

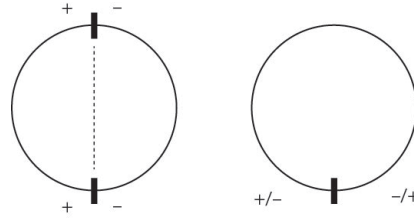
CHAIN OF FOOLS: FRACTALS AND THE FOLLY OF REVERSED PREDICATION

The first business in investigating any topic is to see what has been said before; what has been the limitation of this heritage; and what may limit any future view. With this in mind, the critical question becomes: are the limits "structural" (i.e. based on preconceptions that are misapplied), "inherent" (i.e. the subject is tied up with other key "unknowns"), or simply empirical (i.e. we just haven't thought hard enough on the subject). Here, the survey of the past is limited to a skip-through. What follows is more of a chain-of-consciousness ramble from one topic to the next, whose steps will not always be intuitive to the reader. They are based on the merger of two ideas: Vladimir Nabokov's plan for an index based on "word golf," which explains itself (the results can be viewed in his novel, *Pale Fire*); and Jacques Lacan's idea that the letter always reaches its destination, although in reversed form. Both methodologies are ways of seeing ideas as actions rather than positions; both presume some knowledge and respect for the Medieval concept of the *ars topica*, an arrangement of mental places designed to allow the speaker-rhetorician a near-infinite playlist of notes to support marathon speeches without reference to a written text.

There will be those who find this kind of development] frustrating and insupportable. Others might sympathize with the method but lose their step at some part of the process. With Lacan's "letter" idea, the long pass is made to the reader, who is the real destination. The form of its arrival is unpredictable, as it is based on the receiver. Nabokov is optimistic that this will be a good result. Thought is more atmospheric than determinative. One could say that the starting point, "fractals," is not just sympathetic with these views, it is actually the mathematical description of them. When self-reference creates the barber-shop mirror effect, vertigo ensues, and some are willing to leave this effect as an effect. Others, like Alfred Hitchcock, pick up the stone to see what's beneath. The depths of the mirrors-in-mirrors is not just infinite space. it's a loss of underpinnings that looks for a more solid ground. This is the happy ending of the fractal: that there is something rather than nothing; or, rather, that nothing is the human place *par excellence*.

FRACTALS AND GEOGRAPHY. Possibly the first port to visit on the fractals cruise is that presented by the geographical problem of how to accurately measure coastlines. This issue, introduced some time in the 1960s, noted that the length of a coastline was dependent on the degree by which irregular shapes were reduced to simpler ones, enabling an estimate of distance. The smaller the "grain" of measure, the more accurate the estimate of the coastline length; but the calculus of this issue led to the conclusion that any coastline could be regarded as an infinite number if the grain were reduced to near zero.

BENOIT MANDELBROT. Geographers' curiosity on this issue was not original. It was provoked by Benoit Mandelbrot, whose "theory of roughness" applied to lungs and blood vessels as well as to mountains, rivers, and coastlines. Popularization of the work of the French-Polish mathematician created widespread interest in fractals, which was in fact a term coined by Mandelbrot to describe geometries formed by recursion. This feedback process refers a subsequent value to a previous value, so that the result is a "form of itself," replicated at all scale levels. This can be written as $ABA > A(aba) B(aba) A(aba) > A(aabaBabaCaba) \dots$ etc. The mathematician Louis Kauffman has used the calculus of George Spencer-Brown to show how recursiveness is basic to the formation of the number systems in general, setting up cases for numbers that are defined by such unaccustomed qualities as "true/false" as well as "not un-true" and "not un-false." Kauffman's example is that of a circuit operating in a "transitive" manner, requiring two switches to convert polarity from one state to the other:



If one of the switches is removed, as above, the current becomes “neither positive nor negative.” This, coincidentally, is the Lacanian “gapped circle,” the path constructed by desire that is the desire of the Other, but the Other of course is a construct of the subject ... and so on. The gapped circle is one of several examples of *extimité*, the means by which an exterior is re-located to an interior and *vice versa*. Note also that this circuit metaphor also applies to what we have called “reversed predication,” where the flip from an inside to an outside condition has left a small remainder — what Dolar has claimed on behalf of psychoanalysis.

Mandelbrot of course had none of this in mind. He was a mathematician, not a philosopher, although his ideas seem to be taken directly from discussions of Hegel’s complex project, which we can connect here in terms of its main goal of establishing a positive cultural role for the logic of negation. If anyone “interrogated the gap,” it was Hegel! And, if we want to think of fractals in a productive way, it will involve connecting fractals to the issue of negation.

SCALE DYSFUNCTION. There is one path already somewhat constructed, and that is the idea of three “dysfunctions,” linked ethnographically as well as logically; it’s good to review this briefly before going further. In the circuit example, there is, clearly, the involvement of a motion that, in one state of affairs, is clear-cut and unproblematic, contrasted with a second state that involves paradox. Motion, in this abstract model, becomes dysfunctional. We do not know whether a current is a “negative positive” or a “positive negative” as the result of the simple removal of one of the switches of the two-switch system, required to maintain law and order by switching off what is switched on and *vice versa*.

We can generalize to say that, without the notion of travel or motion, there are no subsequent conditions to consider. A boundary must be crossed; this is fundamental. And, the boundary itself (lacking a “transitive” capability), creates a problem. As soon as we consider the space-time context required to think of travel in any form, we realize the problem. It is that the first state of affairs, with the two switches, requires that we have an a-temporal idea of space. When the current “returns” to the other side, the word “return” has no meaning. There is no “journal” that says, “the current came back home,” only the *map* that represents the work of the switches. We have a space without time. The current does not remember that it was different than what it is, it cannot conceive of a circuit, which would tell “the whole story.”

With the addition of a journal, we have an asymmetrical situation. The current changes from + to -, and then from - to +. It “comes back home” to its original value. With the addition of this temporal account, we realize the shape of the circle and thus correct the original map view, but at the same time we realize that the map was incapable of achieving full accuracy without this “again” element. Without being able to identify what is a return or repetition, the map is lying. If we generalize this, we have to say that temporality is *implicit* in even the most primitive idea of space, that it is not something added. The journal and the map are not really different. The journal is implicit *in* the map, and only later can we distinguish it as separate.

The +/- aspect is significant, for with the short circuit we now also say that, in correcting the map so that it can realize a circuit for what it is, we also need the idea of recursion. Just as time is “built into space” from the start, the way it is built in necessitates the idea of self-reference. Thus, we have the feedback situation that is, in popular terms, a short circuit. The

boundary seems to be something that operates by (1) distinguishing zones within a space and (2) collapsing the distinction of zones within a space at the same time.

If we compare this situation to the kind of feedback that goes into the Fibonacci series, we see the "problem." $\emptyset = 1 + 1/\emptyset$. To find \emptyset we must already "have" \emptyset in some sense. Now, we get to the Lacanian part. What goes out the front door must have "already-always" come in from the back door. If we can move \emptyset to the next value, so to speak, we must already have the results in hand, retroactively. This is Lacan's mirror stage, and also Vico's idea of the imaginative universal, by the way. It's a Very Big Deal. The mathematician Louis Kauffman has drawn this up as a series of "re-inscriptions":

$$\begin{array}{c} \emptyset = 1 + 1/\dots \\ 1 + 1/\dots \\ 1 + 1/\dots \\ 1 + 1/\dots \\ 1 + 1/\dots \end{array}$$

You get the idea: each "stage" differs only by the SCALE at which re-inscription takes place. Otherwise, they are all identical, and this is the idea of the fractal; only, we have added to the issue of motion, TWO additional issues: (1) SCALE, by which we can say there are multiple levels, and (2) IDENTITY, the principle we invoke when we say that each scale level is similar to others, which means that identity is also a version of "self similarity." Hegel confronted self-similarity in its logical format by criticizing the expression $A=A$. He argued that this was not just inadequate, it was stupid, for this form of self-identity did more than it intended to do. It said that things could be "identical to themselves" but it introduced the idea that a thing might NOT be identical to itself, i.e. the 'A' on the other side of the equal marks. This identity creates a difference, whereas the fractal idea is identity that arises *out of difference* — different being initially motion/travel/boundary-crossing.

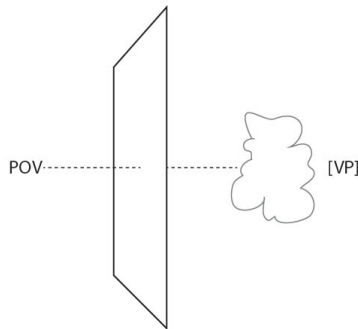
FRACTALS > DYSFUNCTIONS > TEMPORALITY > SPACE > RE-INSCRIPTION

The *ars topica* that styles a linear sequence of topics ("subjects") is also a linear sequence of *subjectivities*. That is, each new topic is a frame, a means of constructing both critical and empirical points of view that are part and parcel of subjectivity's material essence. Once a topic has been conscripted for the sequence, it remains "on call," to be brought into play at any future point of the chain. In this spirit, we must take re-inscription forward, into the idea of reversed predication, which was lying, latent, in the dysfunctionalities of motility, scale, and identity. This is a moment of "future anteriority," a past-future, a retroactive realization.

Discourse begins with the concealment, occultation, or expulsion of some element that makes possible the whole forward movement of the causal chain.¹ This exclusionary act constitutes the first moment of awareness of a phenomenal reality, "there," independent of the observer and the observer's immediate space (and time). Heidegger described this as an *ek-stase*, a "standing out," as a component of *Dasein*, as a being *there*. There is, for consciousness, a division of space, a distinction, a boundary or frame across which the subject must cross, into a space that is negated in terms of not being included in the accounts of what is *there*, despite the implicit necessity of the division, of dividing something into two parts, *necessarily*.

¹ This chain has been elaborated elsewhere. See http://art3idea.psu.edu/locus/causal_chain.pdf.

The viewer and the viewed, visibility and invisibility, work according to an alternating current idea. Attention can be devoted to one space or the other, but not both at the same time. But, as a consequence of the *necessity* of the point of view, the POV is *re-inscribed* into phenomena as a “demonic” presence. This means that, at the proverbial front of a view, the subtraction of the viewer’s space is balanced by the imagining of a metaphysically negative space at the back of the view. This “back” is a ground in the multiple senses of “ground,” “basis,” “control,” “reason,” and “Truth.”



Whatever appears as existent appears to be grounded by an invisible, grounding *backdrop* that also serves as a cause-control, here represented as a vanishing point (VP) that is correlative to the point of view (VP). Consciousness, indicated by the frame, thus implies an “unconscious,” one part of which is aligned with the necessary negation of the subject in the creation of a point of view as “independent/orthogonal” to the phenomenal scene, the other part of which is “occulted” within the visible as an “intimate externality,” a subjective object (Lacan), or “imaginative universal” (Vico).

This invisible ground becomes an “impossible-Real” to be articulated by various cultures and mentalities according to specific subjective contexts. In ethnographic terms, this is the basis of folklores and theologies that thematize the demonic in explicit, distinctive ways. There are however universal dimensions to this formation, suggested by the diagram above. The double-action of retreat from the visible to construct a subjective point of view couples its *askesis* (withdrawal) with the symmetrical withdrawal of the demonic from the phenomenal, as a withdrawal of an invisible from the visible. *Askesis* and demon are subsequently materialized within literature, art, and religion in narrative contexts. The frame separating their domains is also thematized, localizing acts of appearance and disappearance, advance and retreat, discovery and mystery. This zone, within the plane of the frame, so to speak, constitutes an inside frame, a horizon brought into the middle, to serve as a portable boundary that can be viewed from the front, sides, and back. Across this flexible threshold, we can see the separate and separately thematized actions of *kenosis* and *apophrades*, *tesseræ* and *clinamen* — in effect, the other four elements of Harold Bloom’s six “revisionary ratios” that, we claim, are elaborations of the primary dialectic of *demon* and *askesis* (which in turn are the immediate results of framing space and “re-inscribing” time within it).

With reversed predication, the suppressed element (“unconscious”) can nonetheless be materialized as a subjective object (“extimated”), an “unconscious of the world,” generically understood as a *demon* lying within or behind appearance — the uncanny intentionality attributed to nature (the so-called “pathetic fallacy”). While the positivist view discredits such a demon, art, folklore, religion, etc. multiply and elaborate it. Clouds are angry, the sea is peaceful, dawn embraces the earth with her rosy fingers, etc. No matter how we attempt to discredit this view, it reappears in some new durable form, as a “portable intentionality,” a purposiveness freed of declaring its purpose (Kant’s sublime; Aristotle’s automaton).

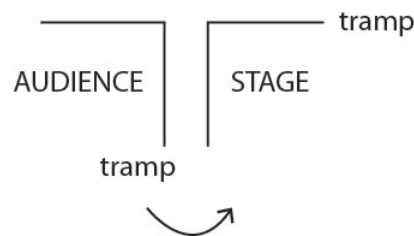
When we describe the framing of conscious phenomena as reversed predication, we realize that the appearance of anything involves this reversal, and that the reversal is also a "rotation" of the predicating frame's polarities. The suppressed element becomes the invisible demonic element within the visible field. One important consequence of this is that desire (which is desire of the Other, but as such, suppressed to our conscious recognition) pops up in the phenomenal field as demand: an interrogation (*demandeur* in the "softer" French sense) that is also an imperative ("Act!" "Think!"). Vico's thunder, thus, is simultaneously an order and a question, the question being "answered" through divination. The order is "enigmatic" because of this simultaneous status as a question: i.e. it is the Lacanian "Che vuoi?" — What does the Big Other want from me? I am interpellated, I have this void at the center of my being, my subjectivity, and I can't fill it in any satisfactory way. The demand is a question.

RE-INSRIPTION > REVISIONARY RATIOS > DEMONS > FOOLS

In Charlie Chaplin's 1931 film, *City Lights*, we have a direct instance of reversing predication.² The film opens at the occasion of a public rally to honor the unveiling of a new monumental statue, an allegory, "Peace and Prosperity." There is a crowd, a band, officials, prominent citizens. *There is a curtain*. The movie makes use of new sound technology, but the actors do not speak directly. There is a musical score and sound effects. When the speakers on the platform get up to speak, we hear a comic quacking/squawking sound that imitates the sounds of speech without allowing clear words to be formed. We hear the band as we would hear it as a member of the crowd, however.

After a few dedicatory speeches, the band strikes up a diegetic fanfare and the curtain is pulled. The Tramp is sleeping in the lap of the central of the three figures. The audience and speakers are scandalized. As the mildly embarrassed Tramp tries to descend, he gets caught on a statue's extended sword blade. At the same moment the band strikes up the "Stars and Stripes Forever," forcing the police official who has been yelling at the Tramp to pause and salute.

From the public scene to the removal of the Tramp, we have a reversed predication, "gone wrong" in that the audience had expected not to see anything special. The Tramp forces us to admit how the reversal of the frame has involved a "rotation" of the excluded element materialized in the most obvious way: the Tramp. From his place of exile at the margins of public view — alleys, vacant lots, abandoned dumps, railway yards, etc. — we now see the poverty of the day directly in front, framed in the "center of a center." What has been invisible and excluded is now hyper-visible.



This rotation-plus-reversal demonstrates how the Tramp, as a public *agalma* (magic substance, both desired and despised), works as a "marker" of the process of reversed predication. This scene also shows how *agalma* constitutes an instance of "self-re-inscription," the construction of a fractal at the level of the production of civic space. We can condense this principle: "every construction of a civic space is by definition a re-construction, a self-construction." Thus, when we shift to the paradigm exemplars of city foundation rituals (Castor and Pollux, Romulus and Remus, etc.) we find the same reversed predication, the

² Watch this sequence at (<http://www.youtube.com/watch?v=2TKsHpW6r2E>).

same *agalma*, the same rotation, the same materialization of the *agalma* as despised, sacrificial victim, etc. (This means, incidentally, that we would be right to return to these primal mythologies and analyze their “content” in terms of Bloom’s revisionary ratios.)

Chaplin is a member of the species, Fool, whose basic revisionary ratio is simple: high/low becomes low/high. In other words, the fool is the personification of reversed predication, flipping the frame, interiorizing the substance of the frame as a thin membrane (*lamella*) within which we may witness the materialization of *agalma*: *kenosis/apophrades*, *clinamen/tesseræ*; *demon/askesis*. These are the motions of the atoms split with the first instance of self-inscription. They afford the “fractal” constructions of “stories within stories” and the other fantasy constructions of our illicit virtuality, our “Borgesian geography.” The test of authenticity in such fractal and fractalizing conditions is based on this simple question: is our analysis just another “take” on interpreting the rich artistic patrimony of works of creative genius — which may be allowed to take any form, any theoretical preoccupation, etc.; *or*, does our analysis correlate to something that the artist *originally had in mind*? This is a form of authentication that connects with artistic intention to demonstrate that there is something more than interpretive freedom; something that can establish a trajectory concealed within history and, specifically, the history of the arts dealing directly in the economies of the uncanny.



The tell in the case of *City Lights* is the role of blindness. The Tramp is running from the police. He uses the maze of stalled traffic, winding among stopped cars. At one threatened capture point, he steps into a parked limousine whose passenger is, at the moment, absent, and quickly exits the other side of the car. On the adjacent sidewalk a blind girl is selling flowers. She hears the door of the limousine slam and presumes that the car’s rich owner has descended. It takes the Tramp a while to realize that she has mistaken him for a wealthy gentleman, and he tries to clarify but soon accepts her promotion. This begins a relationship where the Tramp, attracted to the beautiful but poor blind girl, wishes to continue as if he were actually rich. Coincidentally, he has befriended a truly rich but erratic man who alternatively rewards and humiliates the Tramp. This relationship affords him the chance to raise the funds for an operation that will cure the girl’s blindness. However, he has been accused of stealing and is sent to prison. When the girl recovers her sight, she is able to open a profitable flower show. Now in the position to hope that her patron — presumably handsome as well as wealthy — will come back in person to ask her hand in marriage, she inspects each young well-dressed customer closely. When the Tramp is released from prison, he happens past her shop. Realizing that the operation was a success and that she has recovered respectability, he pauses outside long enough to attract her notice but, of course, she does not recognize that this in fact was her “wealthy patron.”

Wishing to help the Tramp with a small donation, she steps outside. He asks her about her eyes, her shop, her success but she does not recognize him. She is now "blind" to what she "saw" before, *in and through her blindness*. She re-creates the situation of the opening of the film, where the curtain had stood in for the public blindness to poverty, a blindness that, once cured, became a painful visibility of an *agalma*, a scorned but telling excess.

However, when the girl presses the coin into the Tramp's hand, she feels the truth of touch that brings her face to face with the recognition that her "wealthy young patron" is in actuality the filthy, small, ugly man before her. The distance that had, in normal public space, constructed sufficient insulation between the rich and poor, beautiful and despised, quickly collapses. What is before her is Truth, in glory and hideous excess.

Without this exquisitely constructed scene, we would have no real proof that Chaplin had used his idea of reversed predication, with all of its fractalizing potential, to construct Truth within a film about a helpless but witty fool. We can return to the alternating current of the point of view (POV) and vanishing point (VP) and attach characters to these functions: blindness, invisibility, *agalma*, and discovery. The half-knowledge of *kenosis* becomes the "half-man" of the Tramp. The *clinamen* is the story space opened up with the slam of the limousine door. The *tesseræ* is the touch that allows the "letter to reach its destination," albeit in inverted form. From prison, Chaplin returns a word, a word from the death of prison, *apophrades*. We are included in these ratios, as those who have retreated into the dark theater to escape the demon of the civic, but been rewarded with the essence of the civic in this temporalized *clinamen*. And, with the news that the civic employs a fractal logic, it is easy to put meat on the bones of the contention that every *urbs* descends from a *cosmos*, and from the *urbs* we descend further, to the forms of the house and the un-house, the tomb. At each "level," the rules are repeated but also re-written in the script peculiar to the materials at hand. This repeats the contention of Ambrogio Lorenzetti (1290–1348), whose allegorical mural "Effects of Good Government" in the Siena town hall depicted multiple events and multiple scales, brining about a synchronous resonance of civic happiness. The fractal is not an effect of good practices, it is the precondition. If the fractal is happiness, and also meaningful recognition, shouldn't we have some program for expounding the forms of its presence in discourse, thought, and culture-as-performative? Such would be the project of "reversed predication."

Opening up the topic of fractals in this way is in itself an act of reversed predication, in which we look to causes and effects but also the radical space between them, which must be the subject of our direct interrogation. We "interrogate the gap" (Ranjbar) on behalf of the logic of the extimate, by which and out of which subjectivity is manifest and confirmed. It is a container and contained, a subjective object and objective subject.

But, all this is neither here nor there.

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