The Real is a Hole

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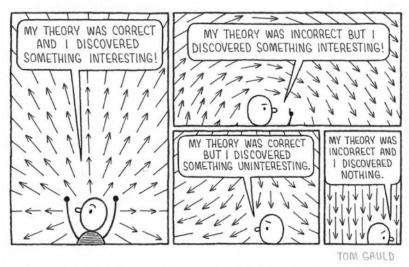


Figure 1. Tom Gauld, *My theory*. Gauld's arrows (correctly) illustrate the dynamics of the Gettier Field, connecting the 111 of Knowledge with the 000 of Science, hinging on the palindromic identity of error (011) and ignorance (100). The vectorial rotation duplicates Giambattista Vico's parallel parsing of the wise man (111), the imprudent savant (000), the astute ignoramus (011), and the fool (100) [*De nostri temporis studiorum ratione*]. Popper's *modus tolens* 'imprudently' negates everything as a test/pretext for truth but at the same time forecloses the one condition for truth, *jouissance*.

The hole that the Real makes in the Symbolic shows that the Symbolic, through a clever arrangement of virtualities, is really only 2-d, that behind and through it is something else, intimate, revelational, and eternal.¹ But, thanks to this 'destructive action' against the surface, we have a geometry which is the rim of the hole, which we are led to regard as the overlap of two 'events', one related to the failure of speech, the other to the failure of Being (aphanisis), two kinds of 'fading away' which, when we try to combine them, produce an unexpected negative result.

Our perception of the Euclidean perspectival world is a clever, culturally guided assembly of experiences occurring at the interaction of stimulæ with surfaces ('skins') of receptors. Thanks to language and other guides, we assemble the conviction that the world is a 3-space manifold, that time is a uni-directional linear sequence. The conversion of 2-d stimulæ conceals its efforts, but the structural procedures are retained, because they must be 'remembered' both genetically and with the maintenance of the 3-d manifold. This memory is a *kenosis*, unconsciously known, accessible only through other interactions with the unconscious and mathematically, through the figurations of the real projective plane.

In ordinary experience, the projective plane manifests itself through its properties of self-intersection and non-orientation, the topological basis of the 'psychosis' that is the 'limit' (as in calculus) of the neurosis of 3-d behavior, whose principle features of ego-ic self and other preserve the structural principle of projectivity in the A, the barred other (bar = the short-circuiting of self-intersection, the two that are really one, and the negational aspect of non-orientation). When self-intersection and non-orientation are

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¹ This is Jorge Luis Borges' celebrated glowing sphere in 'The Aleph', a short story appearing in a collection of the same name. The sphere has many precedents in ethnography, literature, and religion, but its geometry is clarified in Borges example of it as a hole in 3-space that creates a 'beyond' that is timeless and infinite.

knowledge	111
faith	110
resistance	101
ignorance	100
error	011
rumor	010
rationalization	001
science	000

Figure 2. The Gettier Table of binary zero's and one's for Truth, Belief, and Justification. Dan Collins devises, from Edmund Gettier's original essay demonstrating the incapacity of knowledge to be defined as Justified True Belief (JTB), a series of declines from the full claim of 111 to science's (Popperian) suspension of even truth in the modus tolens, the principle requiring any scientific statement to be refutable. The midpoint of ignorance (truth that is not believed or justified) and error (something justifiable and believed but not true) divide the entire field into palindromic halves, pointing to the signifying function of error and signified's relation to ignorance, with resistance and faith key to the structure of the unconscious, 111, that is unknown/unknowable in the everyday and 'psychotic' when experienced.

encountered in ordinary experience, the result is a localization of 'the psychotic' in anomaly, *déjà vu*, paradox, and impossibility. These are the Real, whose literary forms are the double, travel through time, the concentric placement of stories within stories or dreams within dreams, and the contamination of 'reality' by the dream or fiction. Whenever localized psychosis is 'domesticated' by one of these forms, the suppressed (metaphorical) component of any diachronic (metonymic) signifier is extimated as latent structural coherence of a signifying SET governed by the principle of sorites (the 'Chinese Dictionary'). The feature of projective surfaces is that they are uncountable, and this feature is brought into the 'immersive' context of the set as the unary trait. This is the idempotency feature of metaphor, the 'reset button' of the Eternal Return.

The Œdipal feature of non-orientation and self-intersection is clear, through the transgressive thematic features of incest and retroactive correction (the delayed understanding of the prophecy, that Œdipus would kill his father and wed his mother. These hinge on the palindromic relation of ignorance and error. In the Gettier Field defined by Dan Collins,

Truth/Belief/Justification notated as 100 for ignorance and 011 for error palindromically define the bar between the signifier and

signified.² The signifier maintains belief (the Imaginary) and justification (the Symbolic), while the signifier oblates these 'experiential' domains on behalf of the Real (the '1' of Truth in 100). Lacan's Borromeo principle, evident in the Klein-Cayley table, is that any two elements are bonded/constrained by a third (ab/c), thanks to the third's negation.

Just as experience 'prohibits' the Real, Knowledge in 3-space appears as the negative image of the Real, through the so-called 'principle of explosion', *Ex falso sequitur quodlibet*, which Lacan (correctly) applies in Seminar XIV,

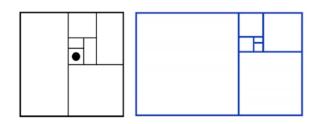


Figure 3. Abraham Moles' definition of esthetic content through the *ex falso* principle of spatial negation (left) is 'corrected' by the (reversible) rectangular reduction in the Golden Rectangle. Fibonacci's number series—1, 1, 2, 3, 5, 8—is 'self-constructing when it is superimposed in the manner of S/s, with a 'jog' allowing the bar to define itself as a -1 to approximate the value of Ø as 1/1, 1/2, 2/3, 3/5, 5/8, etc. The displacement of the numerator over the denominator reveals that the bar of the S/s is also a displacement of -1, thanks to the application of the 'see and say' rule, or 'audio-activity', the Conway Constant whereby 1 = 11 (one 1) and 11 = 21 (two 1's).

² Collins uses pluses and minuses to indicate the values of the JTB field and does not mention the field's relation to the binary number count from zero to seven in the 10-base numbers, but his conclusion makes it possible to see the function of the bar, in \$ and S/s, relevant to psychosis. Dan Collins (2019), 'A short digression on the meaning of knowledge', *Lacunæ* 18: 79–93. Collins makes the essential point that the JTB formula is insufficient and requires a fourth condition, as when the Analyst with a ready explanation for an Analysand's neurosis find that his/her discovery has no effect whatsoever. The missing element is *jouissance*, an enjoyment factor, E, which can only be supplied by transference: 'It don't mean a thing if it ain't got that swing': E(JTB). In various combinations, enjoyment shows how ordinary knowledge (ETB) relates to a 'cure', E(JTB); and how the symptom, J(EB), is the ciphering of the symptom whose solution is EB, the *sinthome* by isolating the master signifier, S₁, from the justification of S₂. For Analysis, it's not enough to know something, you must 'enjoy your belief'. What better definition could there be for 'ordinary psychosis'?

The structure of phantasy. Explosion is the sorites of 'one grain more' and 'one hair less', demonstrating the importance of counting (the point at which the grains of sand or hairs of the head become a pile or bald). Sorites is the paradox that shows that the pile or bald head cannot be determined by counting back to the point where, retroactively, the condition of the pile or baldness 'already existed'. This neutralization of counting is (1) idempotency, mathematically expressible as x + x = x, and (2) the unary trait that, in metaphor, converts meaning multiplicity into meaningfulness by terminating the obsessive ('dictionary-style') pursuit of new signifieds compelled by the Saussurian reading of S/s.

According to Abraham Moles, the esthetic value of works of art is algebraically calculated through a process of reduction, using an algorithm developed by Claude Shannon and Warren Weaver in *A Mathematical Theory of Communication* (1948).³ The space within a box containing a point is divided in half until the point can be located. The number of divisions equals the amount of information required to locate the dot, but it is only the empty set that requires the process to continue. The halved space with the dot terminates the search. Moles' definition of esthetic quantity inadvertently duplicates Shannon and Weaver's search for the most economical way to transmit the human voice over copper wires, namely by reducing the issue of quality to quantity, or 'audio-activity'. Finding what is active, or what activates the knowledge of a communication is, for Lacan, the understanding of how the suppression of a signifier terminates, through the principle of the unary trait (idempotency), the compulsive search for new signifieds—the fatal flaw of Saussure's s/S, corrected by Lacan's inversion (S/s), where retroaction

*	е	а	b	C
е	е	а	b	С
а	а	е	С	b
b	b	С	е	а
С	С	b	а	е

Figure 4. The Klein-Cayley table demonstrates the x+y>z principle of the Borromeo knot, adding a symbol (e) to serve as the bar between S/s or the frame dividing the indicative gesture from the (mimetic) content in the Amos Judd puzzles of Lewis Carroll.

(*Nachträglichkeit*, or *après coup*) installs the unary trait (1 is not counted until its successor appears to indicate it as 'first'—hence 'one is not 1' until it is not 1, that is, until it is *replaced* by 2), which parallels the logic by which the projective figure is 'immersed' into 3-space, making self-intersection and non-orientation evident as paradox.

That sorites is the application of the principle of *ex falso* has been demonstrated inadvertently through the 'Amos Judd' riddles of Lewis Carroll, although it was not until the British mathematician George Spencer-Brown devised a means of graphically converting Carroll's clues into algebraic form. This transformation revealed that an Amos Judd riddle could be easily constructed by splitting assertions into 'predicating' and 'predicated' versions (A_A , B_B , ...), scattering the halves in a random way to produce numbered 'statements' new combinations (A_M , B_N , M_N , etc.) to reveal two 'orphaned' components (an X without an $_X$ and a $_Y$ without a $_Y$), which were not split ($_Y$ = 'unary'). While the 'answer' to the Amos Judd puzzle is nonsense, it is not meaningless. Rather, it is an answer that reveals *pure structure*, in the same way that James Joyce's Stephen Dedalus, in giving his puzzled students the answer to a riddle that seemed to have nothing to do with the original question,

³ Abraham Moles (1968), *Information theory and esthetic perception*, Urbana, IL: University of Illinois.

$$\frac{M}{S'} \bullet \frac{S'}{x} \to M\left(\frac{1}{s''}\right)$$

Figure 5. In one of Lacan's several formulas for metaphor, his aim to 'streamline' the relation between the suppression of M/S' and the soriteslike expression of S'/x points to the role of the unary trait (1) as a means of using emergence to put an end to the obsessive search for new signifieds (s"). When Joyce's Stephen Dedalus gives a ridiculous answer to the puzzle he has just presented to his students, he uses the 'x' as a way to charge S' with the sense of mystery that is the signature of all puzzles. Then, he gives a slightly flaws explanation of the fox as an undertaker rather than fossorial—a burier rather than an excavator mimicking the inversion of S'/S' in Lacan's expression. The riddle, "What is ...? uses M/x as a way to charge the signifying chain with the power of simple inversion, which Joyce uses to show us how the (psychotic) sinthome works.

indicated not a content but a frame, i. e. a structure of the problem.⁴

The X_Y of Carroll's Amos Judd puzzles, the 'fox burying his grandmother beneath a holly bush' in the Nestor episode of *Ulysses*, and the 1 of 1/s" in Lacan's formula for metaphor all point to the issue of structure, which is a 'virtuality of effectiveness' analogous to the immersion of 2-d manifolds within perspectival Euclidean space. The uncountability of the former produces the 'unary' or retroactive counting within the Imaginary+Symbolic of experience, 'thanks to' the absence (= impossibility) of the Real of projective space. Just as the Klein-Cayley table re-asserts the principle of the Borromeo knot (two elements combine to indicate the missing third), the 'uncountability' of the unary trait obliges the symptom, appearing as a set or structure rather than an isolated single instance, to retroactively identify an original act of suppression, a 'traumatic Real' that was the One of the 1', the uncountable replacement that was the 'psychotic prototype' of the Imaginary-Symbolic (neurotic) symptomset.

Foreclosure

In the traditional diagnosis of psychosis, emphasis has been on the role of the paternal signifier. The subject who lacks access to this signifier, or who has not been able to employ it, is said to have 'foreclosed' the Symbolic, specifically the gaps that compel the neurotic to bridge over the inconsistencies and contradictions of the Symbolic with fantasies, *mathemed* as \$\dagger\$a.

Can foreclosure be understood in an alternative way



Figure 6. The trick of the *musca* depicta requires both subtlety and ambiguous placement, as in the case of Petrus Christus' Portrait of a Carthusian with the fly that could be said to inhabit either the mimetic interior contents or the indicative bounding frame. This painterly version of 'ordinary psychosis' points to the Janusian role of the frame as both a divide between inside and outside and a hinge allowing conversion (extimité) of one to the other, another case of the Klein-Cayley condition of a-b/c, but one known since antiquity, famously demonstrated by the Zeuxis/ Parrhasius anecdote.

that 'normalizes' it as a native component already-always present within the Symbolic from the beginning, as the metaphoric suppression action that produces the 'x' (in Lacan's formula for metaphor), above which a 'cloud' of signifiers is held together by an invisible anti-gravity cohesion—analogous to

⁴ The riddle itself contains the answer, from various angles. Joyce has the fox burying its grandmother but foxes are 'fossorial' animals, who dig up buried remains rather than bury them. The riddle also has the cock crowing at 11 a.m. Reversal is also self-reversal, the 'answer' coverts to a question, a *che vuoe?* from the subject, an *Enjoy!* from the Other, or A. The signifier of the Other's ambiguous command, s(A), is not just the structure of Stephen's answer, the answer *is* structure. The presence of psychosis not just within neurosis but at the two opposed positions of center and periphery is the projective geometry of the RSI domains—a perverse 'answer' to the RSI as a 'riddled figure'.



Figure 7. Daphne's idempotency (the fixed laurel, or ever-green) is due to the projective surface she generates simply by wishing to flee (askesis)—myth's first version of the story of 'The appointment in Samarra'. The story has its own suppression function: the 'closet'/Schränk containing the explanatory episode of Apollo humiliating Eros on account of his poor archery skills. In revenge, the god of love fashions arrows, or possibly one arrow with two points (either meets the criteria of a projective line) to inflame Apollo with love but Daphne with hate

magnetic attraction—whose 'floating' creates an atmospheric condition of delay, overlap, *moiré*, and deferred action? Stephen Dedalus's puzzling answer to the riddle⁵ (or, rather, the answer that is more puzzling than the riddle)?

The unhelpful answer is like the *musca depicta* of paintings that depict a fly that cannot be easily determined to be an element of the frame or the contents—either in the 'now' of the spectator or the 'then' of the painter and his/her subject. It is a visually psychotic element that *emerges out of* the nature and conditions of the (neurotic) structure of the 'Euclidean Symbolic'. It is the point where geometrical immersion coincides with the function of the visual frame in painting or, in architecture, the 'Janusian' portal penetrating the wall.

Slavoj Žižek has noted how, in the interruption of the solid wall by a portal, the spandrel stands for the 'useless' space generated as a consequence of other actions. Uselessness suppresses the spandrel in the same way that unanticipated consequences are masked by functional constructions in the process of emergence, which has been biologized by Stephen Jay Gould and Elisabeth Vrba—what a great name for those of us who attempt to explain the city in terms of the Symbolic of language!—as 'exaptation': nature's way of using surplus

production, 'indifferent' to the question of survival at one moment, as key to survival later on. Emergence/exaptation is of course the sorites, and the sorites reveals the central role of the unary trait, which although it cannot itself be counted, makes counting possible.

Architecture's void is this: it is not the hole we imagine to exist if we try to look into a volcano, or down the series of repeated reflections in the barbershop mirrors or the well-dressed Babar's happy elephant kingdom. It is not the corner of Daniel Libeskind's *Jewish Museum* in Berlin, betrayed by the hand-inked sign taped to the wall during a recent construction project, 'This way to the void'. It is not the horrific swamp of Steven King, the enchanted wood of the Brother Grimm, or hidden book in a hidden crypt of Dan Brown. Even less is it the beautiful soul of Hegel's Schiller or, later, phenomenologists enamored of New Age imagery. The void is the *impasse*, the inversion, the crisscross that Freud first uses to describe the alternation between the manifest—to—latent and latent—to—manifest substitutions of dreams

⁵ 'The cock crew / The sky was blue / The bells in heaven / Were striking eleven—Tis time for this good soul to go to heaven' is answered by 'The fox burying his grandmother under a holly bush'. Where the answer seems to have nothing to do with the original question, the reversal of the fox from a fossorial animal (corpse digger-upper) to undertaker points to the pure function of using the signifier as the signified, as in the story of Zeuxis and Parrhasius, This contest between the two painters of Greek antiquity has been misunderstood. Zeuxis's mimesis has violated the fourth wall (representational surface) of painting to attract a bird to fly into the mural, breaking its neck and, in the process, convincing the judge's of the image's 'natural-ness'. It is the classic motif of the 'fruit placed on the picture frame' or, as in the case of Carlo Crivelli, Willem van Alst, and other painters employing the *musca depicta*, the fly whose location, either inside the memetic contents of the frame or outside, on the physical canvas, cannot be easily determined. This ambiguity is the 'foreclosure' of the Symbolic that, analogous to the foreclosure of the paternal signifier by the psychotic, is based on the (neurotic) structure of the Symbolic itself, and thus is a visual paradigm for the idea of 'ordinary psychosis'.

and slips of the tongue.⁶ Freud: 'In regard to the connection between the latent and the manifest dream, condensation results also in no simple relation being left between the elements in the one and the other. A manifest element may correspond simultaneously to several latent ones, and, contrariwise, a latent element may play a part in several manifest ones—there is, as it were, a criss-cross [*Verschränkung*] relationship'.⁷

Architecture's void must be asserted in its Lacanian form: related to both anamorphosis, the Baroque preoccupation with elaboration, and to the question with the retroactive answer to the question in Seminar VII, 'What was anamorphosis before it was anamorphosis?' All of these links are themselves linked to the 'answer in the closet (*Schränk*)' that is the story of Apollo and Daphne (Fig. 5), Lacan's manifesto on psychoanalysis's debt to projective geometry. The surface, the fourth wall, the crossing, the frame/framed, the in-and-out fly, the *closet, the psychotic in the closet of neurosis*.

⁶ See John Shannon Hendrix (2019), 'The dream work of Sigmund Freud', DOCS@RWU: Architecture, Art, and Historic Preservation Faculty Publications. URL: https://docs.rwu.edu/cgi/viewcontent.cgi? article=1042&context=saahp_fp (20). Freud apparently replaced his original use of the word *Verschränken*, Englished by Strachey to 'crisscross' (to describe the flip between condensation of terms into one and the explosion of signifiers from one), into more abstract and ambiguous ones. *Tant pis!*

Psychological Works of Sigmund Freud 15: 173. On page 125, Freud writes: '[A] glance of comparison shows us that the relation between the manifest and latent elements is no simple one; it is far from being the case that one manifest element always takes the place of one latent one. It is rather that there is a group-relation between the two layers, within which one manifest element can replace several latent ones or one latent element can be replaced by several manifest ones'. First, how does Strachey come to translate *Verschränken* as 'criss-cross'; second, how does the German word for closet (*Schränk*) get to be associated with 'entanglement', the not-so-criss-crossy definition? And, why does Freud never use the word again? *Schränk* is also associated with boxes, limits, and cabinets. 'Closeting' is an act of containment and concealing. Possibly, in the context of latency and manifestation, Freud anticipates his own idea of parapraxis, where suppression and the resulting manifestation of signifiers within a 'timeless' matrix, where every connection is held together by an absent signifier. For certain, this anticipates Lacan's more criss-crossy formula for metaphor, where the fulcrum of the cross, •, is also the multiplication sign that allows him to 'simplify' and 'streamline' the vertical displacement of a name, word, or thing, leading to the *lateral* displacement of the suppressed term into a domain, co-terminus with a spatial region, held in place by a rulebook that has been 'hidden in a closet'.