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## Visions and Numbers: Aronofsky's $\pi$ and the Primordial Signifier

PAUL EISENSTEIN

Perhaps the revolutionary proposition of Lacanian psychoanalysis involves the notion that analytic discovery does not involve a finding of meaning. In lieu of such a finding, the end of Lacanian psychoanalysis entails instead an *encounter* with something that signifies whose most salient feature is its stupidity—that is, its inability to be inscribed in any meaningful way within the order of understanding and knowledge. Lacan calls this thing that signifies a pure or primordial signifier, and he insists that both the efficacy of psychoanalytic treatment and our very conceptualization of the structure of subjectivity is bound up ineluctably with it. Admittedly, Lacan's advocacy of the primordial signifier cuts against the contemporary belief that freedom, pleasure, and radical politics depend on our liberation from such signifiers (and in many cases from subjectivity itself). For Lacan, however, there is no getting beyond the primordial signifier, not when we recognize its structural necessity. Indeed, as Lacan sees it, the primordial signifier has simply a function—a formal gesture to carry out whose importance



lies not in the content of its signification, but rather in the fact that it is signifying. In a parable of sorts meant to illustrate this essential dimension of the signifier, Lacan says:

I'm at sea, the captain of a small ship. I see things moving about in the night, in a way that gives me to think that there may be a sign there. How shall I react? If I'm not yet a human being, I shall react with all sorts of displays, as they say—modeled, motor, and emotional. I satisfy all the descriptions of psychologists, I understand something. . . . If on the other hand I am a human being, I write in my log book—*At such and such a time, at such a degree of latitude and longitude, we noticed this and that.* [1993, p. 188, Lacan's emphasis]

This trivialization of just what a primordial signifier ends up moving a human being to write down—the message it brings reduced to a mere “this and that”—is part and parcel of a strategy to drain it of any and all meaning (thus meeting directly the charge that psychoanalysis belongs to the logocentric, and therefore dubious, history of reason and rationality).<sup>1</sup> Indeed, what distinguishes the primordial signifier for Lacan is precisely the extent to which it calls attention to its autoreferential, purely formal aspect. As Lacan puts it,

What distinguishes the signifier is here. I make a note of the sign as such. It's the acknowledgement of a receipt [*l'accusé de réception*] that is essential to communication insofar as it is not

1. This very notion of a pure signifier—of a signifier immune to perpetual partition—continues to mark the impasse between deconstruction and psychoanalysis. In his most recent critique of the latter, Derrida again brings to bear on psychoanalysis “the question of divisibility,” a question that renders impossible any putative claim to have unearthed a primordial signifier and thus reached a terminus of analysis: “Because dissociability is always possible (and with it the undoing of the social bond, dissociability), because one must always and can always analyze, divide, differentiate further, because the philolytic principle of analysis is invincible, one cannot assemble anything whatsoever in its indivisibility” (1998, p. 33).

significant, but signifying. If you don't articulate this distinction clearly, you will keep falling back upon meanings that can only mask from you the original mainspring of the signifier insofar as it carries out its true function. [1993, p. 188]

Here, Lacan points to the radical and unsettling dimension of the primordial signifier: we know we are in its presence when we are forced simply to take note of a sign *as such*, when we choose to acknowledge receipt of a “message” that signifies without being significant.<sup>2</sup>

As Lacan's parable suggests, it is a primordial instance of signifying that enables a properly human world to emerge. This is why it makes sense to speak of the primordial signifier's function as essentially “creationist.” As the first and purely formal instance of communication, it calls a human individual out of the animal world of automatic reactions and institutes a world in which objects and the natural environment achieve consistency and speech becomes possible. The psychoanalytic account of human and cultural development lies here—in the notion that a sign *acknowledged but not understood* is the only way to account for the passage from nature

2. The quintessential exemplar of such a message is, for Lacan, the statue of a smiling angel. According to Lacan, we need only visit a few cathedrals in order to see that an angel's smile is stupid—a sign that “it is up to its ears in the supreme signifier” (1998, p. 20). For this reason, angels underscore the function of the signifier. As Lacan puts it, “It's not that I believe in angels . . . it's just that I don't believe they bear the slightest message and it is in that respect that they are truly signifying” (pp. 20–21). This same point can be seen in Adorno's championing of modernist art over and against social realism, his belief in the radical potential inherent in the autonomous work of art. Does not Adorno's aesthetic theory rest likewise on situating the work of art at the level at which its form alone isolates the primordial, alienating signifier of late capitalist social relations—that is, on the essential abandonment of a work of art dedicated to the communication of a message or lesson? As Adorno puts it, “The very idea, so fashionable nowadays, of ‘stating something’ is irrelevant to art” (1977, p. 168). Nor is “the office of art to spotlight alternatives” (p. 180). Instead, in Adorno's memorable phrase, the work of art resists the course of the world (i.e., the extant social order) *by its form alone*, rejecting in the process what Adorno called “the dogmatic sclerosis of content” (p. 154).



to culture, from the animal world of instinct and appetite to the human world of language and desire. This sign acknowledged but not understood (i.e., the signifier) literally *effects* the subject—that is, it brings a subject about out of nothing. We are, as Lacan suggests, “not yet a human being” when every signifier is understood to bear a meaningful and intelligible message.<sup>3</sup> Indeed, when every desire is automatically and directly materialized, we cannot yet even be said to reside in the order of desire proper. But when one signifier exempts itself from the order of meaning, when the message it brings eludes understanding, when we are forced to take note of its strictly formal function, then a fundamental division between self and Other can be said to have taken place, and a social order emerges in which we begin to speak and signify. Lacan’s central thesis regarding the advent of subjectivity and the social order returns again and again to the key role played by the primordial signifier in setting the subject adrift in a world of alterity, a world in which others appear to want something of us. When Lacan claims that “the signifier is what brings jouissance to a halt” (1998, p. 24), this is what he means: functioning as a sign that strikes the subject as a kind of address, the signifier interrupts the apparent (but in fact engulfing) idyll of presymbolic enjoyment, inaugurating a subject of desire and crystallizing an ontologically consistent social reality capable of being apprehended by human beings.

The “this and that” whose observation is enabled by the primordial signifier, then, is perhaps the most sublime of all trivia; as

3. One of the most interesting features of Steven Spielberg’s *A.I.* lies in its depiction of this idea. When David, the young “mecha” child (a mechanical being with artificial intelligence), is first introduced into a human family, he appears as an inhuman presence, evincing a dispassionate coldness and inability to interact smoothly with his new mother and father. This coldness stems directly from his belief that every signifier bears a meaningful message, which is why the “directions” for adopting him involve confronting him with the stupid dimension of the signifier. His mother effects his humanization by reading a series of seven stupid, nonsensical signifiers. This encounter with the senseless signifier thrusts David into the realm of humanity, and he immediately hugs his “mother” and expresses his love for her.

the exception that interrupts the circuit of demand and satisfaction, it ends up serving as the basis upon which human beings find their bearings in the world. We have here, of course, landed on the centrality of the Oedipus complex (i.e., the phallus *qua* primordial signifier) in the development and socialization of human sexuality. By introducing the signifier, the Oedipus complex enables the supersession of polymorphous sexuality by a hierarchization of the drives, thus conditioning a relationship between human beings and their sexed bodies that takes into account the larger norms and rules governing the display or practice of sexuality (including, most crucially, the prohibition of incest). But the pure or primordial signifier emerges just as crucially in other forms—for instance, in the most primitive of cave paintings and mythological stories and in the highest natural laws unearthed by modern physics. Because both furnish signifiers without the slightest literal meaning, they provide the basic rules and laws that set us upright in the world, lending an organization and a structure and an order to human reality—or, as Lacan’s encomium for Einstein’s “little equations” would have it, “thanks to him we hold the world in the palm of our hand” (1993, p. 184).

Lacan’s claims regarding the stupidity of the signifier bear directly on what is arguably the dominant symptom of our historical moment—the psychotic structure (and threat of full-blown psychosis) currently animating a number of contemporary scientific and mathematical efforts to “discover” that the primordial signifiers that stitch up a given universe of meaning *do* in fact carry a message of intelligible and meaningful content. Underwritten by the belief that these signifiers *were never bereft* of literal meaning in the first place, these efforts work at “incorporating the exception”—at certifying once and for all the tumescence of the signifier. Examples of these efforts are numerous. There is, for example, the so-called Bible Code, in which events as disparate as Newton’s discovery of gravity, the Stock Market’s 1929 collapse, and Yitzhak Rabin’s assassination are foretold by the God of the Old Testament. There is the Suzy Smith Project at the University of Arizona, in which subjects algorithmically encrypt a short phrase or sentence



that they'll then attempt to communicate to a living person after they die (thus confirming the survival of consciousness in the here-after). And finally, there is *The Second Coming Project* in Berkeley, California, which aims to locate an "incorrupt cell from one of the many Holy Relics of Jesus' blood and body" for the purpose of fertilizing a human egg with Christ's DNA and then implanting the zygote "into the womb of a young virginal woman (who has volunteered of her own accord), who will then bring the baby Jesus to term in a second Virgin Birth."<sup>4</sup> In all of these quests, we seem to be in the midst of concerted, psychotic attempts to show that our symbolic order has in fact been carrying the traces of its canonized status all along, that its ground is a sacred, extratemporal order of meaningful knowledge that has simply been awaiting the technological progress necessary for its discovery.<sup>5</sup> It is this order of knowledge, then, that stands ready to rebeatify our world and thus reverse the effects of that traumatic cut that marks the institution of the signifier—what Lacan, in the aforementioned parable, refers to as "things moving about in the night that gives me to think that there may be a sign there."

The hidden but crucial mediator of these efforts is the critical, said-to-be "objective" or "ideal" signifying capacities believed to inhere in the means by which science and math register and transmit information. The miracle of these capacities, for their adher-

4. For more on these three phenomena, see, respectively, Drosnin (1997, 2002), Smith (2000), and *The Second Coming Project*.

5. This view finds its clearest expression in Drosnin's 1997 bestseller, *The Bible Code*, in which Drosnin—a skeptic won over to the idea that the Old Testament foretells significant events in human history—claims that we can certify the truth of the Bible Code today only because we have the technological means to do so. As Drosnin puts it, "The Bible is not only a book—it is also a computer program. It was first chiseled in stone and handwritten on a parchment scroll, finally printed as a book, waiting for us to catch up with it by inventing a computer. Now it can be read as it was always intended to be read" (1997, p. 25). We see it also in the discourse of *The Second Coming Project*, which claims that certain key events and lines in the New Testament—e.g., the Last Supper, "In him we have redemption through his blood" (Ephesians 1:7)—have awaited the discovery of cloning for their true meaning to be apprehended.

ents, rests precisely in the presumption that the ultimately meaningful natural and/or theological truths and causes they discover remain uncontaminated by the means used to procure and communicate them. This is not just to repeat the maxim that every observer changes, in however small a way, what he/she observes; it is to say, instead, that structurally speaking, there is necessarily a non-sensical dimension—a point of opacity—in the Thing observed that permits our observation of it in the first place. In other words, something about the Thing is not, and cannot be, entirely obvious. That so many recent scientific and mathematical attempts to break through and discover the very secrets of extratemporal knowledge rely explicitly on code is thus not surprising. As a metalanguage more accurate than our own, codes come to stand as a form of transcendent and meaningful writing *written by* the Other and existing independently of human cognition. That is to say, codes appear as a kind of metalanguage immune to the conditions or limitations that make a discourse possible.<sup>6</sup> Today, DNA is increasingly regarded as a kind of code containing the truth of our being—the very secret of life.<sup>7</sup> And computer codes are routinely

6. These conditions, as I have been saying, involve the extent to which symbolization already entails the flight or cancellation of the real. One categorical imperative of psychoanalysis is thus to insist that no discourse can claim to have intelligibly rendered or captured the real. As Bruce Fink puts it, "Psychoanalysis' claim to fame does not reside in providing an archimedean point *outside of discourse*, but simply in elucidating the structure of discourse itself" (1995a, p. 137).

7. For the genealogy of this phenomenon, see Kay (2000). Kay's (Foucauldian) historicization of the rise of the genomic code—it is, she claims, a "period piece," a manifestation of the emergence of the information age" (p. 2)—captures beautifully the extent to which discoveries pertaining to the "elementary unit of life" become enmeshed in biological meaning-making efforts. From Kay's account, it is possible to see a kind of "stupidity" in molecular biology's construal of genes prior to the 1950s. Then, genes were seen simply as proteins bearing biochemical specificities. Prior to the '50s, when the idea of codes or information was invoked, it was almost exclusively as a metaphor, the words themselves appearing in quotation marks. But as molecular biology gets overrun by "the technoscientific imaginaries of the missile age," the discourse of information transforms the notion



credited for uncovering—at long last—meaningful signification in the real: only a computer, for instance, is capable of turning the original Bible into one continuous letter strand (304,805 letters long) in order to map every conceivable sequence of letters, and only a computer is able to encipher phrases into mathematical codes that can later be deciphered to confirm that a given communication received from the dead is in fact authentic and not one more instance of the deception that announces the symbolic order's imperfection. Indeed, today, codes appear more and more to solidify the triumph (initiated by Bacon) of the truth claims of science over those of theology—that is, its ability to *explain* transcendence in material terms and thus absorb all metaphysical accounts of causality by referring them to the structural rigor of the scientific method.<sup>8</sup>

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of genes *qua* proteins into the notion of genes *qua* information, language, code, message, and text. The quotation marks disappear and the genomic code becomes itself an ontology, a veritable Book of Life whose unambiguous reading has awaited the material and theoretical tools of molecular biology. The problem with such an unambiguous reading is nothing less than the conceptual ground it clears for eugenics. If Kay's initial aim is to restore the fundamentally metaphorical nature of the genomic code—"The genetic code is not a code; it is, rather, a powerful metaphor for the correlations between nucleic and amino acids" (2000, p. 11)—she does evince the characteristic poststructuralist unease with metaphor *in toto*. Thus her suggestion that those who attempt to use information theory in molecular biology in its intended form—to see, for example, the genomic code as a primordial signifier bearing information that must not be confused with meaning—themselves introduce a totalizing discourse that risks arresting the polysemic nature of any putative "universal" or "absolute" instance of writing. For a similar genealogical critique of the way scientific explanations are the product of a given epistemological culture—that is, the way that explanations *get to count as explanations* only if they meet certain needs—see Keller (2002).

8. Perhaps the paradigmatic instance of this involves recent neuroscientific research that explains religious experience—what Michael Persinger calls "the God Experience"—in terms of the evolution of neural networks, neurotransmitters, and brain chemistry. Relying on the most advanced brain-imaging technology, this research focuses on "brain function" during meditation, prayer, and ritual experiences in order to understand more completely the feeling of having communed with a transcendent Being. For this thesis, see Persinger (1987) and Newberg and D'Aquili (1998). The unstated assumption informing efforts such as these is that no phenomenon can ultimately escape the order of scientific laws.

At one level, the assertion of such codes at least has the advantage of arresting the endless play of substitutions characteristic of a more metonymic, deconstructionist universe; at another, however, they raise the paranoid specter of a language that *coincides with*—instead of sublating—what it illuminates. Far from replacing, canceling, or otherwise barring access to the Other in its lethal, indistinguishable-from-myself, flesh-and-blood dimension, these codes usher us into a seeming paradise of plenitude. But the coherent image of this imaginary paradise is entirely a psychotic fantasy, since it emanates always from a symbolic position and functions as a way of compensating for the lack and inconsistency that is part and parcel of that position. It is here that we can see the extent to which today, by failing to exempt primordial signifiers from our meaning-seeking efforts, we obstruct the signifier's crucial role in the institution of the symbolic order—that is, its overwriting of the imaginary, its calling a halt to *jouissance*. By failing to permit the exception around which a universe of meaning is constituted—the metaphorical substitute for the ultimately lethal *jouissance* of the flesh and blood Other (Mother, Nature, God)—we risk losing that critical place for ourselves as subjects to gain a foothold, a place secured only when a primordial signifier comes to name and neutralize the potentially all-engulfing lethal *jouissance* of the Other. The failure of this "essential metaphor"—the Name-of-the-Father, the natural Law—to take hold ends up then catalyzing a psychotic structure in which there is no lack admitted in the Other, in which the Other telegraphs its intentions not through the dead letter of the Name or formula but directly to the subject in the form of libidinally invested, prelapsarian primordial signifiers.

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As Fink puts it, "Causality in science is absorbed into what we might call structure—cause leading to effect within an ever more exhaustive set of laws. A cause as something that seems not to obey laws, remaining inexplicable from the standpoint of scientific knowledge, has become unthinkable—our general tendency being to think that it will just be a matter of time before science can explain it" (1995b, p. 64).



The diagnostic/conceptual dividing line between neurosis and psychosis lies here: if hysterics encounter a signifier whose meaning remains enigmatic, psychotics never really encounter the signifier proper, since every use of signifiers is believed to bear significant information. Indeed, as Lacan points out, what is most distinctive about the existence of the signifier—the possibility of it being used not to *inform* but to *lure*—is precisely what does not belong to the psychic economy of the psychotic. For the psychotic, every exchange of words is informational. Put another way, psychotics fail to observe the Lacanian distinction between a signifier that signifies without being significant. In short, for the psychotic, every word is significant; no word merely signifies. Psychoanalysis, however, stakes our equilibrium on the non-sensical dimension of the pure signifier. As Lacan puts it, “to extract a natural law is to extract a meaningless formula. The less it signifies anything, the happier we are” (1993, p. 184).<sup>9</sup> As a science, psychoanalysis already has as its target the psychotic structure that underwrites the fundamentally theological fantasy of the natural and social sciences—the notion that the deepest secrets of nature and society will, in the end, be shown to have had a meaningful ground all along.

This fantasy is crystallized in an exemplary way in Darren Aronofsky’s  *$\pi$*  (1998), a film that, in taking its viewer on the path from scientific pursuit to full-blown psychosis, ends up as a kind of object lesson in the etiology and symptomatology of psychosis for late capitalist culture at large. The achievement of Aronofsky’s

9. For Lacan, the space for interpretation depends on reducing the significance of the signifier. This is why psychotics face no interpretive problems. Refusing to concede the nonsense in signifiers, psychotics always find more and more meaning, and thus never really get to the question of subjectivity. Instead, psychotics remain wedded to the ego. As Marie-Hélène Brousse points out, the nonsense in signifiers is what “allows you to impoverish the ego. Interpretation has to be enigmatic, that is, it has to produce less knowledge. By that, Lacan means, in the analytic setting, knowledge is to be taken as a test for knowledge and not as an application of knowledge” (1996, p. 126).

film, however, does not extend simply to the accuracy of its portrayal of psychosis. This is because  $\pi$  ends up—in the encounter it stages between viewer and film involving both a numerical signifier (a 216-digit number believed to contain the key to the thorniest of social and cosmological enigmas) and a visual signifier (the image of its central character at the instant of performing a kind of self-lobotomy)—forcing a confrontation with that which cannot be made to mean. In the visions and numbers around which  $\pi$  is structured, in other words, Aronofsky manages to isolate the primordial signifier in its purely formal dimension. Thus at the end of Aronofsky’s film, what we have discovered is a kind of imagistic equivalent of the primordial signifier, an antidote of sorts to the psychosis that the film depicts and the antithesis to the lion’s share of commercial Hollywood films in which the central images are eventually inscribed within some intelligible and meaningful framework.<sup>10</sup>

The immediate context for Aronofsky’s film is no doubt the historic, four-thousand year quest to fix the exact value of the most

10. As representative of this trend, we might consider here M. Night Shyamalan, and the way his films are driven primarily by an inexplicable phenomenon, a nonsensical image or phrase, that ends up being rendered intelligible by film’s end. The appeal of *The Sixth Sense* (1999), for example, lies in the basic mystery confronting child psychologist Malcolm Crowe (Bruce Willis)—a boy (Cole Sear, played by Haley Joel Osment) with the capacity to “see dead people.” The full meaning of this phrase is not revealed until we learn by the end that Crowe, himself, is one such dead individual. The narrative of *Signs* (2002) shares a similar logic. Arriving at the scene of a fatal car crash involving his wife, Father Graham Hess (Mel Gibson) is able to hear her final, seemingly nonsensical, words: “Swing away Merrill, swing away.” The accident is responsible for Hess giving up both his faith and position in the church. At one point, Hess sees these lines—which refer to the brother-in-law who now lives with him after a failed professional baseball career—as simply the random firings of some nerve endings in his wife’s brain. The film’s climactic scene, however, in which the Hess family is confronted directly by a menacing alien, grants them a prescient dimension. That scene dismisses the existence of coincidence, of the free-floating signifier that has no anchor in the universe of meaning. In the end, this is what convinces Hess to become “Father Hess” again.



famous of irrational numbers ( $\pi$ )<sup>11</sup>—a quest whose current manifestation has mandated the building of ever more elaborate computers capable of calculating the ratio of a circle's circumference to its diameter out to billions of digits (the current record is 51 billion). This quest to "square the circle" has almost always been a theological one. What has attracted so many to figuring out the value of  $\pi$  has not simply been the complexity of its endless divisibility but rather *why* it should unfold in such a complex manner.<sup>12</sup>

11. The discovery of irrational numbers—that is, numbers that cannot be identified completely, since they have no patterns that repeat and thus require an infinite number of decimals to be written exactly—constitutes one of the decisive paradigm shifts in mathematics away from algebra and toward geometrical/mathematical analysis. It is their discovery that is responsible for dealing the death blow to the (Pythagorean) notion that "God is number," that the perfection of God rests in the fact that the relationship between magnitudes could be represented with integers and their ratios. Irrational numbers give, as it were, a Kantian turn to the mathematical screw, since they base mathematical analysis not on the perfect truth and logic of rational numbers (i.e., numbers that are either "whole" or that can be written with decimals that eventually become zero or that have a pattern that repeats itself indefinitely), but on the notion of geometrical demonstration and a continuum leading to infinity whose terminus cannot be reached. For an overview of this paradigm shift, see Aczel (2000, pp. 11–24). Kant, himself, credits geometry with ushering in a revolution "much more important than the discovery of the passage around the celebrated Cape": because geometry recognizes a kind of opacity/irrationality in numbers, it ends up dealing not with what numbers and the properties of figures are, in themselves, a priori. Instead, what geometry elucidates is that numbers and the properties of figures are brought out by an act of the subject—that is, "by virtue of what [the mathematician] himself was, according to concepts, thinking into it a priori and exhibiting" (1996, pp. 17–18).

12. For an overview of the history informed by this notion, see Blatner (1997). Blatner notes that no measurement realistically requires even 100 digits of  $\pi$ —engineers routinely use no more than seven and physicists use no more than fifteen or twenty. For him, the search for  $\pi$  is "deeply rooted in the human spirit of exploration—of both our minds and our world—and in our irrepressible drive to test our limits" (p. 3). As Blatner sees it,  $\pi$  separates the line between the finite and the infinite and thus represents a mystery to be appreciated. Behind this appreciation, however, appears to be a deferral of the (Hegelian) recognition that every pull up in the face of the infinite is in fact the infinite. The computation and writing of the decimals—Blatner's own book contains one million

For Max Cohen (Sean Gullette), the brilliant mathematician at the center of Aronofsky's film, the advances and insights into mathematical knowledge likewise have little to do with utility. As Max asserts in one of the film's initial voice-overs, mathematics is the very language of Nature. Everything around us can be represented and understood through numbers, he claims, and these numbers, if graphed, will reveal the emergence of meaningful patterns. Max's voice-over here culminates with his sitting in a park in New York City's Chinatown, staring at the leaves at the top of a tall tree, with shots from Max's point of view that zoom in on these leaves suggesting a kind of superior, penetrating sight on Max's part. (The reverse shots likewise zoom in on Max's face, suggesting an uncanny intelligence in Nature itself.) As we might expect, this deep-seated belief that nothing in Nature eludes our sense-making capacities has its origins in Max's boyhood, where the institution of the primordial signifier in the form of a fundamental prohibition never took hold. This is made clear in the film's initial voice-over in which Max gives us our lone insight into his childhood: as a boy, he disregarded his mother's prohibition not to stare at the sun, and the experience resulted in the temporary bandaging of his eyes, in recurrent headaches, and in the feeling (as Max puts it) that "something had changed inside me."

Far from functioning as a lesson on the necessity of symbolic interdictions, this experience is described instead in words Icarus might have used (the film will later invoke the Daedalus–Icarus motif)—as a kind of triumphant refusal to accept any effective prohibition. For Max, this refusal amounts to an instance of fortitude that provides direct access to the deepest sources of the Other's (in this case, Nature's) secrets, delivering in the process a moment of

of the digits—might be a way to evade an encounter with the symbolic icon  $\pi$ , and the fact that it *keeps on signifying*. From the standpoint of physics, the same is true for the crucial element *hydrogen*. As John Rigden suggests in the epilogue to his "biography of hydrogen," the continued existence of science is linked to the fact that "the hydrogen atom still beckons," on the fact that there is something about this "essential element" that remains opaque (2002, p. 255).



pure understanding.<sup>13</sup> Convinced of the existence of patterns everywhere in nature—in disease epidemics, in the wax and wane of caribou population, in sunspot cycles, in the rise and fall of the Nile—Max has now centered his attention on the stock market, believing that it, too, must evince a meaningful pattern capable of being known. Indeed, this is for him, in some sense, the sole significance of the stock market: just like the movement of the leaves of a tree, it is an entity *that* is signifying, and Max is committed to discovering the “intelligence” behind it.<sup>14</sup> For him, the stock market stands not as the exemplary signifier without signified of late

13. This sense of triumph emerges in Max's second voice-over dealing with the disregarded prohibition: “When I was a little kid, my mother told me not to stare into the sun. So once, when I was six, I did. At first, the brightness was overwhelming, but I had seen that before. I kept looking, forcing myself not to blink. And then the brightness began to dissolve. My pupils shrank to pinholes and everything came into focus. And for a moment, I understood.”

14. One sign of Max's psychosis here is that he is not at all concerned with symbolic recognition or material advantage. This is patently clear in his rejection of the Wall Street firm Lancet-Percy (i.e., the “petty materialists”), which wants access to Euclid's predictive abilities. On the contrary, Max wants *perfection*—the *jouissance* of the Other in an unmediated form. Aronofsky extends this insight into psychosis in his second film, *Requiem for a Dream* (2001). At first glance, it might appear that Aronofsky has pursued a different path, since the thing that catalyzes the plot is his protagonists' attempt to secure the recognition of the Big Other: Sara Goldfarb (Ellen Burstyn) wants to appear on television in her red dress and thus regain the recognition she imagines she once enjoyed; her son Harry Goldfarb (Jared Leto) and his girlfriend Marion Silver (Jennifer Connelly) aim to open up a dress shop; and Harry's friend, Tyrone C. Love (Marlon Wayans), is shown more than once speaking to a picture of his dead mother about his pursuit of money and security. But as *Requiem* dramatizes the quest to realize the “dream” of societal validation, it ends up showing that the (horrific) appeal of a pre-symbolic *jouissance* is too great. This explains the great pull of the addictions that lead to the ruination of the four (captured, in the film's climax, by the way Aronofsky depicts a kind of horribly triumphant orality: Sara has a rubber appliance put into her mouth during her electroshock treatment; Marion has a dollar bill shoved into her mouth while being forced to “perform” at the party; Harry's mouth is covered by an oxygen mask). The end of the film reveals that the other “dream” in the film—centered on Harry and Marion's love for each other (at one point, Harry says to Marion that she is his “dream”)—is likewise no match for the lethal *jouissance* of the Other.

capitalist social relations; on the contrary, he sees it as “a universe of numbers that represents the global economy. Millions of human hands at work . . . billions of minds . . . a vast network screaming with life. An organism. A natural organism.” His hypothesis is that deep within the stock market, “there is a pattern as well. Right in front of me. Hiding behind the numbers. Always has been.” In the attempt to make plain what has been hidden, Max's life (and entire apartment) is devoted to Euclid—a monstrous, homemade assemblage of monitors, hard drives, modems, and cables that Max has retrieved from an electronic mega dump, that exceeds in power and speed the entire Columbia University computer science department and that is on the verge of being able to predict with 100 percent accuracy the daily vicissitudes of the market. At the onset of the film, Max is “so close” to achieving this accuracy, and he spends his days working to inoculate Euclid against anomalies he chalks up to human error, and checking *The Wall Street Journal* against the data Euclid is able to produce.

At the coffee shop where he compares stock quotes, however, Max makes the acquaintance of Lenny Meyer (Ben Shenkman), an orthodox Jew who, upon learning Max's name, reminds him of his Jewish identity, mentioning Kabbalah and the fact that it is now a “critical moment” in the history of Judaism. Lenny asks Max if he's ever put on tefillin—the small cube-shaped boxes worn on the forehead and arm, containing the four textual sources (from the Bible) for the practice. Two of these sources come from Exodus and concern the duty for each Jew to commemorate God's deliverance of the Jews, to acknowledge a God for whom such deliverance begets certain responsibilities and obligations. The other two come from Deuteronomy and concern Judaism's basic prayer, the *Shema*, which begins by acknowledging the singularity of God (“Hear O Israel, the Lord our God, the Lord is One”) and then proceeds to lay out a detailed description of the rewards and punishments that might follow from obeying (or not) His laws. For Lenny, tefillin have “a tremendous amount of power” and putting them on is a “mitzvah for all Jewish men to do”—a good deed that “purif[ies] us and bring[s] us close to God.” The tefillin may



"look strange" (at these very words of Lenny's, Aronofsky cuts to a close-up of this object), but the place of the small box in daily Jewish worship is clearly intended to recall the symbolic pact made between God and the Jews—a pact rooted in filial recognition of the paternal Law, as well as the several substitute satisfactions God offers in the form of speech, writing, ritual prayer, and obedience. Conceptually, tefillin introduce both the conditional freedom that constitutes the theme of Exodus and the Jews' deliverance from slavery in Exodus, as well as the injunction to love and follow the entire codified set of good deeds designed to secure the approval of God. The practice of putting on tefillin involves the realization of this conceptual dimension. The knots and straps placed on head and arm involve, as it were, a symbolic performance of *self-binding*, a constraining of one's intellectual and bodily prowess. In this light, it is not hard to see why the very mention and sight of tefillin constitute the threat to Max that they do. As a reminder of a fundamental obligation, it presents to Max the place of the Law where there is no signifier, the edge of a hole, and thus triggers in Max the first of a series of psychotic breaks in which Aronofsky ushers his viewer entirely into the domain of the imaginary, besieging us with a rapidly cut chaos of perceptions, sensations, visual images, and auditory impressions. His thumb twitching, his head invaded by sounds he can't control, Max returns to his apartment where he hallucinates the existence of an "Intruder" pounding on his door, unlocking its several bolts, and finally breaking its chains—at which point he becomes unmoored from the social world altogether, and the film's field of representation is entirely taken over by what Aronofsky has termed "the blinding white void."<sup>15</sup> One of the achievements of  *$\pi$*  lies here, in its depiction of the paradoxical and harrowing nature of the fully fledged psychotic break, in which the

15. Strictly speaking, this is the second such breakdown, since the last frame of the opening credits—not coincidentally, the picture of a whitened sun against a black background—is engulfed by the blinding white void that dissolves eventually into the opening image of the film: an extreme close-up of Max's face, his nose bleeding, his cheek to the floor as he comes to.

subject is completely engulfed by the jouissance of the Other. For Max, God is not yet an entity one must attempt to satisfy—and thereby ward off—by the repeated performance of ritual; on the contrary, He is an entity to be *known*, a source of perfection that can help us understand (and thereby gain mastery over) our world. But as the film clearly demonstrates, the knowledge and perfection he seeks at the same time threaten the very ontological consistency of Max's universe, which explains his injunctions (on the cusp of the break) for the "Intruder" to "leave me alone." Refusing to accede to the act of exchange that marks the very founding of Judaism (and of any symbolic order)—the dividing up and distributing of jouissance—Aronofsky thus depicts Max being made to bear God's return in the real. And what that return entails is not the harmonious symbiosis with the Other that the psychotic imagines.

After regaining consciousness, Max symptomatically interprets his problem as an organic one whose remedy rests with neuroscience and pharmacology.<sup>16</sup> Soon, Euclid accurately predicts a series of stock quotes—in the process spitting out a 216-digit number at the very instant that it crashes—and Aronofsky's film arrives at the primordial signifier whose meaning the psychotic is desperate to literalize.<sup>17</sup> The notion that this signifier bears a literal meaning—that there is something to be seen behind or beneath

16. The list of Max's "failed treatments" (given to us in a voice-over) is a long one: beta-blockers, calcium channel blockers, adrenalin injections, high-dose ibuprofen, steroids, trager metastitics, violent exercise, Cafergot suppositories, caffeine, acupuncture, marijuana, Percodan, Midrin, Tenormin, Sansert, homeopathics. He also consults some sort of medical textbook, hoping to localize that section of the brain that might be responsible for his "headaches." Needless to say, all of these measures treat the problem as organic/physiological.

17. It is interesting to note that when Max takes apart his computer to discover the cause for the crash, he finds the remains of an ant that has left some sort of ooze on the circuit boards, shorting them out. This ooze cannot be silicon, given silicon's melting point of 1414 degrees Celsius (2577 degrees Fahrenheit)—a feature that makes it so suitable for circuit boards. At any rate, this organic discovery of what in fact interfered with his computer's ability to run correctly becomes, in Max's hands, a profound source of inspiration. In this scene, and the one following it, I think we can see Aronofsky playing off the motif at



the number—is only enhanced by Max's discoveries following Euclid's crash: first, that his mentor Sol Robeson's (Mark Margolis) investigations into the number  $\pi$  crashed into a 216-digit number as well and second, that Lenny Meyer's group of Hasidic Jews (led by Rav Cohen [Stephen Pearlman]) believes the same number to be the true name of God whose intonation would reverse the Roman destruction of the Second Temple and thus restore the High Priests of Judaism (the *Kohanim*) to their place at the center of that Temple and, ultimately, return the world to the Garden of Eden.<sup>18</sup>

In the case of the latter, we see perhaps most explicitly the extent to which the vivification of God is linked to the meaning believed to reside in the father's *name*. Citing the Talmud, Rav Cohen instructs Max that the entire priesthood, all of the *Kohanim* (the Cohens), were destroyed by the Romans at the destruction of the Second Temple. In this way, their "greatest secret" was destroyed, and along with it, any real ground capable of guaranteeing the integrity of their name. Bereft of the Temple, there is no longer a place for the crucial "single ritual" that the holiest of priests—the "High Cohen"—must perform. According to Rav Cohen, on the Day of Atonement, all of Israel would descend upon Jerusalem to witness this priest's trip into the "earthly residence of God" at the center of the great Temple for the purpose of intoning His true name. If the priest was pure, he would emerge a few moments later and Israel's security and prosperity would be secured for the coming year. In this account of Rav Cohen's, we have here not just an effort to bring Max back within the fold of Judaism—to make him a "Cohen"—but all the ingredients for the formation of a group

the heart of the story of Archimedes, a figure whom Max's mentor, Sol, actually invokes later in the film. I thank Edward Fowble for helping me to read these scenes of the film.

18. Each letter in the Hebrew alphabet carries a numerical value, a fact that has led some to impute a superior intelligence to this particular language alone. We see this in Lenny's initial attempts to interest Max in the Torah and Kabbalah, showing him, for example, how the numerical value of the Hebrew word for mother (41) added to the numerical value of the Hebrew word for father (3) is equal to the numerical value of the Hebrew word for child (44).

of believers: a group ratifies its privileged place in God's gaze through a ritualized performance rooted in an utterance permitted to only one man in one restricted space. It is perhaps here that the trauma of the destruction of the Temple comes through most clearly, that a direct line from that destruction to our contemporary psychotic universe emerges. Indeed, might we see the circumscribed space of the Temple not merely as a sign of its holiness, but rather as the place that veils the stupidity of the signifier, as the place where a purely formal, performative, "magical" self-legitimizing gesture takes place? The trauma of the destruction of the Temple, then, resides not in the loss of the true name of God, but rather in the Wizard of Oz-like drawing back of the curtain on those founding signifiers that gain their force purely from their own enunciation. Bereft of this space, Rav Cohen cannot position himself as a symbolic father, electing instead to take up the role of *Urvater* and hoping Max is interested in *protection* from God's jouissance. But as Paul Verhaeghe has observed, in the wake of the loss of symbolic paternal authority, "primal fathers are popping up everywhere, on the lookout for their own jouissance" (2000, p. 139). We might see Max, himself, as such a father. This would explain why he will not for an instant entertain the possibility of letting a Cohen "higher" than himself intone the word.

Aronofsky has already prepared us, however, for the fact that an intoning of the word is likely neither to recover a foundation that is beyond or beneath its own utterance, nor to become the meaningful basis for group identity. As Max's psychotic breaks have already made plain, there is only a kind of nothingness—a blinding white void—beyond or beneath the primordial signifier. And though the parties seeking possession of the 216-digit number *imagine* it as a conduit for stability and understanding and an exalted sense of community, Aronofsky's film stages precisely the opposite outcome. This is its central importance as a film; rather than consent to the "lie" that cements a given social order—the belief that Max is, in fact, a "high priest" of sorts, the bearer of knowledge that they want to know nothing about—the parties seeking possession of the number evince themselves the symptoms



of their investment in a psychotic fantasy. Thus, the meaning of the number becomes necessarily an *exclusive* one. Max believes, for instance, that God has chosen to place the number in *his* head alone; Marcy Dawson of the Wall Street firm Lancet-Percy believes that the number is fair game for them because information is ipso facto the language of capital and competition the law of nature; and Rav Cohen claims that Max is merely the “vessel” for a delivery meant for them. It is no accident that all three parties act violently toward each other. Here, Aronofsky gets at the implicit psychotic link between capitalist competition and religious fundamentalism: both seek the secret they imagine would secure their supremacy, even as Marcy Dawson speaks of the “symbiotic relationship” her firm is trying to forge with Max, and Rav Cohen instructs Max in the link between the number and an impending Messianic Age.

This link is made formally explicit both in the ways we are made to see the cube-shaped Ming Mecca chip provided to Max by Lancet-Percy as well as the way it functions as an object in the film. This not-yet-declassified chip is introduced as the key to Euclid’s recovery and triumph, and Aronofsky situates and shoots it in such a way as to make its parallel to a tefillin box unmistakable. We first see the Ming Mecca chip in a closeup that mirrors the closeup of the tefillin Lenny first showed Max, and as with the tefillin, the sight of the chip triggers somatic reactions (e.g., thumb twitches) that betoken another invasion into Max’s head by an Intruder. The second time we see the chip comes in a medium shot of Max installing it into his mainframe—a shot that frames Max’s installation as a kind of monstrous parody of the act of putting the tefillin around his head. Finally, when Max does get the chip installed, it triggers a “meltdown” in which Max’s rapid circling of the camera recalls the earlier circling shot to which Aronofsky cuts when Lenny does get Max to put on tefillin and the two of them begin to recite the *Shema*; both evoke an anxious and frenetic encircling of the void.

But the accuracy of  $\pi$ ’s depiction of rampant cultural psychosis is part of a more generalized portrait of the way individuals encounter alterity in a society bereft of the primordial signifier,

where there is nothing to shield us from constantly being enjoyed by others. Almost all of the (little o) others Max encounters in the film are seen as adversarial, invasive, and violent—the bearers of a menacing *jouissance*. Aronofsky captures this cinematically in several ways. First, he films Max in public spaces in ways that make what Max sees almost always threatening—capable of being looked at in only the quickest of glances. In these spaces, a hideous sense of enjoyment seems to pervade even the most ordinary of gestures (e.g., a man eating a sandwich on a street corner, a man reading the newspaper on the subway, etc.). Even Max’s hallucinations betoken an overproximate Other whose exclusive gaze he cannot escape (e.g., the elderly man Max “sees” in the subway who breaks out into song: “Are the stars out tonight?/ I don’t know if they’re cloudy or bright/ For I only have eyes for you, dear”). It is precisely this Other whose most notable feature is its overproximity that demands a kind of speed and vigilance on Max’s part whenever he is in these spaces (e.g., in the subway, in the bodega, walking on the streets of Chinatown, etc.).<sup>19</sup> To capture this speed—and accompanying sense of disorientation—Aronofsky almost always reduces the frame rate in Max’s point-of-view shots, thus revealing the increasingly hyperaccelerated world that Max imagines outside the confines of his or Sol’s apartment. In addition, he often shoots the reverse tracking shots of Max with a Snorricam, a camera attached to Max’s body that results in the frame’s tilting with each frenetic step Max takes. A lens of shorter focal length also works to distort both Max’s face and the spatial relationships between him and the urban world. Besides reflecting the overproximity of the Other, which is a distinguishing feature of the psychotic universe, these moves work, at times, to “imaginarize” the theater itself—that is, to threaten the implicit contract that governs the theatergoing experience. That

19. The lone exception is the place depicted as outside the circuits of capital and hypertechnologization—Coney Island. There, Aronofsky increases the frame rate to slow down Max’s experience of the world, and includes the sight of “King Neptune,” a man dressed almost like a clown, trolling the beach with a metal detector, who puts back the seashell he has picked up and admired.



is to say, besides merely depicting the chaos of Max's world, the instability of the camera and inconsistency of the frame risk bringing us face to face with that side of the imaginary that borders on the real. It is this side of the imaginary—and not the one that borders on the symbolic, which reduces the imaginary entirely to the domain of specular images of wholeness—that marks the latter imaginary's point of *failure*, the point at which it breaks into pieces. Thus we might clarify the Lacanian dimension of the counter-ideological thrust of Aronofsky's film by saying that rather than eschew the imaginary altogether as ipso facto ideological,  $\pi$  attempts to break its privileged link to the symbolic so as to illuminate the terror of its real, presymbolic status. In other words, the imaginary depicted in  $\pi$  is not the version of it with which we are usually presented—that is, a realistic presentation of reality that produces a subject/spectator completely in control of what he/she is seeing.<sup>20</sup> Rather than realistic, coherent mirror images offered up for our easy identification, rather than a fantasized compatibility between jouissance and symbolization, Aronofsky gives us instead images of jouissance that overwhelm the coherence of the film. In so doing, Aronofsky's film helps us to glimpse the imaginary bereft of the fantasy frame that makes it seem so appealing, even if this means bringing Max's world *too close* to us and making the film, in places, difficult to endure.

This sense of suffocating overproximity is rendered cinematically in two other significant ways. The first centers around the

20. This is, as the editors point out in their introduction to this volume, the way Lacanian psychoanalysis has frequently been deployed in film studies—as a way of showing how film's very presentation of reality secures a spectator/subject in the manner of the mirror stage. In this view, film presents imaginary scenarios that are always already fantasized versions of the imaginary—that is to say, versions of the imaginary in which the spectator/subject will precisely *not* experience him-/herself in pieces. Thus Stephen Heath's claim that film works largely by regulating a movement toward disintegration and/or contradiction in the spectator/subject. According to Heath, "Film is the regulation of that movement, the individual as subject held in a shifting and placing of desire, energy, contradiction, in a perpetual retotalization of the imaginary" (1981, p. 53).

recurrent hallucination that precedes Max's psychotic breaks involving the sight of a Hasidic Jew whose mere presence on the other side of the subway line Max takes as a threat, and whose hand is dripping blood, the trail of which leads to Max's own brain. This image suggests both the extent to which castrating agents appear to Max *in the real*, and his investment in a certain neuroscientific fantasy that likewise literalizes the ur-language of the Other, in which a certain segment of Max's brain is taken as the locus of causality for the onslaught of sensory and auditory impressions to which he is subjected. That Max prods, and ends up penetrating, the brain with a fountain pen before being ushered into the blinding white void is perhaps apt, since the jouissance of the Other is precisely what marks out the limits of discourse. The second involves the way Aronofsky signals the impossibility of any sexual relationship for Max. This is clearest in the way that for Max, any woman who evinces the slightest trace of sexual desire betokens the presence of a maternal being who is at the same time obscenely and atavistically sexual. His neighbor Devi's attempts to "mother" Max (she prepares food for him, fixes his hair before he goes out, worries about his welfare, etc.) are part of her obvious desire for him; for Max, however, there is no difference between being desired and being enjoyed, no distance that would allow him to exist before Devi's gaze without being suffocated by her jouissance. Aronofsky twice has Max on the cusp of arriving at the 216-digit number at precisely the same instant that Devi and her boyfriend, Farouk, are engaged in sex. The acoustic dimension of these sexual encounters sends Max into a virtual panic in which the camera rapidly circles him.<sup>21</sup>

21. Aronofsky has intentionally muffled Devi's sounds here, which only heightens the sense that he has restaged a primal scene of sorts. After several listens—and thanks to the sound quality of DVD technology—it is possible finally to discern the sense of Devi's utterances amidst her ecstatic moans: "Do you want to suck on Mama's nipple? / Oh, those tears are so hard. / Mama's going to make everything all right."



That a closeup of Max's finger on the "Return" button of his computer—poised to trigger the computer's revealing of the 216-digit number—generally accompanies the onset of the all-engulfing sounds of enjoyment signals the extent to which the primordial signifier might function for Max. Rather than allowing it to provide some *respite* from enjoyment, Max, as we have already seen, insists on trying to discover why the number enjoys in the way that it does. An articulation of the perils of this attempt to render the signifier back up into the order of understandable causality is left both to Euclid and to Sol. Euclid's own demise contains a message Max can't heed. Becoming aware of its own structure, Euclid must emit a kind of protoplasmic "little piece of the real," the gooey life-substance of an ant that is made to stand in for Euclid's own unsymbolizable origins. This is precisely Sol's lesson to Max. In the face of the psychotic's certainty regarding the meaningful intelligence of the Other's jouissance—Max's belief that "there is an answer in that number"—Sol keeps insisting that the truth of our universe is that there is no meaningful pattern prior to the institution of a symbolic network of meanings in which a universe appears. For Sol, the only pattern is the self-referential one we impose on it, which is why he refuses to allow the number to signify anything, contending variously that the number is a "dead-end," a "door in front of a cliff," a "bug"—all astute ways of characterizing the function of the paternal metaphor in the formation of the symbolic order. Here, Sol is closest to the psychoanalytic recognition that the signifier *does exist* in nature and that it enables us to gain our bearings on the world, but *what* it signifies is entirely another matter. Playing Daedalus to his "renegade pupil" Icarus, Sol tries to reassert a prohibition, warning Max of the dangers of numerology and urging him to leave the digit "unknown."

The precise function of this advice is left ambiguous in Aronofsky's film, since there is evidence that Sol's death—from a second stroke—follows on the heels of a failure to heed his own advice. At the death scene, Max finds the number written out in Sol's handwriting on a sheet of paper, and this may just signal the extent to which Sol's voiced prohibition functioned covertly as a

way of keeping alive whatever meaning the 216-digit number might bear. In any case, Aronofsky finally leaves it to Max to grasp the stupidity of the number and thus to *realize* the impossible object at the heart of the psychotic structure. Up until Sol's death, Max has been committed to "seeing the number," claiming that the number itself is nothing, that it is what's "between the numbers" that is important. Back in his apartment after learning of his mentor's death, Max begins to intone the number (the true name of God) and is cast again into the blinding white void. This time, however, his own image appears in the void, and there is a sense that he has begun to *hear the other speaking within himself* as the bearer of the primordial signifier. This leads directly to the film's final two images—the first of Max, with a drill in his hand on the verge of committing a kind of self-lobotomy; the second of Max, in the park enjoying the *factum brutum* of Nature, no longer positioning himself as the bearer of a question to which he must have the answer. At first glance, the first of these images in which we see the drill penetrate Max's skull, splattering the frame with blood before cutting to black, would seem to invite a reading of  $\pi$  in keeping with the prevailing neuroscientific control of psychiatry. On this reading, Max's cure appears to be simple: it is not enough that he burns the number, since it remains in his head. Thus, what's called for is an identification and localization of the area of the brain responsible for the ideational content associated with the number, the excision of which lets him achieve a degree of equilibrium. But that this could actually work as a self-administered procedure strains credulity. Also, since Max appears in the final scene with a black ski hat covering his head, the status of his scalp/brain is left purposely veiled.

Perhaps the surest sign that things are far more complicated than the materialist-realist explanation is the question Aronofsky has admitted is the one he is most frequently asked: How was the self-lobotomy sequence filmed? In the light of this question, we might say here that this image ends up functioning as the film's own primordial signifier—a vision homologous with the number at the heart of the film and likewise incapable of being made mean-



ingful. That Aronofsky has confessed that this was the image around which he structured the film—that “writing movies is like reverse paranoia”—only furthers the sense that  $\pi$  leads us to the recognition of the purely signifying function of primordial signifiers.<sup>22</sup> Rather than make this image signify something meaningful, Aronofsky appears to grant it a purely structural function. As such, the image functions to “call a halt to jouissance” and, at the same time, to remain a site of non-knowledge that is our bulwark against a fully fledged psychotic universe. The sequence that presents us with the image of Max Cohen with a drill at his skull, then, consists of a physical gesture whose stupidity depends on Max’s (and our) subjectivization. In the scene that follows, this formal instance of signification has itself become the content. The scene begins with an extreme closeup of the leaves on the tree of the city park in which Max is sitting, followed by a reverse medium shot of Max staring at the tree. Max is then approached by Jenna (the little girl who lives in a neighboring apartment) to calculate in his head the sum of two hundred and fifty-five multiplied by one hundred and eighty-three. For a moment, Max tries to perform the calculation, then stops and begins smiling, allowing the little girl to do it on her calculator. This decision in favor of non-knowledge is captured cinematically as well in the frames with which the film closes—reverse zoom point-of-view shots that complete the arc established in the film’s opening in which Max gains some much-needed *distance* from Nature. Shot at the normal frame rate, Max gazes at leaves blowing in the wind in a way that no longer regards them as the bearer of a hidden and/or sinister pattern or meaning.

The final import of  $\pi$  here would seem to be that we, too, in the attempt to counter rampant psychosis, must cast our lot as well

22. In his earliest diary entry related to  $\pi$ , Aronofsky writes of the lone script of his that would be suitable for a low-budget film: “The working title is ‘Chip in the Head.’ Along with the title I have a single image of Sean Gullette, my actor friend from college, standing in front of the mirror, his head shaved bald, digging into his skull with an X-Acto blade for an implant he thinks is in there” (1998, pp. 3–4).

with non-knowledge, with something encountered and perceived for which we cannot find a meaningful antecedent. This exemplar of non-knowledge functions to arrest the chain of signification, but it is something of which we cannot make total sense. Has Max really lobotomized himself by film’s end? What does the hat covering his head really conceal? Is he merely stupid, or has he subjectivized the stupidity of the primordial signifier at the heart of the film in which he appears? My own contention is that in these scenes, we are presented not with the void behind or beneath language, but precisely with the signifier as such. In his seminar on ethics, Lacan claims that “the Thing only presents itself to the extent that it becomes word” and that the word in whose guise it presents itself is “what remains silent; it is precisely that in response to which no words are spoken” (1992, p. 55). So, perhaps we need say nothing about the end of Aronofsky’s film except to say that we can say nothing more. Perhaps the finale of the film enacts itself a kind of antidote for the psychosis that it has dramatized—an antidote appearing imagistically as the functional equivalent of the Word for which, today, we must struggle in order to call a halt to jouissance.

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