

Thaumotropic *Vertigo*

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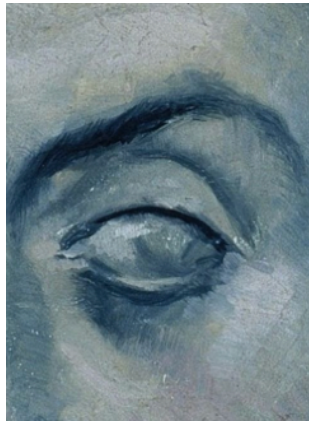


Figure 1. Pablo Picasso, *Celestina*, 1904. Musée Picasso, Paris. The model suffers from nuclear sclerosis, a hardening of the inner matter of the eye.

What is the relationship between the optic and the scopic? It must have been a significant one for Lacan, who berated Xavier Audouard for failing to make the distinction when he made a short presentation for Lacan during his Seminar XIII (“The Object of Psychoanalysis”), session 18, on May 18, 1966.¹ The optic is a matter of parallax: how we use binocular vision and other measures to estimate distances and, thence, know whether to flee or stand and fight; or play dead. The vagus nerve is in control, not the brain, for in such matters as fright, when the feared object is on top of us, there is no time to consult the thoughtful brain, stuffed as it is with preconceptions.

The scopic gauges a different kind of fright, the fright associated with guilt, as Lacan made clear in his connection of the gaze to the popular conception of the evil eye, the ever-present *Penia* who, in want, invades conditions of surplus with the intent of leveling the playing field. Thus do cultures everywhere do something to protect the over-beautiful child, the lucky win at the races, the reference to good fortune (“knock on wood”). We feel guilt because invisible others feel lack and would wish redress. The mechanics by which this becomes the gaze are scopic, not optic. Picasso’s Blue Period painting of *Celestina* (1904) portrayed a modern version of the sorceress depicted in the 15c. Spanish play, *Comedia de Calisto y Melibea*, by Fernando de Rojas. Her affliction, nuclear sclerosis, a hardening of the inner matter of the eye, qualified the witch as monocular, able to personify the point that was the gaze on the plane of “the representation” which could be any presentation of the (objective) visual scene. This meant that, from within a concealed position within “visibility itself,” within its very objectivity, there was a means of panoptical surveillance. Unlike the optical cone of vision, which at best might claim to see 180° of the visible world at any one time, the scopic of the gaze was 360°. Between the full field and half-field, the sighted subject was at a disadvantage to a corrective mechanism that, by virtue of being a cyclops, could see not only what parallax could not but also how the instant of the parallax “snapshot” was bounded by fate on either side: revenge of the past and foreboding of the future.

The contrast between parallax optics and vengeful scopics can be compared to the limitations of human language, as what Lacan correctly described as “non bi-univocal concordance” in

¹ Xavier Audouard, in Jacques Lacan, Seminar XIII, *The Object or Psychoanalysis* (1965–1966), trans. Cormac Gallagher, *Lacan in Ireland*; <http://www.lacaninireland.com/web/wp-content/uploads/2010/06/13-The-Object-of-Psychoanalysis1.pdf>

comparison to the supposed Adamic speech of Paradise before the fall, where words and things enjoyed an indexical 1:1 relationship. It is easy to slide into the assumption that the guilt of the primordial couple was a matter to be argued in the former, the parallax view, with scopics presiding, surveilling, and judging to fill the remaining 180°. Forever after the former time, truth would be available only by halves, without time (timeless) or without space (the void).

The truth of Alfred Hitchcock's *Vertigo* (1958) comes by halves, with an emblem of the demi-view presented, appropriately, between the two halves of the film. After the retired detective Scottie Ferguson has thought himself to be the only witness of a suicide, he is led to the witness chair to testify at the inquest to certify this tragic act. Believing that he is in half-measure responsible for the tragic death of Madeleine Elster, he recounts Madeleine's haunting by her other half, her ancestress Carlotta Valdes, whose tragic suicide on March 5, 1857 drove her great-grand-daughter to celebrate her centennial with a bookending echo.

The two-part suicide of course was engineered. It has not been Madeleine Elster, the wealthy heiress, who jumped to her death that spring day when she was the same twenty-six years old that Carlotta had been at her point of death, at least not the Madeleine Elster had known and fallen in love with, but an imposter, a fake, a look-alike. That's what Scottie would have said had he looked at the body, because there were two women. One remained in the tower until it was safe to leave, with her lover Gavin Elster; the other was Elster's wife, dressed to resemble the woman Scottie had pursued up the chapel tower stairs but failed to finish on account of his acrophobia. Like others who suffer this affliction, Scottie could only look forward; when he looked back down he was terrified by the sudden dissolution of parallax order. Hitchcock managed, with a scale model, to turn the tower's parallax bottom into a scopic accordion by simultaneously changing the camera's position and its zoom ratio. Instead of a proper distancing effect, infinity was pulled forward as the camera retreated and pushed away as it advanced — an effect named (by no less a

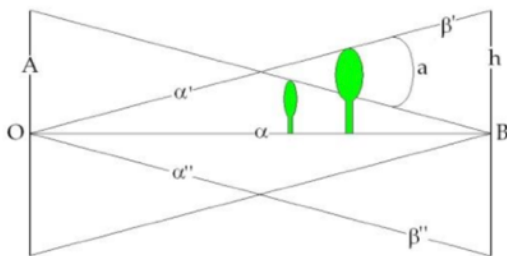


Figure 2. Audouard's second diagram, showing lines converging at the antipodal points of the object (O) and the viewer (B), α' and α'' on one side, β' and β'' on the other. These converging rays however contradicted the diagram Audouard had just previously drawn, where α'/α'' and β'/β'' are both parallels.

figure than Filippo Brunelleschi) as “cathetus.” If ever there was justification for a little word-bending, we should allow cathetus to be “cathesis” on behalf of the universality of the effect whereby, thanks to the subject's 90° relation to his/her mirror image, the vanishing point will forever seem to be tied to the viewing point, following it wherever it goes. This is panopticism in a nutshell, the conversion of Scottie's role as a “parallax guy,” a *private detective*, an expert in using the see-without-being-seen advantages of parallax, who suddenly fails and fills with guilt, thanks to the failure of his parallax project and the blowback of scopic cathesis.

Thus, Scottie makes the perfect witness, a detail without

which the story of *Vertigo* would have been impossible. Perfect should be qualified: perfect for whom? The answer for this comes with the audience's discovery that Scottie has been the mark of a con(fidence trick) and the woman he thought to be the other half of the dead Carlotta was in fact the shell of that con. The shell's famous job is her ability to appear from one view as a confident of the mark, while in the logic of the scam she is the agent of the con, Gavin Elster. She turns. She is a 180° girl. Each side conceals the other, necessarily, to make the sham effective. The cleverness of Judy Barton, Elster's actress, is to play someone who is also a 180° girl, Madeleine haunted by Carlotta. The two parallaxes of the dead and living woman combine to make a 360° guilt trip circuit, a panoptic scopic-aresque, the trope of the "woman haunted by death," whose haunting seems to Scottie to be a running toward but which in the logic of the scam was a running away, but which in the larger logic of the story was — to perfect the perfect virtuality of *Vertigo* — running toward, something she of course does not realize until her literally fatal mistake in part two of the film.²

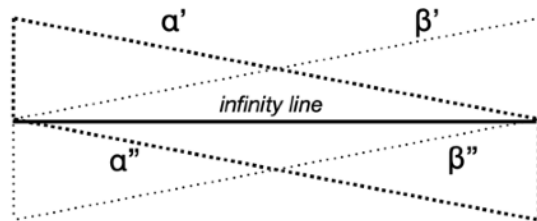


Figure 3. Audouard's fix involved thinking of triangles really parallelograms, a kind of "tangram" insight. The bases of the former triangles joined $AB > ba / AC > ca$ of two internally facing discs.

When Lacan rebuked Xavier Audouard it was, he thought, because Audouard had "parallaxed" the famous schema Lacan had devised two years earlier, showing the relation of the look and the gaze.³ Indeed he had. This is the common reading of Lacan's diagram, as the intersection of two triangles. How else to account for the opposition of the look and the gaze, if not by the parallax of the look versus the opposed scopic triangle of the gaze? However, Audouard had a completely different way of looking at this diagram of two

triangles overlapping. Using the vertical lines defined by the mid-points connecting to the vertices, he extended two parallels to the vertices and midpoints opposites. The two parallelograms, α' / α'' and β' / β'' , required a reading of the verticals as being symmetrically different. This reading, bizarre in relation to the standard interpretations of the congruent diagram presented in Seminar XI, *The Four Fundamental Concepts of Psychoanalysis*, is nonetheless a standard ploy in fiction. A readily understandable example is O. Henry's short story, "The Gift of the Magi," where a poor couple barely able to make ends meet want to give each other

² This is one pole of the uncanny as described by Ernst Jentsch, "Zur Psychologie das Unheimlichen," *Psychiatrisch-Neurologische Wochenschrift* 8, 22 (25 Aug. 1906): 195–198 and 8, 23 (1 Sept. 1906): 203–205. The other pole, "the person who is between literal death and a symbolic death," uncannily, was prefigured by the novel upon which the film *Vertigo* was based, Pierre Boileau and Pierre Ayraud's 1954 novel *D'entre les morts* (*Among the Dead*).

³ Lacan: "I believe that at the end it is not for nothing that you present us, in the plane of the look, with two points separated from one another and which come here, curiously, without my knowing if it is your intention, but in a striking fashion, evoke binocular vision. In short, you appear, with this schema, to be completely prisoner of something undoubtedly confused, and which takes on its prestige from overlapping rather well what properly optical physiology tries to explore." *The Object of Psychoanalysis*, 217.

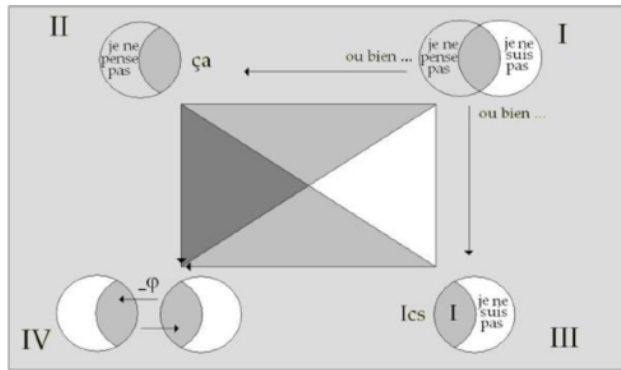


Figure 4. The reference polygon of the torus; the topological “logic” showing how the projective plane must fold to create two voids, one continent, the other incontinent. Lacan plays on the theme of continence by describing acting-out (III) as “inside the Symbolic” and the *passage à l’acte* (II) as “outside the symbolic,” i. e. in a “psychotic” position. In *Vertigo* the Symbolic is the structure of the con, active in Part 1. In Part 2, Scottie takes up a “psychotic” obsessional role when he attempts to convert the tawdry shop-girl Judy into his elegant but deceased lover Madeleine. However, *Judy was Madeleine*, inducing the condition of IV, the condition of symmetrical difference.

a Christmas gift to augment their existing treasures: the husband’s heirloom gold pocket watch and the wife’s beautiful long hair. The husband buys an expensive hair-comb and the wife buys an equally expensive watch-chain. The problem has been that, to afford these gifts, the husband has pawned his watch and the wife has cut and sold her long hair. To accomplish the 360° whole of the exchanged gifts, each has cut off the half of what the gifts are intended to celebrate. In effect, O. Henry’s story is precisely diagrammed by Audouard’s revised diagram.

Is there an “O. Henry” structure in *Vertigo*? Yes, but to extend this thesis, the idea of symmetrical difference, which Lacan references in Seminar IX, *Identification*,

adopts the form of the torus, not just the torus as we see it in a parallax view, but the torus as a projective plane defined by the “fundamental diagram” that, in Seminar XIV, Lacan uses to define, among other things, the relation of repetition (= the essence of the subject’s demand to the Other) to sublimation, after extending with a twist to positions inside the Symbolic (“acting-out”) and outside the Symbolic (“*passage à l’acte*”).⁴

The position IV on the fundamental polygon relates the $-\varphi$ to the void that, in terms of bijection, are the missing elements in the O. Henry story, the pawned watch and the cut hair. The torus, Lacan explains, is important because we can relate the *continent* void of the tube to the *incontinent* void of the “hole in the doughnut.” The former is generated by the circular motion of demand, stretched out into a spiral by the *objet petit a*. The stretch itself is guided by the pivoting axis of the Big *Autre* in the center of the incontinent void. Is it possible to see the spiral of demand as caught within the 180° angle of (optical) parallax, and the circling of the tube as “scopic”? In relational terms this

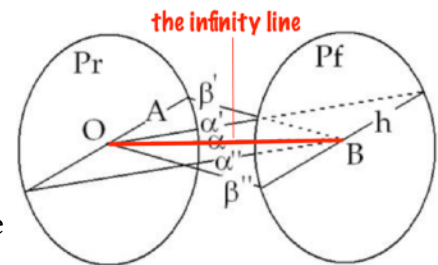


Figure 5. Audouard’s first diagram, which makes it (barely) possible to distinguish two criss-cross parallelograms connecting the Plane of the Look (Pr) with the Plane of the Figure (Pf). Horizons running through points O and B, connected by the infinity line, made Lacan think Audouard was describing a parallax situation, but in fact Audouard was describing a before and after situation, where Pr and Pf were distinguished only by a (katagraphic) cut.

⁴ Jacques Lacan, Seminar IX, *Identification*, trans. Cormac Gallagher, *Lacan in Ireland*, 184–186; http://www.lacaninireland.com/web/wp-content/uploads/2010/06/Seminar-IX-Amended-lby-MCL-7.NOV_.20111.pdf. Işık Barış Fidaner seems to be the only Lacanian to have noticed this: “Lacan’s Torus is the 3D Spatial Approximation of the Combinatorial Unworld,” *Žižekian Analysis*; <https://zizekanalysis.wordpress.com/2021/03/16/lacans-torus-is-the-3d-spatial-approximation-of-the-combinatorial-unworld-isik-baris-fidaner/>

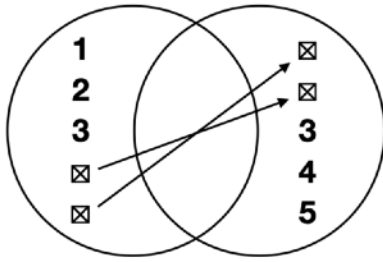


Figure 6. Euler circles create “union without intersection” through a relation known as symmetrical difference, where a *new set* of elements emerges out of the lack of each, but in a criss-cross relation. This seems to meet the criteria of the thaumatrope but also the *tesseræ* as a combination of *symbolon* and *diabolon*. The diagram also describes the (katagraphic) cut through the torus known as the Villarceau cut. Drawing by author.

makes sense. For the parallax view, the other is present as a blind spot, an absence. In scopic logic, the *Autre* as pure structure, while it *directs* the project of containment, is itself uncontained.

This sounds abstract until we immerse this topology into the empirical context of *Vertigo*. This is, after all, about a man who is caught in the invisible web of a scam. He is engaged to surveil a woman who, in Lacanian terms, occupies the point of the gaze. She is invisible to the degree that the detective “keeps her in his sights.” As the shill of the con, she turns with an Audouardian twist from Madeleine to Carlotta. In Part 2, she will twist from Judy to Madeleine. Scottie’s parallax view cannot comprehend what is operating “behind the scenes” and “behind his back” — both as ways of saying “the 180° dark shadow of the scan complements his 180° surveillance assignment.”

The torus defines *Vertigo* by specifying how its two parts work. The first part, “inside the scam,” is Scottie’s “demand” (his pursuit of

goals set up in advance by the con Elster, the *A* of the torus). In Part 2, the void of the scam lingers in the form of Judy, the shop-girl double of Madeleine (no wonder — she was the very woman who *played* the part of Madeleine in Part 1). This toroidal twist drives Scottie into a settled version of the psychotic breakdown he endured in the sanitarium, but here he is compelled to reproduce his lost love by forcing Judy to look exactly like Madeleine. The scopic however cannot be fit back into the parallax view. What Judy *looks like* is able to conform to Madeleine’s parallax appearance only at the point where Scottie has required her to *change her hair*, and we notice how carefully the actress Judy had copied the curl in the portrait of Carlotta. This was the unary trait that Scottie, playing the Analyst, used to authenticate Madeleine’s subservience to the unconscious — not simply her own unconscious as an Other, but an Other that belonged to another, Carlotta. Just as all neurotics are “haunted” by their unconscious, Madeleine’s popular-culture version of being haunted remained true to the psychoanalytical model. It was another’s *desire* that led her to sit in the rented apartment that had been her own mansion; to visit the portrait of Carlotta in the Legion of Honor Art Museum; to pay respects at her grave at the Mission Dolores; or finally to lead Scottie to the Mission San Juan Bautista where she would fake her suicide.

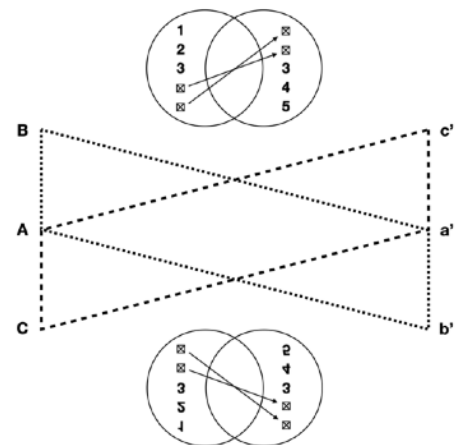


Figure 7. Audouard’s parallelograms as *recto* and *verso* versions of the Euler circles’ representation of symmetrical difference. Hence, the infinity line represents a projective continuum connecting two voids, and the logic of the torus appears, complete with a Villarceau (*katagraphic*) cut to demonstrate the relation between the continent demand of the subject/*a* and the incontinent desire of the Other, *A*.

Scottie's testimony at the inquest was given in two registers, which toroidal topology can explain. In the parallax view, with the Symbolic represented by the legal personnel and procedure of the inquest, it *focused* on the event with the credible support of Scottie's feeling of guilt for his failure to prevent Madeleine's suicide. *Behind this testimony*, beyond its 180° parallax view, was the fact of Scottie's credibility as a police detective, who could be expected to tell the truth under oath. Guilt and credibility were presented in the film's first five minutes, in a roof-top chase scene where Scottie had slipped. Holding on to a gutter while suspended stories above the alley below, his uniformed colleague reached to save him but fell to his death instead. The death-for-life exchange was also a change of costume: the uniform for *plain clothes*, a model of Scottie's retirement from the police force to civilian life. Knowing that Scottie now had an inborn terror of heights, plus the free time of retirement, Elster realized that Scottie was the perfect mark. All he had to do was infect Scottie with "Madeleine's" beauty — easy enough in the plush red interior of Ernie's restaurant — and the die was cast.

The Thaumatrope

Audouard's contribution to Lacan went unacknowledged, possibly because no one connected his criss-crossed parallelograms to the fundamental polygon of the torus. If they had, perhaps a new school of Lacanian thought would have emerged around the correlation of visual experiences to the fundamental structures of demand and desire. There might have been some who connected to the even more obscure "slide-rule analogy" Lacan developed in Seminar XIV, *The Logic of Phantasy*, where the unary trait's recursive mathematics were identified with the Fibonacci number series. Here, Lacan focused on the idea of the cut as a "Golden" distinction that, like the katagraphic cut he had cited in Seminar IX (*Identification*), defined the substance it divided as it cut. Audouard employed this cut in the "flat state" of his diagram, "[T]here would be here a separation (*écart*), something not seen which is there only to express that at each point of this plane there is also a separation of each point with respect to itself, namely, that this space is not homogeneous and that each point is displaced with regard to itself in a separation that is not seen, not visible, which nevertheless comes strangely to constitute each one of these points that my eye perceives in the perspective plane."⁵

The katagraphic cut is significant in two ways. First, it is the proper way of thinking about the function of the mirror in the Mirror Stage, where the specular image ceases to be ocular and becomes scopic. The interpellation of the young subject standing before the mirror sees not his reflection but an actual Other, a structure of Otherness, an *A*. This is a cathetic connection, for only the subject is able to see this image correctly, thanks to the fact that the mirror is a *cut* and not a reflection. The 90° angle of the line of sight to the mirror surface insures the scopic status of this cathesis, and both separates and binds the newly barred subject, $\$$. The katagraphic idea is that the subject and its double arise out of the *écart* of the self from itself. The line Audouard

⁵ Xavier Audouard in Lacan, *The Object of Psychoanalysis*, 216.

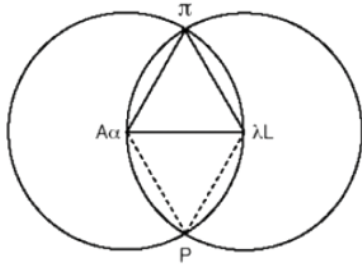


Figure 8. James Joyce uses the palintropic model to configure ALP/ $\alpha\lambda\pi$ disk cut from π to P and spun around AL/ $\alpha\lambda$.

designated as the infinity line defines this cathesis correctly. The result from this point on will be the condition of symmetrical difference. “The Gift of the Magi,” *Vertigo*, and countless other works of art will recognize the dramatic value of this injective function that separates yet binds two sets mathematically.

Artistically, they may more directly employ a variation: the cut made by a diagonal plane into a torus immersed into 3-space, producing the “logic” of the 2-d torus as depicted by the fundamental polygon. This is the “Villarceau cut,” which Lacan shows at the upper right, I, and the lower left corner of his

diagram, IV on Fig. 4. Lacan even repeats Audouard’s thesis, that

the Villarceau cut will have an “open” and “closed” position, just as Audouard’s ovals were at first superimposed and then separated by the infinity line.

Although the diagram looks most like a “vesica pisces,” the same mistake is made of this historic (and, usually, religious) motif by thinking it to be an intersection of two formerly separate circles. Here, again, Lacan is accurate. He defines the “vesica” as an Euler diagram designating “union without intersection.” The lozenge shape in the middle is the function of the cut: a void. There is no overlap, simply the action of the cut which simultaneously binds at the same time it separates. James Joyce famously employed the Euler circles in *Finnegans Wake*, carefully labeling the vertices of triangles covering the void as ALP/ $\alpha\lambda\pi$. Although it is most evident that there are two triangles, there is one parallelogram, with alternative labeling. Joyce, in any event, was concerned to “hold open the void” and resist any Jungian reading of the story of Issi, Shem, and Shaun (and all their pseudonymous personalities). The opening is essential to the circular reading initiated by the sentence given in its last half at the first of the text that concludes with the first half

Vertigo’s second half, moving from the neurotic Scottie pushed to the point of mental collapse to the compulsive Scottie pushed to the point of psychosis, also uses the incomplete sentence of the rooftop chase scene (the terminus of his police career) to the lost beginning of this, his unintentional (?) destruction of his object of desire, Madeleine. In this, the entire film works as a thaumatrope, a union without intersection, a katagraphic cut that binds as it divides. The scene of sacrifice, the substitution of plain clothes for the fallen uniformed colleague — what else could this be but a conclusion demanding a retroactive restoration?

The film as a whole resembles a palintrope, the popular 18c. toy disk with images painted on either side. It seems at first that the images are external to the disk, but when the disk spins a composite image emerges from *within* the spinning. The string propelling the spin is pulled tight then slacked, the cut we imagine to be in the plane of the disk, between outward facing images reversed, in the seeming emergence, becomes the basis of this inside-to-outside event, and we now have a new way to understand Audouard’s infinity line. It is the effective measure of the

moment, both infinite and nothing, between the inward looking faces that, for the Mirror Stage, became the outward facing token, thanks to their contronymic pairing.

The archeologist Marc Azema has claimed that thaumatropes found in Magdalenian caves in Southern France are evidence of the early discovery that cinematic animation, the so-called beta-function converting a series of still images into the illusion of smooth motion, were employed in hunting magic.⁶ The living animal on one side, its dead version on the other, the twisted spring of twin running through the middle ... these activated the powers of the *symbolon* and *diabolon*, ancient terms for the agreement, contract, or password (σύμβολον) and devil, slanderer, antagonist (διάβολος). Both are legalistic terms, one for accord, the other for dispute.⁷ Together they apply to the *symbolon*'s use as a *tesseræ*, the two halves of a token broken in half at the parting of two friends. The uniquely fractured edges, when joined back together at the hoped-for reunion, would demonstrate the authenticity of the friendship. The very evidence of separation would be the contingent cut, the *katagraphic cut*, that guaranteed perfect reunion.

Such a moment takes place in the final moments of *Vertigo* when Scottie recognizes the jewel Judy has pulled out of the drawer to wear to their special dinner out at Ernie's — a return to the first scene of enchantment. The accident of this moment has become the place where Scottie is able to “put two and two together.” From Stone Age caves to Judy's apartment in the Hotel Empire on Sutter Street, the thaumatrope carries the logic of Audouard's revised model of the look and the gaze — itself the basis of film criticism for over forty years — from antiquity into the present.

Like the thaumatrope's wound chord that spins the disk as the hands stretch and relax it, making in and out create an optical effect, the result is both spectral (duplicating) and scopic. The line that separates is the line that reconnects, the line of the evil eye, which Audouard had, given his priestly training, knows to be diabolical. The diagram he draws for Lacan's seminar is thus a kind of *grimoire*, both instructive and magical. Out of the static facing sides of the ovals emerges the act of separation that is simultaneously a restoration. From MadeleineCarlotta to MadelieneJudy to the PlainUniform that opened the film to the uniform plane of the final scene where, like butterfly wings, the symmetrical parts come back together out of their sheer difference, the movie ends. “A woman dies,” just as “a policeman had died,” the last sacrifice echoing the first, after their conversion to pronouns in a flat, featureless semiotic plane.

In the situation of symmetrical difference, where a cut initiates the emergence of something to a “plane of presentation” (the movie screen witnessed by the audience) thanks to its internality, we could say that *diabolon*, discord, has produced *symbolon*, a contractual relationship. Was this not what film theorists in the 1960s and 1970s were seeking in their deployment of the Lacanian gaze?

⁶ Marc Azéma and Florent Rivère, “Animation in Paleolithic Art: A Pre-Echo of Cinema,” *Antiquity* 86 (2012): 316–324; <http://antiquity.ac.uk/ant/086/ant0860316.htm>

⁷ Antonio Marco Martinez, “Symbol' and 'Diabolo' (Devil) Are Two Related Words,” *History of Greece and Rome, Antiquitatem*; <http://www.antiquitatem.com/en/symbol-devil-symballon-diabolos-demon/>

How then did they get it backwards, as Joan Copjec claimed?⁸ How did they miss the fact that the gaze was located in the plane of the object, not a subject empirically figured by the male gaze or, worse, the audience itself? Perhaps this is the fate of Lacan's legacy: it will be divided into disparate parts by a *diabolon* but only occasionally rejoined as a *symbolon*. Psychoanalysis itself is a thaumatrope, where an image emerges from an internal katagraphic cut, the birth of the clinic out of its own foundational myth, a Mirror State for theory itself.

⁸ Joan Copjec, *Read My Desire: Lacan Against the Historicists* (New York and London: Verso, 2015).