Ethnotopology

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ABSTRACT. Between Lacan's "pre-topological" period and his formal declaration of commitment to topology in 1961, there was a decisive event that shifted his conception of topology, from a primarily mathematical phenomenon to an ethnological one. This was Seminar VII, *The Ethics of Psychoanalysis* (1959–1960). In a decisive session focused on architecture, Lacan described the Baroque as a "surface of pain" and gave, as a mythical correlate, the story of Apollo's pursuit of the nymph Daphne. Unable to flee the amorous god's advances, the nymph froze in place; her compensation was the immortality of the ever-green laurel. Although Lacan did not present the back-story, his geometry was projective and correct. Daphne was trapped "as soon as she thought to flee." Ethnotopology takes this as a paradigm of how thinking of the first humans embeds a latent structure, which shapes it inversively and re-enacts in every telling.

A **New Lacanian Topology** will not be produced by competent mathematicians. It will be hobbled together by amateurs who carry out *ersatz* conjectures based on the speculative wager, that topology *begins with ethnology*. This is an intentionally erratic theory about the metaphoric structure of "mythic mentality," initiated by the subject-as-signifier in relation to the ~~Other~~, a hysterical sublimation of a traumatic Real that resurfaces in signifying chains. This ethnological beginning reverberates through successive periods of development of thought, from mythic to representational ("heroic") thought, to the conceptual thinking of modernity.[1]

From Adjacency to Concentricity

Ethnological topology involves: (1) parapraxis, (2) orthogonality, and (3) inversion. Out of these primary devices, a series of axioms emerge that are subject to formalization in relation to the independent principles of projective and inversive geometries. In particular, number theory in relation to irrational numbers (which can be represented as ratios) presents a fourth theoretical source. The primary drive behind ethnological topology is

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[1] Only two theories of metaphor involve suppression and parapraxis. Lacan, as is well documented, disengaged from an analogy-interpretation theory of metaphor and showed it to involve suppression and the unconscious. Before Lacan, Giambattista Vico had articulated (1725/1744) metaphor as the basis of cultural evolution. For both thinkers, metaphor is primary and generative, not interpretive or secondary. Giambattista Vico, *The New Science of Giambattista Vico*, trans. Max Harold Fisch and Thomas Goddard Bergin (Ithaca: Cornell University, 1948).

instrumental convergence: the apparent determination arising from conditions of apparent randomness, the motivating force behind divination in the first societies and the basis of subsequent (secularized) thinking, terminating in science and mathematics.[2] In folklore, ritual, and other media, this is the theme of the fatalistic conclusion, whose paradigm exemplar is the story of Œdipus, the self-cursed hero, whose empirical experience entails metonymic chains but whose metaphoric sublation/discovery structure is "vertical" and "orthogonal."

The discovery of topology within culture focuses on the question of human origins: the decisive "moment" when, in Lacan's linguistic terms, when humans replaced bi-univocal concordance with non-bi-univocal concordance — a sudden shift from 1:1 signification to a condition of radical ambiguity. Only one other thinker, Giambattista Vico, has theorized this shift in the name of metaphor. Vico's suppression/expression model is nearly identical to Lacan's.

Popular culture, from myth onward, is unaware of its metaphoric complicity and thus a good "naïve informant." The classic "unreliable narrator," unaware of the critical elements he/she has experienced, nonetheless preserves them in a distorted (but coded) manner. With adequate translation devices, the topologies preserved by the unreliable narrator can be exposed for study. Lacan's discovery of paralysis synonymous with the desire to flee (*askesis*) allows us to describe, with great precision, the trope that will inform fiction from myth to modernity. When Poe writes "Masque of the Red Death," the threat is relocated into the midst of the very castle that had been constructed to lock out the plague. In the older story of "Appointment in Samarra," the servant fleeing the devil she saw in the market-place reliably encounters, *with equal efficiency and precision*, her fear in that very destination. *Askesis*, the desire for sanctuary, must thus be considered as a contronym that negates the desired effects of a change of position: ⇆. This is the same non-orientable logic Eros used to fashion arrow(s) to inflame Apollo with love and Daphne with hate, simultaneously. As soon as movement initiates a change of location, it simultaneously activates a change of orientation (from danger to safety), converting sanctuary into its opposite, refuge to prison.[3]

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[2] Instrumental convergence is made evident through a standard geometric description of the torus. In what is known as the "fundamental polygon," the 2-d torus is a combination of centrifugal and centripetal forces springing from repetition and converging on sublation. Instead of folding the sides of a plane into a round tube, the 2-d torus is the relation of two voids that is structured by Möbius-shaped cuts.

[3] The geometry of this double twist is reproduced in the famous "belt trick" of the physicist Paul Dirac, who demonstrated the mysterious ½-spin of the charge of the electron (which seems to require a 4π rotation to complete a full cycle). A belt twisted once cannot be untwisted, but twisted twice (4π), it can be returned to an untwisted state as long as the ends maintain the same orientation. Noah Miller, "Dirac's Belt Trick, Topology, and Spin ½ Particles," *3Blue1Brown*; https://www.youtube.com/watch?v=ACZC_XEyg9U&t=2894s, accessed August 4, 2024. The relation of the Belt Trick to parallax conditions can be found in the Ames Window or Hollow Mask illusions.

The "fictional truth" of ethnology is topological, and the most useful mode of this topology is the inversive geometry by which position and orientation, which appear to be orthogonal and independent, are in fact linked at a subliminal level, giving rise to "instrumental convergence": the operations of fate. These are the *topoi*, important for their effectiveness and durability. Characters, plots, settings, and the other variables of fiction may change. A *topos* is able to survive translation from a religious to a secular context. They key is structure, which is why it is necessary to acknowledge the work of Fraser, Harrison, Levy, Ragland, and others we could call the first true structuralists, as foundational.

Vico characterized instrumental convergence in terms of the Stoic's insistence on determinism, which in fact is dependent on the Epicurian's opposite insistence on the functions of chance. Vico's scale was cultural rather than individual. He formulated an "ideal eternal history" that guided all cultures through three mentalities: mythic, representational, and conceptual — each implicit within the other, although each stage is ignorant of the others' logics. The ideal eternal history was Vico's "Real," which at the scale of culture used the same topological inversive logic as the Œdipus story, thanks to the division between a "horizontal" metonymy operating orthogonally from a metaphoric logic of convergence.

Our argument is that psychoanalysts wishing to engage with Lacan's topological legacy should turn to ethnology rather than pure mathematics. Topology is "always-already" present within the structure of ethnographic production. Ethnotopology will not escape mathematics entirely, but its primacy means that, before the conceptualization of mathematics was possible, its topology was already present. This is why Vico's theory of myth conforms with myth itself.[4] Conformity itself becomes the scientific means of corroboration, which takes place as theory moves from abstraction to "naïve manifestation" (the creation of *topoi* by cultures unable to form abstract concepts).

Cyclopean Imagination

A good topology of the *topoi* of inversion would work even if theory returned to what Vico called the foundational plane of the "imaginative universal," a purely naïve level of apperception undiluted by rational consideration. This was the "cyclopean" stage, preserved for modernity by Odysseus's encounter with the Cylops in *The Odyssey*. From the point of view of the "modern" Greeks who expect the Cyclops to behave like polite hosts, the crew discover that *hostes* is a fundamental contronym, and that its "orthogonal value," its *topos*, involves radical hostility. The structural feature of this is the verticality imposed

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[4] Vico argued that there was a "scholarly universal" corresponding to the "imaginative universal" of myth. In Lacanian terms, this is about critical theory's necessary relation to *jouissance*. In Lacan's formula for metaphor, this is indicated by the s″ in the expression M(1/s″).

onto the horizontal principle of free travel, and the imprisonment of the Greeks as counterpart to Daphne's paralysis.

Cyclopean cultures forbade any relocation of the hearth that was the point of exchange between the *manes*, the ancestral dead, and the living who attended its flame. Seeming to know in advance that any move would involve a simultaneous change of orientation. Orientation had to be maintained at all costs — a cyclopean principle evident in the conflation of astronomy with astrology and the etymological relation of *de sideris* with desire.

However, the necessity for exogamy and the need to respond to environmental changes required defection, which had to be disguised. To escape the *manes'* panoptical censure, marriage had to be disguised as abduction, rape; the bride had to demonstrate her passivity, the family had to feign resistance. For unavoidable changes of location, the soil of the hearth, imagined to contain the spirits of the ancestral dead, had to be carefully packaged and transported so that the new site would replicate the orientation of the original. In the case of marriage, the *manes* were conceived as having an outside view; for relocation, an inside view. Outside/inside what? Outside/inside the *stage* of the Symbolic, *insulated* from the "auditorium" by a topological proscenium arch, the tool of orthography.

X **Y**

X **Y**

katagraphic mark

2π = 1π

circuit completion = 4π (720º)

X

2π — the cut requires an orthogonal completion

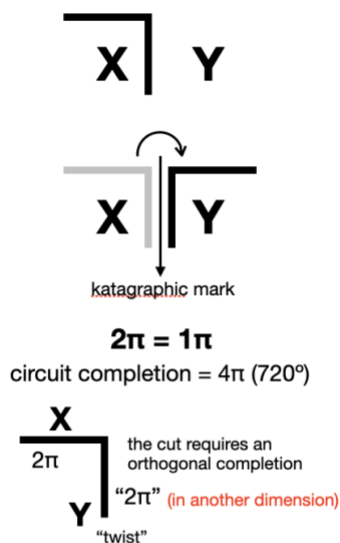**Y** — "2π" (in another dimension)

"twist"

Figure 1. On a spherical drawing surface, a mark equally distinguishes the spaces that appear to lie on either side of it. This topological ambiguity leaves a gap/surplus that defines the *katagraphic* cut as a fundamentally "orthographic" distinction that can be materialized in cultural presentations as ascent/descent.

Tests of these correlations are almost always made through samples taken at different periods. The Cyclops Episode in *The Odyssey* is, for example, told from the historically "posterior," Greek point of view. Odysseus is the unreliable narrator unaware of the real reasons for his imprisonment. Nonetheless, the "tell" of the story appears when the blinded cyclops tries to yell for help from his neighbors, and uses the name Odysseus gave him: "Nohbdy." The pronoun is understandable to the Greeks but not to the injured Cyclops, who regards it as a proper name without any functionality as a pronoun. The Greeks are telling the story, so the Homeric joke is that the other cyclopes *do* understand the more abstract function of the pronoun, but it is more be the case that the cyclopes in general do not interfere with their neighbors on any account. The cyclopean mentality, unable to conceptualize, could not comprehend the principle of binary opposition that would make pronouns work. The negative had a value equal to the positive and was its literal adversary. Cultures invoked names to gain magical control. Nohbdy, like Night,

invoked an unfathomable depth, not a ready substitution indicating a binary negation.

The structure of this name *topos* is the same as the "Injunction of Popilius," which Lacan cited in Seminar XII and elsewhere. A distinction is made between two elements (X and Y in Figure 1), but the underlying form of the surface on which this distinction is made is spherical, so it is indeterminable whether X is enclosed or enclosing. A "flip" of the mark is equally true, Y_X to X_Y. Between the two possibilities there is a small, "vertical" gap, an *objet a* in the sense that it is both a lack and surplus in relation to the mark's *construction*. Retroactively, this gap redefines the mark ("katagraphic"), able to make "two kinds of cut simultaneously." One turn of this cut completes a circuit (2π) in the plane of metonymy, another that accomplishes a half-cut (π) in an orthogonal space (π). The two cuts accomplish a 4π "space of rotation" where the center is equivalent to the outer circumference and each point on the rotational sphere is equivalent to its antipode.

The sphere of rotation shows why Freud's sequence of stimulation, evaluation, and action (φ-ψ-ω) involves *two planes* of *simultaneous* rotation, each independent (orthogonal) from the other, so that what is enacted at one level is effectively accomplished at another. Daphne's non-orientation to Apollo's love, the desire to flee, accomplished, at an independent (orthogonal) level, paralysis (~~location~~); but this also guaranteed her immortality. Apollo, in the position to know what this effectiveness meant, appropriately honored the nymph by using laurel branches to decorate the brows of other "immortals," the champions of the Olympic Games.
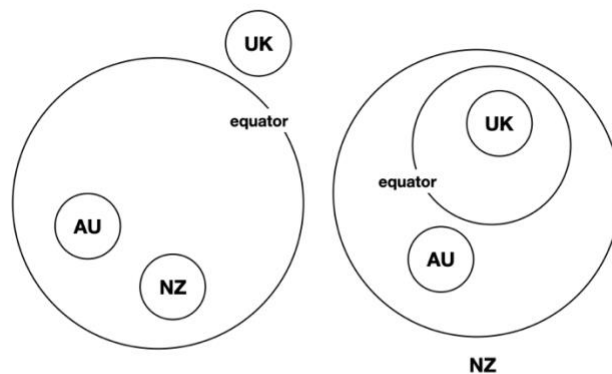

Figure 2. In the final pages of *Laws of Form*, George Spencer-Brown shows how drawing on a spherical surface demonstrates the theorem ○ ○=◎. Adjacency is equivalent to concentricity, the key to the structure of retroaction (*Nachträglichkeit*).

Ethnotopology does not require the conscious intentions of authors. Characters of fictions are equally unaware of its logic. Orthography is a principle of an unconscious initiated by suppression and "relieved" by mimesis or acting-out — either of which instantiate a primitive expressive level, a *Vorstellungs Repräsentanz*, effective in its original

context of production, non-orientable and self-intersecting from the perspective of (conceptual) theory.[5]

Summary

The inversion circle (Lacan's *extimité*) is equivalent to the "reversed predication" of a division made on a spherical surface, which produces a gap that is simultaneously a surplus and a lack. Lacan makes the same demonstration with a toroidal surface, producing the axiom, ○ ○ = ◎.[6] Spencer-Brown makes the same observation in his demonstration of the mark made on a spherical drawing plane. This serves us as a Rosetta Stone for ethnotopology (Figure 2). The gap between X(Y) and Y(X)[7] is orthogonal, and, like Odysseus's (unreliable/naïve) invention of "Nobdy," an independent dimension is created that is (1) effective in the medium of its creation and (2) interpretable in the discourse of theory.

   The shortcomings of a purely mathematical approach to Lacan's topology is evident. Some mathematics calls for more mathematics, an extension that should be undertaken only by a competent mathematician who, after considerable labors, will be left to theorize about mathematics but not psychoanalysis. The ethnotopological approach, however, acknowledges what is obvious in the sequence of production. If topology were not native to the production of signifiers *throughout all stages of cultural development*, it would not be worth considering. If however it is coterminal and complicit with the formations of speech, it must be regarded as equally primary as speech itself, as humans evolve metaphor in contradistinction from 1:1 symbolic systems. Speech = Babel = babble (*lalangue*). *Lalangue*

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[5] It is possible to think of metaphor in terms of Freud's energetics-schema, where the stimulus of perceptual encounters, φ, are *misconstrued*, ψ, in a non-orientable way, so that an instrumental convergence, ω, contracts at a point antipodal to the initial φ. Though opposite, this point is coincident: the completion of the (4π) circuit and thus a 2π "balance of payments" that is simultaneously a 2π conservation of energy.

[6] Lacan draws his marks on a torus in Seminar XIII, while Spencer-Brown draws on sphere at the end of his *Laws of Form*. Lacan proves equivalency, but Spencer-Brown notes that his mark, ⌐ , is actually, from the beginning, a composite, of a "horizontal" principle of crossing and a "vertical" principle of calling, combining the travel surface with a vocative function while preserving the orthographical relation of the two in the right angle of the mark. Orthography requires that the 2-d space of topology accommodate a principle of access, which in literal terms would require a third dimension. Instead, orthography is a parallax principle embedded at the level of the surface, an impossible-Real interior, which elsewhere I have labelled the "Janusian observer," the look-out point of the Ⱥ, Lacan's barred Other.

[7] An alternative transcription of Spencer-Brown's notation, X_Y/Y_X, reveals an affiliation with the condition of symmetrical difference, which Lacan graphically inserts at the lower left corner of the fundamental polygon of the torus in Seminar XIV. There, the vertical gap corresponds to the $-\varphi$, a sign not of castration but of castration *as a sign* (symbolic castration). The self-reference of a "sign of a sign of itself as a sign" refers us back to the meaning of the Homeric "Nohbdy." While the cyclopes did not understand hospitality and thus did not help Polyphemus out of disregard, the Greeks did not understand the "depth" of the invocatory name for cyclopean culture and relied on the abstraction of pronouns instead. In the symmetrical difference of X_Y and Y_X, the disconnect is an *objet a* of the non-orientation of self-intersection — what is clearly evident in the Cyclops Episode.

is spoken by whoever happens to be a "stranger in a strange land," just as Freud saw "Signorelli" to be a sign of the "sir" (*Herr*) and thus related to Herzegovina and its geographical neighbors. Bosnia could then shift back to a name, the forgotten name, and proceed, having changed orientation along with position, until the journey extended (virtually) to the small town in the Upper Adige where a former patient — like the *Turks* — feared the loss of sex more than death and took his own life to prove the point.

All metaphor, in this engagement of the simultaneous change of orientation with respect to position, is parapraxis.[8] Because this is true of mythic thought as well as conceptual thought, it is the *topos* that employs a "scholarly universal" to discover Vico's "imaginative universal," to the benefit of the theorist who, like Freud, forgets something whilst "on vacation." We continually thread the spiral ramp of Babel, only half-expecting a vertical/orthogonal conclusion, a lapidary Δ encased in *jouissance*, to conclude our journey, even if this journey is only a thought we have while gazing into a well.[9] Verticality as a mechanism of orthogonality, then of ethnotopology, is evident already in Frost's poem:

> Others taunt me with having knelt at well-curbs
> Always wrong to the light, so never seeing
> Deeper down in the well than where the water
> Gives me back in a shining surface picture
> Me myself in the summer heaven godlike
> Looking out of a wreath of fern and cloud puffs.
> *Once*, when trying with chin against a well-curb,
> I discerned, as I thought, beyond the picture,
> Through the picture, a something white, uncertain,
> Something more of the depths—and then I lost it.
> Water came to rebuke the too clear water.
> One drop fell from a fern, and lo, a ripple
> Shook whatever it was lay there at bottom,
> Blurred it, blotted it out. What was that whiteness?
> Truth? A pebble of quartz? For once, then, something.[10]

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[8] The reference point is Sigmund Freud, *The Psychopathology of Everyday Life*, Volume VI of *The Complete Psychological Works of Sigmund Freud*, 209–210.

[9] This reference is in homage to Dan Collins perceptive essay on Frost's poem, "Lacan with Frost," *Canadian Review of American Studies* 51, Number 1 (Spring 2021): 32–43. The original poem is a virtual restatement of ○ ○ = ◎, which Collins duplicates in his analytical drawings.

[10] Robert Frost, "For Once, Then, Something." *Robert Frost Reader* (New York: Henry Holt and Co., 2002), 106–7.