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ON FRACTAL GEOMETRY AND MEANING DISSEMINATION: RE-THINKING PYNCHON'S *THE CRYING OF LOT 49*

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Modern and contemporary scientific theories —from thermo-dynamics, new physics and quantum mechanics to more recent disciplines such as fractal geometry and chaos theory— have become a very important influence on the cultural and literary manifestations of modern times. In particular, this paper concentrates on how the American novelist Thomas Pynchon borrows several scientific concepts —mainly coming from the grounds of fractal geometry and chaos theory— to build up the metaphorical web that sustains the philosophical underpinnings of his second novel, *The Crying of Lot 49*. By doing so, the novel becomes a fractalic self-conscious fictional artifact which reflects on the one hand the indeterminacy of an apparently absolute meaning or final interpretation and, on the other hand, the relativity of the world outside us, as contemporary scientific thought posits.

Traditionally, classical science pictured the world as an ordered, harmonious whole —the deterministic and objective Newtonian *clock-work universe*. However, such mechanistic image was first challenged in the early 19th century by a newly born science which was called thermo-dynamics. According to it, all energy of the world steadily dissipates up to a final point where matter disintegrates and a terminal state of undifferentiated chaos is reached. In particular, the second law of thermodynamics, better known as the 'law of entropy' (Morris 1986, 110), states that physical systems move towards a state of maximum disorder —what is known as 'entropic equilibrium' or 'heat death' (see Rifkin and Howard 1980, 36).

By the beginning of the 20th century, Albert Einstein's famous theory of relativity and his new dimension of the space-time continuum likewise altered the *apparently* objective and well-defined Newtonian

world. Einstein's studies proved that whatever reality may mean, it ultimately corresponds to an active intellectual —and therefore, subjective— construction imposed by the individual in his/her attempt to grasp external phenomena. Robert Nadeau (1981, 9) further details the subsequent condition of epistemological uncertainty that these new physical consi-derations brought about as follows:

> there is the growing suspicion in the scientific community that knowledge in the sense of an absolute transcription of physical reality may be a kind of necessary illusion for the symbol-making animal. It could also mean, if the present scientific revolution continues to have an impact upon the subjective experience of members of this culture, that absolute knowledge in other aspects of our lives might come to be regarded in the same way.

Parallel research in the fields of quantum mechanics and quantum statistics further validated Einstein's theories about the relativity of the universe. Discoveries in quantum physics proved that sub-microscopic particles are so small and move so rapidly that the closer their position is determined, the more difficult it is to predict their velocity, and vice versa; a fact which inevitably led scientists to regard the very act of observation as uncertain. Heralded by relevant advances such as Max Planck's theory of quanta,[1] Werner Heisenberg's indeterminacy principle,[2] or Niels Bohr's principle of complementarity,[3] just to mention a few among many others, modern science acknowledges the idea that causality can actually be reduced to a statistical principle of probabilities and that, consequently, reality cannot be known with absolute precision. As Eric C. White (1990,

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[1] Planck studied electromagnetic radiations concluding that the energetic flow in a body does not take place continuously, but rather in discontinuous units which he called 'quanta'.

[2] Heisenberg also posits the discontinuity of physical processes. He explains, it is impossible to assign a particle or electron an accurate spatio-temporal description, as there is an interaction between object and subject, because the act of observing affects the field of observation: in other words, the closer the position of the electron (spatial dimension) is determined, the more difficult it is to determine its velocity (temporal dimension).

[3] Bohr's principle proved that in some experiments electrons behave like particles, and in others, like waves, which led him to the conclusion that wave and particle are complementary aspects of the same reality, that there is a 'superimposition of states' (Davies 1987, 166), to use the proper scientific terminology.

97) summarizes it, "[q]quantum mechanics thus obliges us to give up classical expectations of representational closure of 'objectivity'."

More recent studies, such as fractal geometry or new theories integrated in the so called theory of chaos, likewise reject the classical clockwork universe, opening the way to a number of key-concepts, such as self-organization, complexity, uncertainty, and unpredictability. Chaos theory, for instance, attempts to determine the principles of organization within apparent disorder, revitalizing discussion around the classic dichotomies chaos vs. order and freedom vs. fate. Researching into the science of chaos, scientist Ilya Prigogine (1985) —a pioneer in modern thermodynamics— discovered that systems fluctuate up to a point —the 'bifurcation point'— where the system will disintegrate into chaos or leap to a new, more differentiated, higher level of order. Such physical or chemical structures —called 'dissipative'— give clear proof that, under certain conditions, entropy is also the starting point of a process of self-organization. As a result, chaos is no longer seen as the absence or lack, but as a new source of order and producer of systems ruled by a negentropic activity.

In a similar way, fractal geometry (Mandelbrot 1982), closely related to chaos theory, also stresses the idea that apparent disorder may possess a deep structure. This new geometry —and, therefore, a mathematical *model*— is grounded on the fact that there exist scaling symmetries across different microscopic levels. More precisely, Benoit Mandelbrot, the pioneer of these new scientific models, discovered that complex irregular forms —'fractal dimensions'— become ordered geometrical forms through a combination of both deterministic and random equations. To put it into other words, from an apparent chaotic state, these structures evolve in a 'recursive symmetry,' and become ordered, more complex systems which Mandelbrot called 'fractals'.

In the midst of this shattering scientific panorama, modern society is deeply affected in its philosophical and cultural manifestations by the idea that reality is paradoxically characterized by randomness, instability and disequilibrium on the one hand, and ordered diversity on the other hand. Or, from a metaphysical perspective, that there are multiple, but equally valid, representations or interpretations of reality that cannot be assimilated into a single unified view.

Obviously, these new scientific postulates were and still are put under serious consideration by the literary community. And so, many

modern and contemporary writers of the time show their serious attempt to reflect or transcribe to literary terms all these scientific assumptions. In this mood, the real and the fictional universes are equated, the latter being the metaphorical mirror of the former; and the literary works become self-conscious artifices reflecting the metaphysical landscape brought about by scientific advances (Stonehill 1988, Hayles 1991).

Like some other famous writers such as John Barth, Kurt Vonnegut, or Don DeLillo, the American novelist Thomas Pynchon is one of those artists who likes to depict throughout his narrative work the epistemological uncertainties claimed by 20th century scientific thought. In fact, the paradoxical nature of physical reality posited by modern science is minutely described in Pynchon's fictions: an entropic world running down into disintegration and discontinuity, a fictional landscape in which, as Heisenberg demonstrated, it is impossible to clearly distinguish between patterns inside and outside the mind. But his proves to be a really special concern. As if faithful to his eager interest in physics when he was a student of Engineering at Cornell University, Pynchon immerses his readers into the metaphysical landscape of modern civilization (Cooper 1983), and portrays the way science challenges the cultural and philosophical panorama of the times by masterfully adapting the discourse of science to his own rhetoric of writing.

Throughout history, human beings have felt the need to understand the world outside, to construct a frame of reference for organizing their daily activities. In *The Crying of Lot 49* (1966), Pynchon's second novel, the writer exploits the human being's compulsive tendency to look at phenomena and see meaningful patterns that perhaps —talking on scientific grounds— do not objectively exist. Deeply grounded on the concept of entropy in information theory (McConnell 1977, 173), the entire narrative is built upon a web of miscellaneous pieces of indirect information —echoes, reflections, acronyms, details, etc.— that overlap, becoming interlocking clues in protagonist Oedipa's hunt for meaning. Oedipa attempts by all means to make sense of her life by trying to organize its complexities, and desperately seeks for the way to integrate the proliferating disorder into some kind of intelligible order. To put it in other words, she tries to find an ordered pattern within the apparent chaos that characterizes her external reality. Nonetheless, the final truth about the world outside —or a rational explanation to it— is forever deferred. As we are going to analyse, Oedipa undergoes a quest for

knowledge which will lead her to a state of epistemological confusion in the midst of a no longer absolute or graspable universe. The narrative thoroughly explores the possibility of a world of probabilities, of an interface between the true and the false, the objective and the subjective, the real and the imaginary; and, as far as the relation between language and fiction is concerned, between the literal and the metaphorical.

One of the most outstanding points in *Lot 49* is the insistence on the premise that the Newtonian world-view, rooted on categorical imperatives such as the law of the excluded middle, or on the apparently 'absolute' dimensions of time and space, is no longer valid when trying to understand and interpret the modern universe. In this sense, the novel becomes a faithful reflection on, as Thomas P. Weissert puts it, "the inapplicability of global theorizing to complex systems." (1991, 233). Protagonist Oedipa Mass becomes involved in a very complex plot where an excess of information will lead her not to a totalising closure of the text, but to a permanently bifurcating path where new messages and meanings are continuously created. *Lot 49* embodies a web of oppositions —of 'either/or' configurations— that Oedipa must unravel and learn to accept as both possible interpretations of the same reality. Throughout the novel she will keep on finding an endless chain of uncertainties and paradoxes that revolve around a final dilemma: the mysterious Tristero can be *either* real —a historical tradition of postal fraud—, *and/or* imaginary —"all part of a plot, an elaborate, seduction, *plot*" (p. 19).

At first, the protagonist finds no light when trying to understand the mystery around the secret organization named Tristero. Through free indirect style, the narrator enters the character's mind to present to the reader her chaotic involutions up to the point of believing —as the novel also suggests— that the Tristero could even be a secret conspiracy against her:

> as if a plunge towards dawn indefinite black hours long would indeed be necessary before The Tristero could be revealed in its terrible nakedness. Would its smile, then, be coy, and would it flirt sway harmlessly backstage, say goodnight with a Bourbon Street bow and leave her in peace? Or would it instead, the dance ended, come back down the runway, its luminous stare locked to Oedipa's smile gone malign and pitiless; bend to her alone among the desolate rows of seats and begin to speak words she never wanted to hear? (p. 36)

From a philosophical perspective, the novel foregrounds that part of the difficulty in comprehending the external world may arise from the fact that we categorize the objects of our experience with the aid of language. And language is now regarded not as a referential semiotic code that provides the human being with the necessary objectification to apprehend external phenomena, but as an arbitrary system, allusive and 'bifurcative', to borrow the proper scientific term.

The narrative concentrates on the idea that the linguistic code does not seem to transmit information in an accurate way, but rather conveys the ambiguity and dissociativeness inherent in the physical world. It is quite significant that Oedipa, while attending the *en-abymic* theatrical representation of *The Courier's Tragedy* —a self-reflective and so, in a metaphoric sense, fractalic construction—, realizes how "things really get peculiar, and a gentle chill, an ambiguity, begins to creep in among the words" (p. 48). It is precisely the director of the play, Driblette, who literally asserts that reality is not made up of words, but rather a mental creation: "The words, who cares? They're rote noises to hold line bashes with, to let past the bone barriers around a actor's memory, right? But the reality is in *this* head. Mine." (p. 54). To Oedipa's desperation, positivist Driblette (see Davenport 1990) concludes that a final understanding is never attainable; that she can "waste [her] life that way and never touch the truth" (p. 54).

The use of metaphor is precisely one of Pynchon's most brilliant literary artifices in the novel to stress the lack of an objective referential framework with which to accurately grasp reality. By transferring the meaning of an object to another, metaphor tends towards the dissemination of a unique meaning. To borrow J. Bono's words (1990, 72), "[m]etaphor involves a transfer of meaning from one term, to which that meaning attaches properly or literally, to another, where the meaning becomes improper, deviant." This is the reason why to reflect a deep skepticism concerning the efficacy of language, *The Crying of Lot 49* embodies such an intricate metaphoric web of signification, codes, hieroglyphics, acronyms, obscure meanings, etc., which superimpose, complement, and oppose. In short, an entropic excess of information whose final, ultimate understanding is always deferred (Derrida 1967; McHoul and Wills 1990), but whose very existence is, at the same time, producing the possibility for new messages to appear.

In effect, as far as scientific metaphors are concerned, it is important to point out the novel's special interest in the notion of entropy in information theory. The narrator textually refers to the scientist James C.

Maxwell —who in a thought experiment designed a demon capable of operating a perpetual-motion machine, thus violating the second law of thermodynamics— to metaphorically explain entropy in kinetic terms. If entropy and disorder can be counteracted, the narrator suggests, there must be an alternative to the specter of universal heat-death or entropic equilibrium claimed by thermodynamics. In the novel, Stanley Koteks explains to Oedipa that a character called Nefastis has developed a demon similar to that of Maxwell's, who lets only fast-moving molecules move in one direction and slow-moving molecules in the opposite one. In this way, the demon is able to spontaneously create an ordered configuration of the molecules and a perpetual-motion machine that defies entropy. In the novel, the Tristero system works just as the Nefastis machine is supposed to, but it counters social (see Arnheim 1974, and Rifkin and Howard 1980) instead of thermodynamic entropy.

As far as entropy in information flow is concerned, communication throughout the novel is always confusing and indirect, as it is affected by noise and other forms of intrusion that generate the possibility for new messages. While trying to decipher the multiple cross-references she comes through —Tristero, W.A.S.T.E., the muted post horn, etc.—, Oedipa realizes in her dialogue with Koteks that the more information she gets, the more difficult it is to order and understand it as an only message. The increase in the amount of information accounts for the increase in the level of entropy. As the narrator puts it, "as if the more she collected the more would come to her, until everything she saw, smelled, dreamed, remembered, would somehow come to be woven into The Tristero" (p. 56).

Like the demon imposing order on the molecules, Oedipa tries to discover which information may work against her entropic chaos of knowledge about the Tristero. Immersed in a confusing gathering of information, the protagonist feels the urgent need to create a personal version of reality in order to surmount such absurd uncertainty. First, Oedipa attempts to find a rational explanation amidst her excess of information. The narrative voice, inherently evoking modern cosmology interest in the cosmic order (see Davies 1989, Hawking 1990), refers to the protagonist's endeavour to go on in such an uncertain search: "She would give them order, she would create constellations" (p. 63). Compiling all the different and multifarious data she has gathered, Oedipa believes that she has found, at last, a final explanation about the Tristero. However, the final truth about its (un?)real existence is permanently deferred; another alternative —or the

product of her paranoia— is also considered as a feasible possibility, a possibility that makes the protagonist feel lost in a maze of epistemological confusion —literally, "all alone in a nightmare like that" (p. 61):

> Either Trystero did exist, in its own right, or it was being presumed, perhaps fantasied by Oedipa, so hung up on and interpenetrated with the dead man's state. Here is San Francisco, away from all tangible assets of that estate, there might still be a chance of getting the whole thing to go away and disintegrate quietly. She had only to drift tonight, at random, and watch nothing happen, to be convinced it was purely nervous, a little something for her shrink to fix. (p. 75)

In this manner the novel seems to assert that apparently single and unique meanings can actually multiply in a way similar to an endless fractalic geometry. The different processes of communication that appear in the book show in themselves the property of self-similarity that Mandelbrot (1982) indicates as constitutive of a *scaling* property: on different narrative levels, the possibility of ever reaching a final answer or message always disappears because there is no element that, coming from outside that level, may enter it to manifest the ultimate truth. Nefastis's Demon cannot discriminate hot from cold molecules because Oedipa fails to contact it from her superior position; on her own level, Oedipa hopes to discriminate true from false information units, but finds no external help to solve the puzzle into which she has been forced by Inverarity; finally, on the level of the reader, he or she is subject to the same condition of uncertainty, the only possible way out being —as promised in the very title of the novel— the divine Revelation that follows number 49, that is to say, a new and second Pentecost. At the end, the reader knows that Revelation never comes, and we are left with a textual structure that could be growing up, in this self-similar way, *ad infinitum.*

In so doing, Pynchon also seems to draw his readers to conclude that the purely referential linguistic code can reveal reality only in a partial manner; consequently, the world should be alternatively approached through more complex relations of signification, through alternative metaphorical constructs which allow us to accept the objective and the subjective as faces of the same prism. As Oedipa finally states by the end of the novel, "[t]he act of metaphor then was a thrust at truth and a lie, depending where you were: inside, safe, or outside, lost" (p. 89).

Metaphorically "trapped at the centre of some intricate crystal" (p. 64), Oedipa's mind inevitably experiences an absurd void, a state of cognoscitive uncertainty. Once the apprehension of the external universe proves to be ambiguous and paradoxical, the narrator suggests the possibility that the real is in fact made up of imaginary projections —literally, what Oedipa questions herself, "Shall I project a world?" (p. 56). This mental elaboration may work as a way out of the existential labyrinth, and the world outside would ultimately be dependent on each personal version imposed by the very subject observing it:

> Oedipa wondered whether, at the end of this (if it were supposed to end), she too might not be left with only compiled memories of clues, announcements, intimations, but *never the central truth itself*, which must somehow each time be too bright for her memory to hold; which must always blaze out, destroying its own message irreversibly, leaving an overexposed blank when the ordinary world came back. (p. 66; emphasis added).

Far from an objective, absolute truth, Oedipa accepts the relativity of her own perception and discovers a range of possible answers to the ambiguous reality she tries to grasp. The narrative voice insists again on the protagonist's epistemological despair, after having realized "how much of a search among alternate universes it would take" (p. 71): "She had nothing more then to put it off with. Again with the light, *vertiginous sense of fluttering out over an abyss*, she asked what she'd come there to ask. 'What is Trystero?'" (p. 108; emphasis added).

The ultimate meaning of the Tristero seems to be constantly deferred, subject —like *ultimate truth*— to its fractalic condition *en abyme*, and the novel presents this deferral even in a more precise way, through more metaphorical allusions to the physical world and to the recursive symmetries of fractalic structures: "Now here was Oedipa, faced with a *metaphor of God knew how many parts*; more than two, anyway. With coincidences blossoming these days wherever she looked, she had nothing but a sound, a word, Trystero, to hold them together" (p. 75; emphasis added). Metaphorically echoing fractal theory, the narrator suggests that the apparently logical deciphering of the Tristero is like an ordered chain of infinite interpretations, a recursive self-organization out of an initial chaos of knowledge: "The repetition of symbols was to be enough [...] Each clue that comes is

supposed to have its own clarity, its fine chances for permanence. But then she wondered if the 'gemlike' clues were only some kind of compensation. To make up for her having lost the direct, epileptic Word, the cry that might abolish the night" (p. 81).

Oedipa becomes aware that all the information she has collected is neither reliable nor absolutely true, that any attempt of categorization with which to understand —to order— external chaos is always relative, restricted. However, by tracing patterns, the paranoid protagonist creates an apparently continuous reality; at the same time, she realizes that though these patterns promise the final answer, they never yield it. Coming to the conclusion that reality does not have a unique explanation, she finally accepts both *either* and *or* alternatives as possible answers to her doubts: Tristero is real, but also a product of her paranoia, a hallucination, a fantasy of her own mind. Contemplating herself in front of a mirror —metaphorically indicating her broken inner self— she accepts Tristero as a partially cognoscible system, a single signifier with different —but all probable— interpretations: a product of her paranoia, a dream, a conspiracy or, certainly, a real phenomenon:

> *Either* you have stumbled indeed without the aid of LSD *or* other indole alkaloids, on to a secret richness and concealed density of dream; on to a network by which X number of Americans are truly communicating whilst reserving their lies, recitations of routine, arid betrayals of spiritual poverty, for the official government delivery system; maybe even on to a real alternative to the exitlessness, to the absence of surprise to life, that harrows the head of everybody American you know, and you too, sweetie. *Or* you are hallucinating it. *Or* a plot has been mounted against you [...] *Or* you are fantasying some such plot, in which case you are a nut, Oedipa, out of your skull. (pp. 117-118; emphasis added)

Central to Oedipa's attempt of reorganization has been her ability to recognize recursive patterns of order among the different clues of a single reality, Tristero. Her final meditations lead her to conclude that apparent chaos can turn into a state of order, that the knowledge of the world has to be completed —in a well-balanced union— by an endless gathering of subjective appreciations or personal perspectives about it (see Prigogine and Stengers 1985).

All these multifarious possibilities out of a single sign, metaphorically multiplying in the manner of fractalic geometries, are very early literary echoes of the impact of contemporary scientific thought and, more precisely, of the possibility of a fractal symmetry and an order out of chaos, born from a unpredictable bifurcation points. By the end of the novel, Oedipa starts to perceive some kind of emerging design: the interpretation of the Tristero, initially perceived as disordered, emerges as a more complex kind of order. "[T]eaching herself to breathe in a vacuum" (p. 118), she refers to all the different alternatives related to Tristero as, literally, recursive symmetries. "Those symmetrical four" (p. 118) possible answers suggest maximum uncertainty in information theory terms and, from an epistemological view, the possession of a multifarious and never-absolute knowledge made up of complex combinations of data.

At the end of the novel, Oedipa discovers that the Tristero forgeries of Inverarity's stamp collection are going to be sold as *lot 49*, and that a strange bidder is interested in acquiring them. Caught in her metaphorical labyrinth of multiple options —"a hundred lightly concealed entranceways, a hundred alienations" (p. 124)— Oedipa tries to configure her final interpretation for the mysterious Tristero. However, the symbolic image of the geometric fractal recurs again to explicitly suggest that absolute interpretations are no longer valid, as they have been replaced by statistical probabilities. Only by accepting a self-regulating interpretive framework made up by the different answers to the Tristero can Oedipa order her chaos of knowledge. In this sense, the narrator further insists on the analogy of the fractal as a reification of the evolution of chaos towards more complexity and order: "The waiting above all; if not for another *set of possibilities* [...], waiting for a *symmetry of choices* to break down, to go skew. She had heard all about excluded middles; they were bad shit, to be avoided; and how had it ever happened here, with the *chances so good for diversity*?" (p. 125; emphasis added).

The acceptance of a diversity of interpretations —idea that has been posited all along the novel— is finally foregrounded through a textual reference to the science of information technology. The narrator refers to a symbolic combination of binary digits —ones and zeros— to further imply that reality is a tapestry of different interpretative approaches, thus insisting again on the co-existence between hazard and order, chance and necessity, paranoia and anti-paranoia and, from a metafictional

position, between reality and fiction. Oedipa not only learns to accept a partially knowable reality, but also attempts to transcend it: "For it was now like walking among matrices of a great digital computer, the zeroes and ones twinned above, hanging like balanced mobiles right and left, ahead, thick, maybe endless. Behind the hieroglyphic streets there would either be a transcendent meaning, or only the earth" (p. 125).

The protagonist finally seems to understand the blurring of frontiers/interface between subjectivity and objectivity, between the internal and the external ontologies. Her final conclusion about the Tristero is probably correct, but the other different explanations are, if not erroneous, likewise possible. The necessity to integrate opposites and accept the multiplicity of interpretation also calls, on metaphysical layers, for a necessity of myth interpretation. The need of a final integration is suggested at a textual level when the narrator announces that Oedipa "settles back to await the crying of lot 49" (p. 127), the "epileptic Word" as the novel also refers to, precluding the sacred 50 of the Pentecost that announces the mythic Second Coming in the Christian Day of Revelation and Final Judgement.

Either myth or transcendence —understood as Revelation in religious terms— reify an arbitrarily constructed order that can be superimposed upon human existence and give meaning to that existence. If the history of modern culture, as Pynchon portrays it in the novel, is characterized by insecurity, instability and absurdity, a mythical or religious alternative can also fill the gap between the individual's existential despair and a never-graspable external gnoseology.

Any analysis of knowledge in the context of everyday life turns out to be a dialectical process between objective and subjective realities. As Peter Bruck (1986, 35) affirms, "reality no longer provides a common fund of meaning and experience but rather appears strangely ambiguous to the percipient subject." On this basis *Lot 49*, as a metafictional construct, deeply questions the validity of individual perception when apprehending external reality.

By inquiring into the manner in which reality is constructed, the novel has described a world only cognoscible in a partial way; that is, through conceptualizations and mental calculi —probabilistic, to use the proper scientific term. Oedipa has undergone a difficult search for meaning, which once again shows Pynchon's epistemological concerns when depicting characters trying to decode chaotic —entropic— pat-

terns of events; patterns that, ironically, instead of leading to a shared truth, only confuse them even more.

Oedipa, trapped and restless in her self-made subjective reality, has learnt to contemplate an extremely complex mental construct, an incomplete but nonetheless probable reality. Similarly, the reader is caught in her or his own subjective interpretation of the novel, and, like the protagonist, s/he is left to fabricate her or his own version of the novel so as to satisfy the need for understanding. Furthermore, as a somewhat epistemological meditation, Pynchon inherently suggests that the human being must try to *embroider* plots —to "project worlds" of, at least, metaphorical validity— to fill the epistemological gap between oneself and the unknowable.

By adapting to literary terms what cosmology, fractal geometry, and chaos theory have suggested at macro and microscopic levels, Pynchon's novel stands, already in 1966, as a metaphorical self-ordered framework possessing the connotations of maximum information, dissipative reorganization and, above all, a deeply encoded structure. *Lot 49* can thus be regarded as a very early postmodern reification of the idea that external reality is forever subjective —as an endless web of different *probable versions* that offer not an absolute, but a partial knowledge.

Like Oedipa's quest for the final truth, the act of interpreting the narrative also becomes —metaphorically speaking— an indeterminate and *probabilistic* process. Pure objectivity and absolute referentiality disperse, and the linguistic organization of *Lot 49* ultimately reflects the plurality and indeterminacy of a no longer absolute signification. Oedipa is caught in the unending enigma of a dubious interpretation; like her, the reader must come to accept that words are not fixed to a central meaning, that the text is opened to a complex number of readings. And thus, the novel is never completely decipherable or interpretable as it fluctuates within its own unstable system of codes and the reader's own personal interpretation. Like Oedipa, the reader is finally drawn to search for a coherent, complexly ordered structure behind the novel, or to imagine it by creating a personal version of the novel, or both things at the same time, as both options intersect in the very interpretative act.

In making both Oedipa's and the reader's interpretations so uncertain, Pynchon has created a fictional analogue to the postnewtonian universe, one in which characters and readers must deal with uncertainties as radical as those claimed by the new physics and contemporary

cosmology. As a metafictional self-questioning construct, *The Crying of Lot 49* has ultimately acknowledged the way discourse is bounded by metaphorical assumptions inherent in language. While registering a profound uncertainty and seeing the need for different alternate representations of the world outside, Pynchon keeps trying, as his characters do, to decode the ominous logic of reality, and to make his fictions reflect it. No doubt, the writer openly presents his great concern with the problems that surround the core of human existence. This is precisely the reason why his novels, cultural projections of the signs of the times, have long been considered fruitful dialogues between science, literature, and philosophy.

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