/her voluntary obeisance as a peasant at the feet of noble masters. In fact, the perceiver of the skull that suddenly pops into view as such realizes a much more profound Master–Servant structure, that of the "scam" by which the Con (in this case two Cons) has used to hold the Mark in a tightly secured position, a *stress position* known all to well by servants and slaves of all kinds, as specified by Hegel's Parable of the Master and Slave.

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14 Lewis Carroll, "The Biliteral Diagram," Book III and *passim*, *Symbolic Logic,* ed. William Warren Bartley, III (New York: Clarkson N. Potter, Inc., 1977).

I see the Master/Servant as Lacan's "first discourse," the demand for recognition, which ironically fights to the finish while simultaneously destroying the possibility of recognition. The servant wins out (according to Alexandre Kojève's interpretation) because of its ability to turn from one master to the other, one "side" of the paradox to the other; to, in effect, embody the paradox as such in such a literal act of embodiment that it is the *body of the servant* that, in turning itself over to the wishes of the Master, creates a *jouissance* that keeps the master in His Place, upstairs rather than downstairs.

The downstairs pleasures of the body-full servants is inaccessible to the Master whose two aspects, whose two (meaning-less) components of the biliteral expression, are now camouflaged by the multiplicity of Servants who, dressed in livery, are nothing more than their roles/costumes. The replicability of the servant (it's hard to find a good one, as they say) allows for multiplication. Idempotency in electrical engineering terms is a button that switches on the first push but then does not respond to any successive pushes. "You can never be too rich or too thin," Wallace Simpson, the Duchess of Windsor, was credited as having said. In other words, the Master forsakes *jouissance* on account of idempotency. This is true of capitalism in general: no money is ever enough. "Coke is *it!*" because, as Žižek points out, it contains salt that engenders thirst at the same time it pretends to slake it. "I am thin, but I need to be thinner!" complains the socialite who is also never rich enough, and we see now the logic of Simone Weil's anorexia. "If I eat, God will get less." *It is the money that enjoys the rich, not the rich who enjoy money.* Or thinness. The Con Game of the Master's Discourse is the flip that reverses *jouissance*, but also the role of the biliteral and anonymous "servants" who, broadly distributed, create a phantasmagoria of meanings that, when *re-assembled*, reduce to Nothing.

We return to the idea of a "full frontal anamorphosis," the form of this art before the 16th century that Lacan, having had his fill of trick mirrors and peep-holes, wondered about. Anamorphosis seemed to have *emerged* suddenly and forcefully around 1533–1638 — from Holbein's *Ambassadors* to Jean-François Niceron's *La perspective curieuse*. But, Lacan pulled the rug from beneath this historical imposture of originality by looking in the guest register for the other name Anamorphosis had before it was Anamorphosis. "I knew   Day before she was a virgin," claimed the wag Oscar Levant; but, the logic of this preposterous claim is clear. Doris was calling herself something (and behaving accordingly) before she identified as America's favorite virgin. Just so, anamorphosis was, before the kneeling act, stretched-out murals, and cylindrical mirrors, *something else*. What?

Full fontal anamorphosis has no trace of blurred skulls or tricky mirrors. Instead of a remote peep-hole, the image requires nothing but the "neural" demand that, no matter where you stand, you will feel that you have fallen under its power (La Gournerie). You will be held, motionless, set before the majestic power of art, which may decide to punch you in the nose. This is "anamorphosis with a kick." The angle of submission, $\partial$, has allowed you to kneel before the masters, to be the Mark of the Con(s) in submission to their scam. Now, the $\partial$ command you to stand before it, for an orthographic, ortho-*psychic* correction procedure. The scam is that you will willingly give in to the work of art. You will fall in love, in the same way Scottie (the Mark in the Con, Elster's, clever scam) falls in love with Madeleine/Judy, the Shill.[15]

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[15] Analysis of *Vertigo* as a scam employing an "anamorphic" shill employs the device of the thaumatrope, a disk spun to combine two images on *recto* and *verso* to link Scottie's love for "Madeleine" who does not exist. The $\partial$ of the thaumatrope relates to the twine threaded through the hole that penetrates both images, locating the point at which love and death materially connect. Anahita Shadkam and Don Kunze, "Death–Dream in Two Parts: *Vertigo*'s Roof(e)scapes," ms. submitted to the *Journal of Architectural Education*, February 2021, publication unlikely.

Carroll's full frontal anamorphosis links to the anagram, rebus, and cipher; crytpograms that accept and even encourage full exposure yet resist ready interpretation. In fact, resistance itself becomes the element of self–incrimination that links shame with the failure to know or "save."[16] In Albrecht Dürer's *Melencolia §I*, the intentionally misspelled title is an anagram for *limen coelo*, or "gate of heaven." Dürer seemingly borrows Vico's clue, that the word *coelum* is both "heaven" and "axe," a cleft in a plenum. Talk about interpretation by the cut! Dürer compounds interest in this angle by displaying a "magic square" based on the number thirty-four (the planet Jupiter, thought to be an antidote for Saturn's afflictions, numerically 15). This cleft is depicted as a moon with a radiant "moon-bow," accessible only after solving the biliteral conjunctions: the hour-glass, the saw and plane, the dog, the "tesseract," or truncated triangular trapezohedron. The rhombic faces have angles of 72º, 108º, and 126º, all of which have a sigma (numeric sums) of 9, similar to the sigma of Holbein's reticular net (27º, or 2+7=9).

The puzzle parts invite "interpretation by punctuation," as Dan Collins would call it: successions of trial de-codings, interpolations with other scattered signs, historical background, mathematical formulæ, etc. OR … one can cut to the chase by "interpreting by the cut," namely looking for the "twins separated at birth" whose reunion will bring about an emergent transformation, an answer "out of Nowhere." This is the *limen caelo*, the *limen* that, in cleaving heaven, creates it. This a "primal term" in Freud's sense of those ancient words that were given hyphenated, antipodal functionalities: *altuus*, *hostes*, *sacer*, *cælum*, whose high/low, hospitality/hostility, holiness/obscenity, and cleft paradise all attest to the existence of a "primal level of consciousness" where negation is unplugged, or not–yet–plugged in. We know this well from Freud's connections of negation to the dream and the unconscious, both of which de-fang negation so that antinomies trouble no one. The living may meet the dead, the past the future, the evil with the saintly. Binaries simply do not work in the systems we associate with conscious forgetfulness or, rather, a systemic failure of memory, a structural dementia.

Whether the River Lethe of dreams or the impenetrable wall of the Real of the Unconscious, the "primal term" of the sorites *means nothing*. This means both *non*-sense in the Deleuzean sense and "the Real's radical resistance against the Symbolic" in Lacan-speak. The joke is my own invention: "What do all Lacanians have in common?" "—Nothing." Nothing is the foundational cancellation that is sorites' "answer," which transfers all questions of meaning to the puzzler and his/her acceptance of the puzzle *as such*. Guilt, and shame, are the essence of the anagram, rebus, cryptogram; if you feel it, you know it. Like Scottie, you accepted the job, your failure proves that you solved someone else's problem (the con, Elster's) by failing to solve your own. *Jouissance* is enjoying you. You are the master who failed the mastery exam.

Fortunately, despite these many side-trips into contronymics, scams, and shaming, the sorites is easy to explain. Thanks to Spencer-Brown's Calculus of Form, we learn how to make one of Carroll's puzzles. First, a biliteral conjunction is formed, say (x)y. Then, any number of other "uniliteral" elements are

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[16] Shame functions as the final component of the trick that, in *Vertigo*, the con Elster secures Scottie's cooperation at the suicide inquest of the actual Madeleine. Scottie's shame at being unable to follow "Madeleine" (the shill) to the top of the tower at the Spanish Mission proves his sincerity and, thus, his authenticity. Shame and humiliation become the angle of view required to see the anamorphic skull in Holbein's *The Ambassadors*. Potential or attenuated shame is the guiltiness required, in all cons, to gain the con's *willingness*, not unconnected to the art–as–scam's demand for the willing suspension of disbelief. The Puritans rightly seized on the element of guilt to "prove" the sinfulness of the performing arts. Theaters are, architecturally, buildings made to be burned down. By extension, *all* buildings requiring authenticity (*firmitas*) involve a guilt that is balanced against the sacrifice of a victim (a con) concealed (anamorphized) into the building's foundations.

invented: a trick poney, a restless child, animal that howls at the moon. These will appear in two positions, once as container (the black in "all cows are black"), once again as contained (the cows). The container/contained uniliteral couples are separated and joined to other complementary elements. Black is contained ("black is one of my favorite colors") and all animals in my pasture are cows. Predicates or predicators, elements are scattered across the field, a figure is hidden inside the rubble. Just as debris fields of actual disaster sites contain keys to victims' chances of psychological recovery, the puzzle is not a puzzle without a redemptive key, a jewelry box or family photo album — something that relates *personally* to the puzzler and identifies him/her as such. This is how the subtraction of meaning (the original biliteral pair are "gratuitous") enables the transfer of significance from the puzzle to the puzzler. This, as Collins explains in his essay on metaphor, a conversion of the search for meaning(s) to generic meaning-*fulness*, a state of *personal* relation to a signifying situation.[17]

Collins' account of (Lacanian) metaphor in fact reveals the logic of sorites and connects Carroll's biliteral system to Lacan's *matheme*. Lacan's aim is to bring interpretation by punctuation's "endless search for substitution meanings" to a halt, indicated by S(I/x). This is made to be a reduction of the part of the formula lying to the left of the →, easily confused for "=," a reduction based on the numerator/denominator alternation of the signifying chain, S2: S/S2 • S2/x. The "cancellation" Lacan implies by the disappearance of S2's on the right of the *matheme* put the metaphor, S, "in charge of" an evacuation of meaning within the parenthesis of (I/x). This calls a halt to the endless quest for supplementary meanings and a resulting shift from multiple meanings to the singularity of meaningfulness. This is the same as the sorites in the hands of Carroll the Sorites Puzzler. The "endless quest for supplementary meanings" is portrayed in the splitting and scattering of any number of uniliteral elements conjured up as *recto* and *verso*. Thaumatropically, these are "spun out" to combine at random with each other. The point is to camouflage the original *biliteral* pair, the twins who cannot reduce to one and therefore *are* the "unary trait" that Lacan celebrates as a dual, i. e. a *cleavage* or *cut* with two resulting faces. In effect, Lacan, like the clergyman–photographer Carroll, *encloses enclosure*, a *limen coelo*, a cut into heaven.

This is the face that conceals the face, the cut into the stone that "has two sides" but only one cleft. It is a common practice of stone masons to break a stone in half but then place each half so that it cannot be readily spotted and visually re-joined. This, in a nutshell, is the logic of sorites as a retroactive immersion of the 2d space of the cleavage into the 3d Euclidean "performative" space where puzzles exist as faces of the unknown. We look through the fourth wall expecting to enjoy the play or film. We punch through the Möbius band expecting to make a registration mark terminating the sequence of signifiers. But, we encounter non-orientation. The arrow we drew originally is now inverted. We have only half–completed our circuit. What we thought was 360º is actually only 180º, part of a pair. We must continue. We must double. We must turn Holbein's painting over to find the key, the 360º of the Apocalypse, which we may experience from our front–row seat as a punch in our Stendhalish nose.

## Non-orientation and Self–intersection

These are the slogans of projective geometry. They are the primary effects of figures Lacan involved himself with on behalf of his project of understanding extimacy's inside–out role in the productions of the Other, love, anxiety, the discourses, the Unconscious, and (especially) the death drive. Non-orientation and self–

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[17] Dan Collins, "On Metaphor," *(Re)turn: A Journal of Lacanian Studies* 6 (Spring, 2011): 149–157.

intersection engage the figures of the torus, the interior 8, the cross-cap, the Möbius band (or cut), and the Borromeo knot, variously but without exception informatively. Lacan's topological interests were grounded and cross-checked by his conversations with France's most notable mathematicians. In other words, he was no slouch. His speculations in knot theory take place at a level far above most of his psychoanalytic colleagues, nonetheless he tortured them with the challenge of identifying topology with the third and final domain of his sequential interests, the Real.

It happens occasionally that an amateur with little learning and a dangerous backlog of misconceptions happens across something of interest. In this case, the amateur is writing presently, and the backlog involves hasty remedial self–instruction on the subject of projective geometry. In other words, the dangers of a bad education are antinomies: not knowing enough, and knowing "too much," i. e. knowing what doesn't happen to be true. Nonetheless, there are two lessons to be learned in bad education. The first is that any methodology must accept the likelihood of error; the second is the positive connection to *kenosis*, not knowing what one doesn't know. This means that what one doesn't know, or knows incorrectly, can possibly convert to something that, on account of its natural elusiveness, has been missed by others. Bringing this kenotic material forward is always done with trepidation and plastered with qualifiers.

On the subject of methodology, mathematics has developed a technique fit for ignorance, although the ignorance of a trained mathematician is of an infinitely higher order than mine. In the face of a seemingly insolvent problem, mathematicians will develop an *ad hoc* thesis that makes little effort to address the known evidence of the problem. This is an "ersatz conjecture." When applied to the problem, the result is, as expected, an abundance of error data. *Of course*, the conjecture is wrong; that was expected. However, the error data has a curious by-product. It *re-shapes* the original problem. Against this new form, another ersatz conjecture is made, with the same indifference to the reality of the issues at hand. Again, there is new error data. Again, the problem, now slightly changed, is re-shaped. Again, an ersatz conjecture.

There are many possible outcomes of the ersatz conjecture. The first outcome is certain, however. The conjecture is mistaken. It does not invest any pride in being correct, so there is no disappointment or shame in failure. In fact, there is something of a sigh of a relief. The less–but–nearly–as–certain outcome is that what is learned along the failure process has a positive value. It is almost always novel, and almost always interesting. The third and much less likely outcome of the ersatz conjecture is the *ansatz* moment, the "lucky break." As any statistician knows, *only* a random experimental design yields definitive and accurate results. Randomness, never easy to achieve, produces definable–in–advance results. In this spirit, the ersatz conjecture aims only to not conceive of what it's aim might be. This includes any idea of what the actual problem at hand is! In architecture education, this has the famous status of the advice of avoiding preconceptions. Not only do assumptions generally prove themselves to be false, but their constraint of the design process means that the results are tautological. No matter how vigorous the inquiry into alternatives, the designer produces what had first come to mind, but in so devious a way that the actual process has been converted into a falsification, a camouflage. Like the sorites puzzle-maker, the answer is known in advance and disguised within a random scattering of irrelevant signifiers, de-coupled and re-coupled in seemingly meaningful ways, only to negate themselves and find the rabbit that was in the hat all along.

In my particular ersatz conjecture, I employ the method of noting curious absences. These amount to three unsatisfied connections relating to Lacan's topography and knot theoretics. The first step is to establish that my expectations for the presence of these connections is justified; the second step is to wonder why an "outsider" in the psychoanalytical — to say nothing of the mathematical! — would have noticed the absences when no one else has. My first expectation is that I have simply overlooked the connection in my poor reading of Lacan's works and secondary sources; the next expectation is that the connection, if already made or newly restored, is either trivial or unwarranted.

**Sorites**. Sorites is never formally mentioned by Lacan, to my knowledge; however, the principle of proliferation of signifiers while one signifier (a master signifier) remains latent, is a theme that surfaces in many forms. It is curious, given Žižek's accurate identification of sorites with emergence and the retroactive presence of synthesis in Hegelian dialectic, no one has explored this relation with the central Lacanian theme of the *aprés coup*. This would identify the Real of trauma, the generator behind compulsive re-visiting of an un-symbolizable event in the past, with the master signifier, the initial biliteral signifiers (Carroll's term) that, disconnected and concealed within the "debris field" of miscellaneous signifying chains, creates resonance thanks to the uniliteral cancellations. This would seem to be a trivial connection were it not for the fact that cancellations are, in music and literature, encountered in the form of paired signifiers arranged in a chiastic pattern, and retroaction becomes the basis for the astonishment the audience experiences when it grasps the whole of the work in this way. Given that the sorites directly reveals, or models, the logic of "interpretation by the cut," and given that sorites is definitely related to the phenomenon of emergence, as Žižek showed and connected to architecture in his only architecturally explicit references to the spandrel, one would expect at least some interest amongst Lacan scholars.[18]

**The enthymeme, or "silent middle term."** fff…

…

**The coincidence of indication and distinction (Spencer-Brown's "Calculus of Form")**. [example of *The Graduate*, screen tests of Dustin Hoffman]. "Not for architects?" No — the calculus directly engages relations of representation to various "spaces of representation," viewing the latter as variable, constructed, and culturally specific.

…

**Ekphrasis, the Idea of the Theater, the Theater of Idea**.

…

**Anamorphosis, the uncanny, and metaphor**. Lacan gives considerable attention to the flagship artworks introducing anamorphosis as an "official undertaking" in the 16th and 17th centuries. Pointedly, he asks, in the style of Oscar Levant's claim to have known Doris Day "before she was a virgin," what was anamorphosis before it was anamorphosis? He put it in a less provocative form. Speaking of an anamorphic "bib" of a Rubens' crucifixion painted around a cylindrical mirror, Lacan remarks that "This object could never have been produced, never have had a secondary meaning without a while preceding development. There is behind it the whole history of architecture as well as that of painting, *their*

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[18] Slavoj Žižek, "Architectural Parallax Spandrels and Other Phenomena of Class Struggle," URL: http://www.lacan.com/essays/?page_id=218.

*idempotency of the architectural imagination*                                                                20

*combination and the history of this combination* [emphasis mine]."[19] The idea of and designation "anamorphic art" does not appear before the 16th century, however. What was this "combination of architecture and painting" called before that? What was Doris Day before she was a virgin?

Mladen Dolar has noticed this issue and taken on a project of connecting anamorphosis to the uncanny, unshackled from its service to the Enlightenment as a reactionary attempt to hold on to a superstitious Gothic past.[20] To his credit, anamorphosis has been rightly tied to the interests and techniques of the uncanny, found in rituals, folk practices, religious concepts, and whatever has gone by the name of "the mythic," in the Cassirean–Vichian sense of that term. But, given that all arrows aim in the direction of the primitive and the question of how psychoanalysis, particularly in its theory of metaphor, might be connected to the idea of "language origins," there is surprisingly little interest among Lacanian scholars to reach the target. It is as if the uncanny and anamorphosis are Zenoniain arrows, required to complete half of the distance to their destination before they begin the second half, matched by an equally Zenoniain skepticism that is more than a little willing to give up the idea of completing this task. Thus, the connection of Lacan to Cassirer and, necessarily, to Vico has never been made. Even with the analysis of Antoine Mooij (*Lacan and Cassirer: An Essay on Symbolization*) there is no mention of Vico whatsoever, and hence no marvel at Cassirer's conversion of Vico's three stages of symbolic consciousness to his own system of mythic, representational, and conceptual thought.[21] This would have made it obvious that the next step would be to consider the transition from "heroic thought" to "conceptual thought" the fulcrum point at which anamorphosis suddenly appeared as an autonomous idea in the arts and architecture, and that the question of what had gone before it would have identified the uncanny of "heroic thought" (which Lacan represents through the tradition of the troubadours) and thence to Vico's imaginative universality of myth, which one could claim to be a raw, unmediated version of Lacan's *matheme* of metaphor.

**Gauss–encoding the Borromeo knot.** The three rings of the Borromeo knot played a central role throughout Lacan's progressive, shifting focus on the Imaginary, Symbolic, and Real. According to Will Greenshields, the Borromeo knot appears first in Seminar XIX, *… or Worse*. The three rings of the knot presented as a stack, with the unusual feature that each ring, considered as the topmost ring, unaccountably "tucked under" the next ring, creating an endless re-insertion. The set of rings were thus self–intersecting and, thanks to the bottom–top conversion, non-orienting. This had an advantage putting it ahead of the torus as psychoanalysis's preferred topology. Each ring could take on a symbolic relation to one of the three Lacanian domains, promoting the insight that the relation of any two domains was maintained by the third. Lacan presented the Borromeo knot in diverse variations, hinting continually that there was a role for a fourth ring, identified with *jouissance*, required to hold the other three in place. But,

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[19] Jacques Lacan, *The Ethics of Psychoanalysis*, Seminar VII (New York and London: W. W. Norton & Co., 1992), 135. Despite Lacan's interest in Holbein's double portrait, he was clearly unaware of the significance of Holbein's over–specific date of completion, or of the geometric net case across the viewer of the anamorphic *vanitas* blur, the crucifix, and the nominal "place of the skull," Golgotha. Adding this information confirms Lacan's conjectures, and goes even further to assert a connection between this double encryption and the "apocalyptic" relation of a second form of anamorphic virtuality to the first, evident only in comparison to the painting's relation to Euclidean representationalism. See John North, *The Ambassadors' Secret: Holbein and the World of the Renaissance* (New York: Hambledon and London, 2004).

[20] Mladen Dolar, "Anamorphosis," *S: The Journal of the Circle for Lacanian Ideology Critique* 8 (2015): 125–140; " 'I Shall Be with You on Your Wedding-Night': Lacan and the Uncanny," *October* 58, Rendering the Real (Autumn, 1991): 5–23.

[21] Antoine Mooij, *Lacan and Cassirer: An Essay on Symbolization* (Leiden and Boston: Brill/Rodopi, 2018).

such a fourth ring is not officially necessary. Why does the fourth ring continually arise as the "solution" to a non-existent "problem"?

The geometer–mathematician Carl Friedrich Gauss invented a notation system that has subsequently been called Gauss code, Gauss notation, or Gauss word.[22] Using this system to analyze the Borromeo knot reveals the presence of a "virtual ring" mapped by the configuration of absent intersections. Since rings overlap each other in pairs, each pair produces place–holders for the third ring, but collectively these place–holders amount to a fourth ring. Furthermore, the symmetry of the place–holders creates a chiasmus that, if mapped as a linear graph, creates an up and down whose peak divides the paired blanks. This is the form taken by chiasmus when, in a literary work, expressions in the first half of the work match in a 1:1 relation to signifiers in the second half. Richard Kopley's analysis of Edgar Allan Poe's short story, "The Purloined Letter," makes it impossible not to consider what relation ties this chiasmus even more closely to Lacan's interests in virtuality, which in the short story is the theme of "purloined," of "running alongside" in a "parallel semiosis."[23] Lacan's famous interest in Poe's story has not been connected to the Borromeo knot's chiastic encoding, nor has the question of a "secondary virtuality" (of *jouissance*) been connected to Slavoj Žižek's identification of a "virtuality of effectiveness," a virtuality that, in contrast to the virtuality of "virtual reality" (computer generated simulations of Euclidean space, generalizable to any 2d representation of 3d space), maps the presence of a second kind of Real, an "efficient cause" Real, inserted into the Imaginary, Symbolic, and (first, or "traumatic") Real.[24]

What would constitute a happy ending for this incomplete saga of the Borromeo knot? In my view, this would be a full–length mirror view of the "full frontal" form of anamorphosis, *via* the thesis that there is a secondary virtuality as such, bearing the secret of *jouissance* and the famed *objet petit a*, the "object–cause of desire" evident in the Freudian *Es*.[25]

**Theorems of projective geometry**. The topography of the torus and other "surfaces of pain" relate psychoanalysis to architecture, although direct references are limited to Seminar VII. But, what if the *qualities* of projective surfaces and related knots such as the interior–8 and Borromeo rings, non-orientation and self–intersection, are returned to their foundation in projective geometry? As such, projective geometry is not treated by Lacan or his commentators. There is no mention of the founder of projective geometry, Pappus of Alexandria, in 300 a.d., although Lacan is keenly and knowingly aware of Girard Desargues, the architect who revived Pappus's theorems and applied them to stonecutting and perspective drawing. Collaborating with Blaise Pascal, these theorems were elaborated using triangles and circles. However, geometers of the day did not understand these new figures and reacted violently. Projective geometry was forgotten until the beginning of the 19c., when mathematicians such as Plücker, Gauss, and (later) Riemann and Lobachevsky redefined geometry as — *fundamentally* — projective.

Projective geometry is logically prior to Euclid. This raises the "Doris Day question": What was projective geometry before Euclid? Is this question related to that of anamorphosis? Just as this latter

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[22] "Gauss Notation," *Wikipedia*, URL: https://en.wikipedia.org/wiki/Gauss_notation.

[23] Richard Kopley, *Edgar Allan Poe and the Dupin Mysteries* (New York: Palgrave Macmillan, 2008).

[24] Slavoj Žižek, *The Reality of the Virtual* (podcast), Ben Wright, producer. URL: https://www.youtube.com/watch?v=RnTQhIRcrno. See, for more information, "The Reality of the Virtual," *Wikipedia*, https://en.wikipedia.org/wiki/The_Reality_of_the_Virtual.

[25] See Lacan, Seminar VII, 137, in reference to Freud's *Es* in a primordial relation to "the Thing."

question leads us to the uncanny and the metaphoric modality of mythic thought, the former question requires us to abandon the Euclidean templates that have forced the uncanny and mythic thought into representational flatness. A proper geometry of metaphor, in my view, would call on projective geometry to find its true field of action.

This would take us back to the question of idempotency, and the relation of mythic thought to dreams and the unconscious. Here, the figure–ground reversal analogy would immediately take advantage of projective geometry's inclusion of the position of the observer in any observed. A projective line is simultaneously a line and a point lying on a horizon–at–infinity. But, the circularity of the horizon suggest another point *behind* the viewer's position in relation to this line. The toroid implications of this pre-Euclidean world lead directly to the conjunction of two voids (of demand and desire) that would relate to mythic themes such as Prometheus, the localization of family worship at the household hearth (Hestia), and the magical implications of walls, foundations, graves, and public spaces.

Key to this re-geometrization of mythic/metaphoric thought in its ethnological/architectural manifestations depends, radically, on projective geometry, yet curiously projective geometry has been forcibly ejected from architecture's displays of "humanistic geometries."[26] Why the hostility, which seems to couple the generic rejection of Lacan by architecture theorists with the view that "Desargues was present at the birth of mechanism--the world picture upon which experimental science was founded. Desargues was a mechanist at a time when there was no better way to make enemies. The life and work of Desargues can help us understand the birth of mechanism" (Schneider, 2).

Both architecture theory and Lacanian psychoanalysis make little or no use of the founding theorems of projective geometry. What do they miss? My view is that these theorems are graphic embodiments of chiasmus. The theorem of Pappus, for example, allows three consecutive points to connect to counterparts on a line at any distance and any angle on the same plane. The dots must connect in a crisscross fashion: *a* to *b'*, *b* to *a'*; *b* to *c'* and *c* to *b'*; *a* with *c'* then *c* with *a'*. The result is the determination of a third line, no matter how the points are spaced on the two lines. This is akin to a "origami" fold of *space itself*. This in my view is the first occasion of the Theory of Relativity, in its move from a weak to a strong form. In the weak form, light is bent by the gravitational fields that "deform" an otherwise regular space. In the strong form, it is *space itself* that is curved. This radical move returns the question of the viewer's relation to space; space can no longer be regarded as objective in relation to a viewer's subjective observations of it. The viewer and the viewed are *simultaneous* within space, which now implicitly involves its own surveillance. We might say that there is no object that is not self–curved (non-orientable) by its status as "already-always-being-observed" (self–intersecting). In other words, projective geometry carries psychoanalysis over the same bridge it used to carry the mathematical study of projective geometry to quantum physics, where all

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[26] The flagship of architecture's distaste for projective geometry in favor of Euclidean geometry was a Ph.D. written at the Virginia Polytechnic Institute and State University in 1983, which blamed Girard Desargues for starting the Industrial Revolution. Desargues and Blaise Pascal revived the theorems discovered by Pappus of Alexandria in 300 a.d. and showed that projective geometry was logically prior to Euclid. At the time, their work was reviled and misunderstood, but in 19c. projectivity was widely expanded by Gauss, Plucker, Riemann, and others. By, the 1900s it was again forgotten or demeaned as being "non-Euclidean," as if to say that regular coffee is "non-decaf." But, projective geometry was essential to both Quantum Physics or Relativity Theory, so one could say that it survived only by being transmuted. Mark Schneider, "Girard Desargues, the Architectural and Perspective Geometry: A Study in the Rationalization of the Figure," Ph.D. dissertation, the Virginia Polytechnic Institute and State University, December 1983. Schneider specifically cites one committee member, Alberto Pérez-Gómez, for encouraging his study and supplying key materials.

"observeds" are simultaneously objective and subjective and all observers are implicitly constructed by what they observe. The theoretical benefit of including projective geometry as such in the consideration of psychoanalytical self–intersection and non-orientation is evident through the alternative. *No psychoanalysis would be complete without it!*

*Architectural Imagination vs. the Architectural "Imaginary"*

I propose taking the question of the architectural imagination out of the pedagogical context where it is regarded as an unmixed good. Returning the imagination to the psychoanalytical Imaginary has two advantages. The first is to show, in the wake of removal, the void left behind reveals itself as belonging almost entirely to British empiricism. This is the tradition of the reverie and dream; where the conscious mind in waking reality is relaxed enough to give rein to associations that would, in the harsh light of rationality, be rejected. This idea of the imagination is based on the false binary, Imagination–Reason. This is the same binary that fueled Schneider's condemnation of projective geometry as "instrumental" and non-humanistic. Those familiar with architecture's versions of phenomenology will recognize the binary in its deployment to, for example, promote hand–drawing over computer graphics. Citing the Enlightenment as the culprit for the advancement of technology–fueled suppression of imagination has forced simplified ideas about history, the history of thought, and philosophy's basic terms. It has forced architecture theory to "take sides" or, worse, to accept theory as the sole means of defending imagination — an option that has been readily taken up by those who have suggested "doing away with theory" altogether.

The take–it–or–leave–it impasse that has inserted itself into the important issue of the architectural imagination has eclipsed any possibility of seeing the imagination in psychoanalytical terms. The subject is, in contemporary architecture pedagogy, unavoidable "subjective." This, as Lacanians familiar to any degree with concepts such as extimacy, the Other, interpellation, *das Ding*, the Unconscious, or the symptom, would reject this mandate out of hand. Is the Lacanian Imaginary "ready for architecture's 'prime time'?" The answer is, realistically, no; pessimistically, never. Without referencing the Freudian–Lacanian field, there is no Imaginary without a subject that is barred, extimate, and held within the misidentifying impasse of language (in neurosis) or … *worse!* … pushed to the limits of psychosis on behalf of a missing (paternal) signifier. In my view, theory involving the human subject is Lacanian theory. Theory that brackets the subject (philosophy?) exempts itself from serving architecture, art, and literature — in other words, the media of the imaginary — so radically that the question of the imagination would have to be ruled out from the start.

British empiricism carried the Enlightenment cut between subject and object without the necessary critique of the cut that allowed Lacan to re-examine Descartes' claim about the relation of thinking to being. And, although Continental Philosophy, hermeneutics and phenomenology included, continued to examine the cut continuously, architectural phenomenology reverted to British empiricism's radical binary while supplementing it with quotes from Heidegger, Ricœur, and (perversely) Merleau-Ponty. Bluntly put, neither the imagination nor the Imaginary are antithetical to "rationality." Why? —Because rationality has itself been reduced to a binary procedure that does not properly belong to it.

**Instrumental cause**. It is impossible to present the full case here for my contention that architecture theory's misconception of imagination (on behalf of British empiricism) relies on a historical misreading of instrumental cause. Just as Schneider's thesis attributed the Industrial Revolution to Desargues' theorems, architectural phenomenology, in claiming the architectural imaginary for its own, has had to

employ a binary opposition of imagination with instrumental thinking. This extends rationality to the zone of theology, since instrumental cause was stolen from this domain in the first place. It was the cause assigned to the performance of the duties of the Catholic Mass, the transformation of the host. This cause required a effective and "pure" transmission. The priest as agency could contribute or subtract nothing. From A to C, the B of agency had to be silent, invisible, and "circular" in order to effect the transfer from object to subject, particular to universal.

There is no aspect or form of symbolic logic more reviled in architecture theory, more isolated or blamed for the troubles of society and history, than instrumental cause. Associated with the tool, it is given the powers of transformation, not only of material conditions but of the subject who uses it. The tool–user is monomaniacal. His/her intention is focused on optimizing the conditions for using the tool and maximizing the results. The Industrial Revolution, whose aspirations were detailed in Diderot's famous Encyclopedia, extended this instrumental attitude across the globe, using trade, military power, political influence, and religious doctrine to justify the dominance of mechanistic production. Instrumental cause became the root logic of this conversion of multiform subjectivities (cultures, diversities, freedoms) into monoform results of Capitalist production.

No doubt, this production happened and continues to happen, but can it be attributed to instrumental cause? Fundamentally, instrumental cause is a rhetorical construct. Its logic is that of the rhetorical syllogism, the enthymeme. Given that the enthymeme was employed by Homer, its antiquity is established. It is the principle that, to persuade those who are, in general, averse to some idea or proposed action, no logical argument can be effective. The speaker must address the auditor duplicitously. The speaker wants to get the auditor(s) to do something they are opposed to doing, so the speaker, instead of revealing his opposition to their opposition, sides with them and elaborates on the validity of their resistance.

The bi-valent position of the speaker is presented as powerlessness. The speaker is *unable* to change anyone's opinion, so he/she "gives up, publicly." By manifesting agreement with the resisters, the speaker takes the opportunity to lay out the logical particulars of resistance and confirm their interrelations, their formal correctness. However, the speaker converts his/her own duplicity into a double sense, a "positive truth" concealed within the negational resistance. The power of this strategy is based on negation itself. Negation is propositional. It confirms a state of affairs that is introduced, and claimed to be true, only by an "if." "If X is true, *then* it must be rejected (negated)." But, the "if," the subjunctive shadow of doubt, remains within and behind this proof, as a virtual presence. It does not disappear. The "if" flows alongside negation, which exposes itself more and more as the speaker elaborates the rational terms of negation.

The original construct that the auditors have rejected … what is its structure? The negation project of disproof would make it seem to be rational, a "fact." But, this is not the case. The X is itself chiastic, a process rather than a definitive fact or object (ob–*ject*, something "thrown against"). The X is objectified *only thanks to* the process of negation, which confers on it a positive reality by means of a retroactive action. Like an honor bestowed on a posthumous book, the award recognizes the talent of the author only after this talent has created the work. Retroaction confers, on the previously empty space of the enthymeme, a positive content. This content is given life and substance in this subsequent action, which is *made to appear as a RE-action to legitimize itself.* In other words, to negate or oppose something effectively, that something must have a positive objectivity to begin with. In the enthymeme, the retroaction of this logic is gradually exposed. The *more* it is exposed, the *more* the "other side" of the original is revealed. The

speaker is able to con-*vert* the auditors, who turn clockwise in response to the speaker's counter–clockwise exposition. As Homer shows, the generals who tell their troops that they have no good reason not to go back home are the most effective in getting them to stay and fight.

Architectural theorists who condemn instrumental cause should be publicly exposed for (1) having ignored the history of the logic they have appropriated and (2) being unaware of the historical context of the enthymeme used in instrumental cause. The relation between instrumental cause and the enthymeme is topological, projective. One circle creates another, a virtual circle. The auditor moves a "right" by him/herself moving "left." The middle term of the enthymeme's syllogism is silent, self–cancelling. It embodies the conjunction of self–intersection and non-orientation that is the hallmark of projective geometry's 2d surfaces of immersion.

One would think that instrumental cause and the creation of a spatiality that is concurrent with consciousness's "encounter" with the traumatic Real of the Unconscious would be of interest to architectural theorists who self–identify as phenomenologists; but, instead, they have not only abided their ignorance of the basic facts of the case, they have misrepresented the facts they do know. This double fault should cost them the serve and should have resulted in a game, set, and match loss; but, instead, they have proclaimed victory. "Instrumental cause," its origins, intricacies, historical significance, and theological importance have been scrapped in order to give mock coherence to the project of opposing Descartes' *Je pense*.

Instead, architectural phenomenology should have informed itself of, and adopted the spirit of, Lacan's Seminar IX, on *Identification*. In this work, Lacan regards the Cartesian proclamation that thinking and being are co-determinate with an ironic Hegelian argument about the involvement of retroaction in the (enthymemic) rejection of A=A. In fact, what is born out of the first few sessions of this seminar is the confirmation that identity is nothing without retroaction, that positive existence owes to the unexamined (but then silently examined) "if" of negational attempts.

**The lost cause**. Because of architecture theory's general avoidance of topology, to say nothing of Lacanian psychoanalysis, any substantive restoration of a "psychoanalytic theory of imagination" will not likely happen. And, because imagination is considered to be an indefinable but unquestioned good in architecture education, known only through its enigmatic excesses or deplorable lacks, any partial dialog between architecture educators unfamiliar with psychoanalysis or even the issues of imagination that would, in my view, ground it in Vico–Cassirer literature, will not move from the current position of holding the imagination to be an imponderable, ineffable commodity, resisting any analysis or conversion to pedagogical principles. In contrast, nearly every aspect of Lacanian-Feudian psychoanalysis is teachable and learnable. Success is grounded by clinical results rather than statistical analysis based on abstractions that would limit any empirical study. But, worse, the silent alliance architectural phenomenology has maintained with British Empiricism, and the resulting rational–imaginary binary that rules out every instance of automatism that has, since ancient times, figured as a dominant feature of projects, precludes any progress on this front.

I use "lost cause" not to be pessimistic, or to identify with "losers" who are no longer obliged to keep up the fight but may claim theoretical valor/purity. What is "in the lost–and–found" is preserved by being negated. Loss is the same as Lack in Lacanian terms. It is a negation that has allowed for what, in language, cannot be achieved, what Lacan called "bi-univocal concordance": an "Adamic speech" spoken, a Truth, by

which language speaks the speaker, by which the *speaker* of theory is made into a dupe of language. This is Lacan's acceptance — to be a dupe of language. This is the cause we lose, but the effect–iveness we *gain*. This is the automatism of the efficient cause, the effectiveness of the second form of virtuality, the ability to topologize (through cases of self–intersection and non-orientation) what is True in architecture. This is a project of restoration, of undoing damage done by over fifty years of poor reading, poor teaching, and poor architecture. As Lacan, had he been an instructor of architecture, might have predicted, the results would be an "ego architecture," counterpart to "ego psychology." Experts would argue for strengthening the ego: a program apparently employed without humility or reservation by Eisenman, Gehry, Libeskind, Koolhaus, and other "iconic" form-makers. Even the humility performed publicly by architects such as Steven Holl, Peter Zumthor, and Juhani Pallasmaa is in essence a version of ego architecture, dependent on the same "heroics of the form–maker" that centralizes genius as an "imaginative intent" within the psyche.

Such a concept is alien to psychoanalysis. The architect is not a forming father but a passive mother, whose womb wanders from location to location "synesthesiatically." From sense to sense, organ to organ, the womb disavows its role in forming, takes on the suffering of gestation, childbirth, and nurturing of the child–building that has resulted. The architect–mother, like a good Ibsenian, holds the secret of paternity close to her chest. Paternity, ever a matter of doubt, attempts to re-establish itself on the basis of "affiliation" as a ground of, and grounded in, semblance.

To restore imagination to architecture, those who have most intently wish to be seen carrying its flag must be stopped for questioning. This includes almost everyone who has taught architecture in any fashion, without or without drawing on phenomenology. There has been no other means of placing the issue of *ingenium* ("genius" as a translation would be misleading) as something known only through its absence or inexplicable surplus. We (I include myself) should have connected the imagination to the situation of Lacan's L-schema. We should have disconnected it from the Imaginary, which bonds two egos in a "Euclidean space" of normalized expectations and virtualities, and put it firmly in the camp of the Symbolic, the *via sacra* by which the Unconscious will make an attempt to escape in order to reach the *Es*, the spoken form of the S, the subject–just–prior–to–being–barred, $. This autoerotic pre-subjective being is the empty space created by the process of denying its existence at the Mirror Stage. Recovering it will be any "enthymemic project" in that there is no positive means of asserting what does not "exist" but, as Lacan would say, "ex-sists." It exists through resistance, and resistances. It is a negative that, curiously, momentarily suspends the effects of negation. It allies itself to the architecture educator's experience of the "too little" (<) or "too much (>) to create a version of the *poinçon*, ◊, a "relation with." Relating is not just a connection, but a "network of associations," a circu-lation of energy, which, as I have shown, is a double circuit of the palindromic enthymeme.

The "architectural imagi-*nary*" proceeds like Analysis; along the tracks of the L-schema, where the Analyst's strategy, curiously, matches to the < and > of imagination: a lack or surplus, a too late or too early, something under or something over. Between these goal posts, the Unconscious aims to score a goal, which is the goal of the *Es*, the spoken S that holds us all as subjects within its thrall, under its spell, asleep. Paralyzed. With the viewpoint fixed, the world must go over it, and that is the definition of the dream.

*Idempotency: from caption to cut*

Consideration of idempotency begins with the solid evidence of the figure–ground reversal in sleep. The dream must move across the fixed point–of–view of the paralyzed sleeper. At the same time, the dream

performs the remarkably architectural function of insulation/preservation. Shielding the dreamer from external disturbances, idempotent defenses create a fortress of layered counter-measures to reduce incoming stimuli to harmless components of the dream. I have argued elsewhere that these may involve a "palindromic neutralization," which is at this point no more than an analogy. If a sequence, 12345 is matched with 54321, the sum of the combination is held constant at 6. *Something like this merger* must take place in order that accidental sounds and movements can be rendered harmless within the context of a dream. The palindrome could account for the curious accounts of "event dreams," where a sleeper is awakened by a sudden blow and recollects a long, detailed dream where the blow has figured as an element occurring at the *end* of the dream. Given that the disturbance causes the dream in which it figures as a concluding element, some kind of palindromic reversal must be involved.

Palindromics returns us to Planet Torus, where the repetitive spirals of demand (demand is nothing if not repetition) specify an ancillary void of desire. In Lacanian terms, desire is out-sourced to the function of another fiction, the Other (A for *Autre*). This other can be a super–ego agency or any authority capable of interpellating the subject, "calling" the subject and compelling the subject thanks to a void created within the subject. There is no way to respond to the Other's demand to "Enjoy!" The subject continually asks the Other, *Che vuoi?* — What do you (really) want of me?

I see the torus as an idempotency device, with one important deviation from Lacan's employment of this projective surface. In a special variation of the torus, a spindle torus, the central void is replaced by the overlap between the two sides of the torus. In the same way Euler circles overlap to create the void associated with the forced choice, it is useful to see that the torus, a torus with a *spindle*, creates, out of this relation of demand with desire, a geometric representation of the forced choice. This is the void or VEL of the Venn diagram for "neither/nor." The robber's demand, "Your money or your life," leaves the victim *no choice,* although the demand is presented *in the form of a choice*. I emphasize the *form* of demand to connect this situation to the "mark" of a "con" (confidence trick) — the subject who is *held in place* (idempotent) for the duration of the scam.

The form of demand, as it appears in the desire of the Other, is a continuance, an extension. When we model this as a surface, topologically, we require the principles of self–intersection and non-orientation. Self–intersection is the autonomy and self–contained nature of the demand–desire relation. Yet, within this finite "surface," there are infinite means of extension: demand can continue "forever." Lacan defines metonymy as that very means of extension, where one meaning is replaced/displaced by another, on and on. This is the logic of the "dictionary meaning," where each new definition requires a further clarification. Dan Collins has emphasized that this "interpretation by punctuation" (I prefer "interpretation by the caption") must be curtailed in favor of an "interpretation by the cut," which returns the interpretive project to a primary — and primal — division. Lacan after all emphasizes that the signifier is nothing if not a means of articulating a *difference*. One can cut a Möbius band to create an "interior 8," but, more important, the Möbius band is itself the result of a cut, a cut that is rejoined in a non-orienting manner, ⇅, making two edges into one and two sides into the same side (self–intersection). My contention is that idempotency can be defined as a cut that results in this *reduction* of difference into self–intersection, a cut that *preserves difference* in a way that is immune to a metonymic "interpretation by the caption."

It is important to see Lacan's use of projective topology in terms of the two properties of the non-orientable and self–intersecting. This is key to understanding, for example, that the palindrome is both, and that it is a numerical equivalent to a Klein bottle, Möbius band, or Boy's Surface. In the example used about, 12345 and 54321 are mirror versions of each other, a case of non-orientation. When they are shuffled together to produce 1/5, 2/4, 3/3, 4/2, and 5/1, they self–intersect. This allows me to assert that the idempotency of the twinned palindrome pairs, represented here by the constant 6, can be extended theoretically to the "constant surface" of projective 2d manifolds, where one travels forever without reaching a limit or edge. The cut, /, is interesting because it is implicit in the 12345/54321 combination. A palindrome *is* the cut. By means of the cut, a continuum is possible, and this continuum can be manifest as a 2d manifold submersed into 3d, to use geometric parlance. But, the continuum feature allows us or even requires us to extend to the case of metonymy, where the continual replacement/addition of one signifier by another, implicit in S/s, creates an extension of meanings we associate with dictionaries, and with interpretative projects based on continual captioning and re-captioning. Going back to the cut is a style of interpretation that would reveal the / as both self–intersecting and necessarily non-orienting.

What about "real cuts"? — The kind made on human bodies in acts of violence, punishment, or ritual dismemberment? It would seem that we have left the purely theoretical domain for cultural conditions of contingency, various folk practices and cultural beliefs. But, even here we discern the ability to grasp the difference between interpretation by caption and interpretation by the cut. How do orthodox cultures punish a thief? The cut of the hand that was the agency of the thief, because it was what accomplished the crime but also cursed the criminal. The subject with a thieving hand is better off without this autonomous agent of evil–doing, just as the victim may find some satisfaction in knowing that the person who stole his silverware must now find some other less convenient method. The cut in this case has been used to "cut short" the continual addition of new meanings by the metonymical method of captioning. Punishment, like metaphor, is enacted to put an end to a continual supply and new demand for meanings. It is meant to be *meaningful*, rather than a specific meaning. Cultural practices are filled with just such adaptations of the "theoretical" preference for the cut over the caption.

[TO BE CONTINUED]