



A Polythetic Method for Demonstrating Jacques Lacan's Visual Thinking

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This is a transcript of the narrative of a YouTube video that may be accessed at <https://youtu.be/MdlpIGevdpE>.

Thomas Cole somehow in 1836 had worked out what Donald Trump's dream of Washington DC would look like. This was not just a feat of clairvoyance but an understanding of how, in the face of mental deterioration, narcissism tries to make the best of the nothing it faces on the neural level. For Lacanians, this is a treasure trove of data on the ego's ability to create images in the place of the damage done by the lost Other, how the excess of grandiosity compulsively requires consistency and rules based on the whims of an authoritarian. It is an absolute determinacy, a convergence, disguised by the appearance of an absolute freedom to elaborate, extend, and cover over the deteriorating ego's increasingly wide gaps. This one image shows, in a nutshell, the political predicament that the US now shares with a world held hostage by a single deteriorating infantilized subject.

Images can seem to represent states of mind, or at least represent what Lacan, following Jacobson, called the function of the shifter, that which changes with the changing position of the observer in reference to the world that painting represents as a quadrature. Lacan's visual imagination is consistently attracted to conditions where the shifter function connects to the way the visual world can be encrypted with things that seem to belong to it because they are visual objects but then put up a resistance to that world by being keys that



The polythetic method offers an alternative to art-historical, thematic, or other means of image comparison. Rather than interpretation, polythetics aims to discover what might constitute, at the level of reception, an unconscious. At the level of maximum disaggregation, a “unit” may be found to have optimal associative potential, redefining the content and, especially, the structure of the work. This experiment uses a painting Lacan studies closely in Seminar XIII, *The Object of Psychoanalysis*, Diego Velázquez’s *Las Meninas*. Arguing for the role of the “shifter” (orientation based on the observer’s position and disposition) in relation to the visual field, Antonello da Messina’s *St. Jerome in His Study* serves as an “anamorphic companion.”

disassemble and rearrange what appears to be contingent within the dilation of the cone of vision. I’ve added a painting that Lacan doesn’t use that illustrates in an even more direct way what is happening in a painting he does use, namely Diego Velázquez’s famous self-portrait, *Las Meninas*.

If we can think of these two paintings as anamorphic to each other, we could say that there is a new painting created in the overlaps between their different uses of the visual frame. These are at first blurry, but some coincidences introduce us to the idea of the polythetic set, where there is a level or scale of meaning where things match up to create alternative orders that are both internal and external to the original paintings. This is a different idea of anamorphosis from the one Lacan presented in Seminar 11, but the idea of polythesis is present in other ways, even much earlier than this seminar. Polythesis has to do with the double meanings that are present from the start, thanks to the unconscious and its relation to the evidence of the senses, and how these double meanings are a part of the structure of the unconscious and not just the effects of our misconceptions.

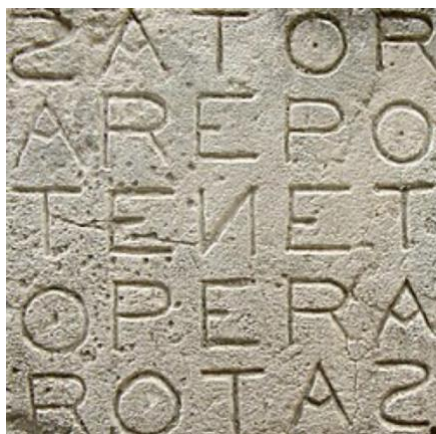
Both paintings make use of a double frame, which creates a generative ambiguity that becomes the basis for the emergence of new meanings in both paintings. If we pull the blurry overlaps into focus we can substitute whole, crisp forms to make a composite that,

like a crossword puzzle, makes sense in several different ways that are revealed by passing through the artwork from different directions.

Towards the development of a study method

I want to move beyond seeing polythetics as just an analogy for anamorphosis. I want to show how, if we understand anamorphosis *as* polythetics, it becomes a methodology. In these examples we can see how elements are reduced to unit parts that are then able to interact in different, independent ways. But, Lacan himself had already discovered the logic of the polythetic set when he discovered that he could use the figure known as the fundamental polygon of the torus to describe the repetition of the unary trait as an irreducible remainder. How? He saw that the remainder was not something that happened after meaning was subtracted by repetition, but from the start, as a condition intrinsic to the process of repetition. The examples demonstrate how this makes sense. As soon as the crossword, acrostic, or Tarot card defines the unit, all of the possibilities are immediately evident. They are parts of stories that come in vertically, horizontally, or diagonally. Their isolation has become their connection potential.

Unlike the donut kind of torus, the topological torus requires a twist. If we fold a flat sheet into a tube and attach the ends, a 2-d torus requires us to insert one end alongside the other. This effectively makes the torus a Klein bottle. This is the non-orientability of the zero degree of meaning, the void inside the unit that sucks in meanings just like a vacuum causes condensation. The nothing of the void becomes the anything of potentiality. We know characters who are like this in popular culture, the Charlie Chaplin tramp who knows how to dance and talk backwards, Puss 'n' Boots, the dead person who has forgotten how to die.



Topological figures equivalent to the Klein bottle also have their stories to tell in popular culture. The cross-cap is the trap that requires a magic abracadabra to open or close. The Möbius band is really the *après coup* of Lacanian linguistics applied to the idea that every story, to be a story must have an ending that responds to the beginning. This response is non-orientable, like the twist of the Möbius band. It must travel both forward and backward, both making then breaking the rule of commutation, *ab* equal or not equal to *ba*.

Contradictory or non-orientable movement is the basis of the numerical magic square, whose rows, columns, and diagonals all add to the same sum, but in the process they reveal

a pattern of internal twisting and folding. Commutation applies to these additions while non-commutation specifies the internal design. Even the Rotas-Sator acrostic has an interesting internal diagonal design. These commutative “equalities in the face of inequality” are simultaneously the non-commutative “inequalities in the face of equality,” a puzzle that makes us want to look closer in all of the examples we have of new economies of exchange, from the Rat Man’s debts to the gold watch chain and hair comb of O. Henry’s famous story of “The Gift.”

This becomes very exciting when we notice how many Rotas-Sator squares there actually are, which we never noticed before. Modern literature’s famous example is *Finnegans Wake*, where Joyce wrapped the text around itself in an act of self-intersection to produce a non-orientation at the level of individual elements, the Shems and Shauns, of the story. The elements then freely interact not just with each other but with things the reader is thinking about. It might be useful to think of how, in these terms, *Finnegans Wake* is actually a model of AI.

When Julio Cortázar singles out the reader’s freedom in his novel *Hopscotch*, it’s like he’s giving us something we already had but never realized, since polythesis is a condition of reading in the first place. This is to say what others have been saying, that AI is already something we’ve been doing with our own neurons, thank you very much. It rings true when artists make a big deal about it because it’s been going on since time immemorial. But, we never gave it a name, and for sure we never formalized its logic or related it to the experiences of anamorphosis. Making this connection has the advantage of using these experiences, which Lacan begins with the story of Zeuxis and Parrhasius in Seminar XI, *The Four Fundamental Concepts of Psychoanalysis*, or maybe even the Three Prisoners’ Dilemma of his 1945 essay on Logical Time, to have visual parts to play with.

In Seminar XI, Lacan relied on the work of Jurgis Baltrušaidis to see anamorphosis mainly in terms of the distortions of the picture plane that require a restricted point of view. This type of anamorphosis begins primarily in the sixteenth century, but in Seminar VII, Lacan was already wondering what might have happened before this, to fuel such spontaneous enthusiasm for distorted murals and images made to be seen with cylindrical mirrors. Hans Holbein’s famous painting of *The Ambassadors*, painted in 1533, gives a practical answer! Both Lacan and Mladen Dolar have missed the discovery of John North (*The Ambassadors’ Secret*, 2002), which shows how the artist had a much broader program in mind. The anamorphic *memento mori* image of a skull, to remind the viewer of the inevitability of death, turns out to be simply a step to discover information we find only on the back of the painting!

The date Holbein gives for the completion of the painting is over-precise. Normally the day is indicated, but not the exact moment. This is a faulty instruction, which tips us off that this painting is an induction puzzle. 4:00 p.m. is the time of day on April eleventh of 1533 when the sun would have been above the London Horizon on Good Friday, a moment that

many in Holbein circle of astronomers and astrologers believed would be the time of the Apocalypse. This time was “proven” by the convergences produced by multiples of threes: three eons of 500 years, thirty-three years of Christ’s life, and the angle of 27° that had set up the anamorphosis of the skull and positioning of the viewer.

What I’m aiming at here, is to show how such over-determination is not so much a matter of graphic or esoteric symbolism, but the idea of the permeability of the polythetic set! When a work of art is set up to manage the tensions of opposites — what we might call a visual contronym — the non-orientability of opposed relations do not happen in a specific place. Rather, they are distributed throughout the whole, which constitutes a kind of circuit with a twist. A hole in a line shoots through the whole line. [The twist of a Möbius band cannot be said to be at any one point along the strip.] A void in a solid extends throughout the whole solid, so that we cannot say whether we have a solid punched by holes or a collection of holes held together by a fractal net. Like the well-known Menger Sponge, Lacan’s idea of anamorphosis is more of a general theory of how the polythetic sets created by the signifying chain create hollowness throughout the signifying system, which is an economy of oppositions.

All this talk about polythetic sets may seem to be just some irrelevant annotation having nothing to do with psychoanalysis! I would like to show that not only is polythesis central to Lacan, but that Lacan had been aware of polythesis and its relation to topology via induction and inversion from the first of his theoretical career! To see this, we have to understand where the indivisible remainder in mathematics comes from, and how it relates to two of Lacan’s most important “mathemes,” the unary one and the little A, known as the *objet petit a*. We end up wondering how it is possible to reconcile the number 1, made as a fraction whose denominator is 9, with the idea that 9 over 9 should be fully 1, and not something with a perpetual small remainder!

Mathematical analogies of the indivisible remainder

To grasp polythesis is to understand how the remainder distributes itself throughout the medium it finds itself in. Lacan has a beautiful demonstration in Seminar 14 that seems to have been mostly forgotten, perhaps because no one uses slide-rules anymore. This brief exposition demonstrates how it is that, in any line we designate by the unary 1, there is a hole that serves the function of a balance, a point of transfer. Lacan uses the Fibonacci point as a good example of a pivot between how what comes next can be a function of what has just come before, as the number series 1 1 2 3 5 8 ..., and so on, defines the $\emptyset$ of the golden ratio.

By pulling out the *a*-point as external to the one and then pushing it back into the line, Lacan finds, using algebra, that the remainder will be a^2 . If that interval is pushed back into the *a* to the left of it, the subsequent remainder will be a^3 . Each new remainder will be a

power of a , with odd values on the left, even values to the right, basculating around the perpetually empty hole, which is a to the n^{th} power, the power of infinity. Lacan later uses this idea to confirm what Girard Desargues had said about the projective plane, that the horizon could be reduced to a point in the spherical space of perspective.

If the unary one is filled with holes, then it is automatically a circuit, not just one circuit but two, running at the same time but in opposed motions. Amazingly, this corresponds to the way that the signifier's duplicity as both content, *énoncé*, and an act, *énonciation*, is a double identity empowering the signifier's topological and semantic permeability, which is nothing less than a means of functioning simultaneously as a universal and a particular. But, what does this ratio of 1 over a mean? How does the remainder work within the Swiss-cheese version of the circuit?

Summarizing with a polythetic transcription

Let me try to tie up this argument for polythesis by showing that permeability has the practical function of showing something evident that embeds something uncanny. Lacan himself uses the famous painting, *Las Meninas*, with its famous mirror playing the part of the *objet a*, to introduce the contronym of a visual certainty combined with an indeterminate and uncanny remainder. The key here is to subtract everything that would balance the perspective within the physical canvas, so that the vanishing point is placed at the exact center of the four edges. But, of course Velázquez has shown more. The space to the top and left are like the back-stage of the main image, the place where the mirror gets its over-scaled reflection of the king and queen standing where we are, presently looking at the painting. This off-set shows us the *a-objet* in action, creating an irreducible remainder as troubling as point 9 9 9 9 9, and just as impossible to explain.

Through a series of inversions, the spectacle of the king and queen standing in the doorway in the space in front of the room we see, standing where we now stand, projects in a series akin to the powers of a , from the doorway to the canvas to the mirror and back again, a circuit that I'm describing here in reverse so that you can see how the interior-8 creates two motions working against each other. Just as Velázquez sought to make a painting that would be both something specific and certain but also at the same time universal, about painting itself, Lacan sought, in seminar 13, to see the 1 over a as a ratio of the subject and signifier capable of self-generating its own unconscious. This means that the ratio allows *Las Meninas* to serve both as a unique painting *and* a template, into which we can fit other paintings that align generally with its point of view, its shifters.

Thus, we can put the painting of saint Jerome in the role of a supplement, in the same way that a work of literature is meaningful only within the context of other works. *Meninas* does not have Jerome's potted carnation, but it does have a system of shadow lines that basculate between the visible and invisible. It does not have a golden bowl which Jerome

situates as the permanently virginal vessel of Mary, mother of God, but it does have an empty space closed in precisely the same way, a cross-cap void twisted at the top by the basculations of the image of the king and queen. And, certainly, it does not have a partridge, which is the key to the meaning of Jerome because it, like Jerome, can be impregnated by the wind. But, the meander it references because its Latin name, *Perdix*,¹ is shared by the purported inventor of the Thesean labyrinth, and in this primal figure of all architecture we have a dialectic between monster and hero that is the same as a space conquered by the eye, a darkness that must be penetrated by extromission and not just passively registered on a flat retina.

And, if we look deeper, we can find that the perspective that involves the rule of commutation, $ab=ba$, is broken by the mirror, whose insistence on a left-right order constitutes non-commutation $ab \neq ba$. This is not just as an accident of the painting but its indisputable visual principle. Of course, we would not have expected *Meninas* to yield to a lesser translator than Jerome, master of languages and creator of the vulgate Bible. But, we should also command *Meninas* to speak the “hole truth” as nothing but the truth, the truth of the void, by opening it up through the polythetic method, which I offer here as a means of a fully ethnological edition of Lacan’s psycho-topology.

¹ *Perdix*, Dædalus’ nephew, was thought to have invented some or most of marvels for which his uncle took full credit. Afraid he would be found out, Dædalus killed *Perdix* by throwing him off a cliff. The gods, pitying the innocent *Perdix*, gave him eternal form as a partridge, a bird that, seeming to remember its namesake’s death, always flies close to the ground. Medieval bestiaries claimed that the partridge was so over-sexed that it could be impregnated by the wind, which led Antonello to compare it to Jerome, whose translation was thought to be directly inspired by the divine *afflatus* of God.