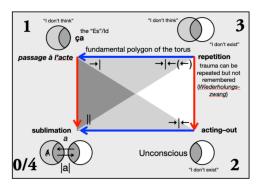
The Isomeric Topology of the Lacanian Other

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ABSTRACT. Lacanian-Freudian psychoanalysis is most original and inventive when it involves the negation, suspension, or reverse-folding of time. In the *après coup* of language, the timelessness of the unary trait, or the forward-backward movement of the death drive, time is not just triplistic (depending on the emergence of a collective unconscious) but as solid as space itself, constituting itself within the depthS of space's solitary, unary sagittal dimension: the vector of the observer.

The long list of "timeless times" in psychoanalysis stretches back from jokes and anxiety to the primordial Uncanny, where Ernst Jentsch's two "atoms" are really two sides of the same coin: the living person whose flight from fear aims directly at its nemesis (as in the case of Daphne pursued by Apollo); or the dead subject who has "forgotten how to die" in the interval Lacan called "between the two deaths" (literal and Symbolic). In all of these we see the dialectical structure of instrumental convergence, embedded within every impulse, closing it down with a structural combination of unnoticed secondary features, as in the story of Œdipus.

Lacan was thus justified in his praise of Edmund Bergler's 1949 book, «La névrose de base». Bergler asserted that the proper neurotic used aggression in order to find humiliation, thanks to the fact that the legacy of the mOther's never-fully-acknowledged but fictionally reconstructed neglect. Where Freud modeled this through the *fort-da* example, Lacan saw an equally contronymic opportunity to understand masochism in topological terms. This could be undertaken at the level of the signifier by seeing how metonymy folded into two "vectors," one aimed at the *énonciation*, the act of language, the other at the inter-subjective content, *énoncé*. At the level of metonymy, these vectors joined with a special scission that was simultaneously a seal: the katagraphic cut.

Bergler's humiliation-seeking neurotic is the very model of the hero described by Irwin Cook ("'Active" and 'Passive' Heroics in the 'Odyssey," 1999). The hero seeks humiliation, but not just anywhere. I argue that the logic and logistics of heroes can be found wherever the hero is caught within a suspension or reversal of time: the *katabasis* or descent into Hades; the contest; the labor or puzzle. These "interior 8" conditions are essentially topological, but to see the relation to the "instrumental convergence" where, in every intention, an opposite force is embedded from the start, the theorist must regard not the "immersed" (visualized) form but the true topological Real, described by what is called the "fundamental polygon."

WHAT IS ISOMERIC? This term describes the zig-zag pottery of many ancient cultures but also is the point designating balance in the system of humors, where in all cases except melancholy, health is defined in terms of binaries. The melancholic (Lacan's hysteric) is "infected" by the unary trait, independent of scale (even small amounts are "toxic").

WHAT IS TOPOLOGY? Contrary to many if not most Lacanians' belief that topology is the affine (rubber-sheet) geometry that begins with Euler's Königsburg Bridge Problem, Lacan's topology is actually based on projective geometry, discovered by Pappus of Alexandria in 300 c.e. and re-configured by Girard Desargues and Blaise Pascal in the 17c. It is a 2-d geometry of the Real Projective Plane.¹

WHY TOPOLOGY? Jacques Lacan was without a doubt the most "visual thinker" in the history of psychoanalysis, but his visuality was developed through projective geometry as a means of conceiving the Real as Structure. This for Lacan was the truth of psychoanalysis, a message that would always arrive backwards, beneath the agency of discourse. It was "formalized" by the objet petit a, which could be theorized only through the means of its resistance to being "domesticated" by the Symbolic. Lacan correctly designated the foundations of his topology: the theorems of Pappus of Alexandria, reworked by Girard Desargues and Blaise Pascal. Projective forms cannot be seen, but we can use their "immersions" into 3-space as long as we count the immersions as deployments of fantasy.

Topology, particularly through the device of the "fundamental polygon," a graphic rectangle showing the relations of vectors that connect all points on the projective plane smoothly but, if "submersed" into the 3-space of Euclid, would show cuts, twists, and folds, is inherently divergent and convergent: non-orientable but self-enclosing. In the language of AI, instrumental convergence is the structuring of secondary features inherent in any movement or thought to produce an equal and opposite result. Contrary to the famous principles of computing asserted by Nick Bostrum, the "father of cybernetics" Norbert Wiener asserted that both human and machinic thought tended towards a kind of suicide, a point picked up by Aaron Schuster in *The Trouble with Pleasure*. Piling complexity on top of complexity in the pursuit of faster, better "thinking," machines and humans build in their own burn-out. In at least one classic modern case, Stanley Kubrick's *2001: A Space Odyssey*, instrumental convergence was used to effect a "second program" superior to the first literal plan of the human designers. In ethnology, however, instrumental convergence is the rule, not the exception. *Œdipus Rex, Hamlet*, and Kaffka's *The*

¹ Apparently this misconception stems from the Jeanne Lafont's *The Ordinary Topology of Jacques Lacan*, trans. by Jack W. Stone and endorsed without reservation by Elie Ragland, although Lacan nowhere references the Bridges of Königsburg. Followers have embellished Lafont's contention without consulting sources dealing with the history of geometry or, for that matter, Lacan's own (correct) attribution of topology as established by the foundational projective geometry theorems discovered by Pappus of Alexandria, around 300 c.e., rediscovered and extended by Girard Desargues and Blaise Pascal in the 17c. Their work was forgotten in its own time but enthusiastically revived by mathematicians such as Möbius, Klein, Plücker, and Riemann. Projective geometry is not about a hypothetical "fourth dimension" of space but instead the "real projective plane," which has no space for an observer-observed dimension.

Castle, to say nothing of *King Lear* or *Romeo and Juliet* would not work without it. No joke can be told without the symmetrical difference between the introduction and the punch-line.

WHY INSTRUMENTAL CONVERGENCE? In his first Seminar (*Freud's Papers on Technique*), Lacan runs across a reference to time travel in Norbert Wiener's *Cybernetics*, which had come out in 1953. There were two aspects of Wiener's example that Lacan must have noticed: (1) the "laminar" positioning of two parallel but opposite flows and (2) the uncanniness of any communication between the two levels, which Wiener nonetheless proposed. The traveler moving in reverse time would see the effect ("trace") of what was, for the normal time traveler, the result of a cause the reverse-traveler had yet to encounter. This related to what Wiener had written about entropy: that some actions can be reversed without noticing (the planets in the solar system), but others (crashing waves, etc.) would appear as impossible. The reverse time-traveler would see the effect before the cause and would, in relation to the first time traveler, have the status of a prophet.

What is a scientist, we might ask, but a prophet with good reasons; a prophet who sees the "actual" results from a non-entropic point of view? Lacan was perhaps attracted to the proximity of this example to cases in psychoanalysis where time is negated, suspended, folded, or reversed. In his "linguistic turn," Lacan emphasized the role of the *après coup*, the requirement that the beginning of a sentence cannot be known until the end arrives to retroactively revise it. What has the sentence meant before that happens? Metonymy, the generic form of the signifying chain, offers two logics. The first relates in a causal-grammatical way to the next signifier in the chain. The second, however, refers to a synchronous suppressed content. Metaphorization is foundational in the construction of reality. What is this suppressed content? It is the break from the bi-univocal concordance between word and thing that holds other (animal) forms of semiotics in line with "the real world." Once this is broken, and metonymy is the way it is broken, the "dog can go meow and the cat can go bow-wow."

In his explanation of *Zweckmäßighkeit*, Ernst Cassirer explained that purposiveness presupposed and in effect generated an equal but opposed force. It called into being a world resisting, in an uncannily specific way, desire. The question is, who will win? Is it the intention, the desire that, in order to be articulated, had to imagine (somewhat paranoiacally) an external pre-existing resistance, or will this imagined resistance, thanks to its invisible comprehensive order defeat every challenge? Does purposiveness not just call into being its own worst enemy but also endow it with uncanny super-powers?

Instrumental convergence is about the structural means by which Cassirer's purposiveness collapses according to its own imagined opposition. Where intention is contingent and impulsive, resistance is "globalized," indefinite, structural. It is the invisible foe, the super-surveillant all-knowing enemy. This is the foe that Nathanael constructs in "The Sandman," the windmill army hallucinated by Don Quixote. In psychoanalysis it is not simply the driving force behind paranoia and hysteria, but the logic that pervades every case where material effort is countered by

structural opposition, where not only effort but the time constructed to allow for a cause to have an effect is itself suspended or, indeed, reversed.

Lacan realizes that this opposition is not just present *in* language, it is present *because of* language and without this opposition there would be no human language. The retroactive revisionism, the metaphoric suppression presupposed but then enacted by metonymy, and the resulting opposition of the sense of free random choice with the structures this choice itself installed is language's metaphoric-metonymic bi-fold. Without it there would be no cultural evolution, no religion, no literary imagination. All presuppose instrumental convergence at the same time they struggle against it.

Wiener's temporal model seems to fit everywhere psychoanalysis involves time dysfunction:

aprés coup (language)
trauma
jokes
premonition
transience (Freud)
prophecy/dread
dreams
symptom
the unconscious
unary trait
the uncanny
aggression/humiliation
déjà vu
exaptation/emergence

This is not a list of a thirteen topics, the depth and breadth of each item on this list covers the full range of the psychoanalytic subject! What is more, the theme of instrumental convergence allows "mix-and-match" comparisons of items and groups of items. Wherever there is time dysfunction, there is the operative structure of antagonism, suppressed or subliminal on one side, manifest and repetitive on the other. In other words, this is nothing short of the "fundamental polygon" of the torus, which most Lacanians declare as dead by 1962. If that is the case, then psychoanalysts should consider resurrecting the zombie-torus as a Return of the Real for their science as a whole and, in the twilight of reconciliation with topology, restore the clinic to culture, as Lacan and Freud never ceased to do.