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Liane Rausch Petersen
Iowa State University

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Paranoia and determinism versus anti-paranoia and non-determinism in Thomas Pynchon's *Gravity's Rainbow*

by

Liane Rausch Petersen

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Signatures have been redacted for privacy

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TABLE OF CONTENTS

PARANOIA AND DETERMINISM VERSUS ANTI-PARANOIA AND
NON-DETERMINISM IN THOMAS PYNCHON'S GRAVITY'S RAINBOW 1

NOTES 26

BIBLIOGRAPHY OF WORKS CITED 27

SUPPLEMENTAL BIBLIOGRAPHY 28
PARANOIA AND DETERMINISM VERSUS ANTI-PARANOIA AND NON-DETERMINISM
IN THOMAS PYNCHON'S GRAVITY'S RAINBOW

Paranoia and anti-paranoia are central concepts in Thomas Pynchon's Gravity's Rainbow, yet only one extended study of the conflicting concepts has been written. Reconsidering the conflict between the two concepts in the light of their scientific implications yields a new understanding of Pynchon's purposes and a new awareness of the ultimately hopeful message of the novel.

Paranoia is "nothing less than the onset, the leading edge, of the discovery that everything is connected, everything in the Creation, a secondary illumination—not yet blindingly One, but at least connected."¹ Pynchon's characters can hardly avoid seeing connections in Pynchon's world; thus, paranoia is a defensible response to that world. While connections alone provide significant justification for the paranoid hypothesis defined by Pynchon for the novel's characters, such as Tyrone Slothrop, Pynchon also provides confirmed conspiracies which further validate the paranoid hypothesis. Tyrone Slothrop's paranoia is justified, for example, not only by the plethora of connections surrounding his activities, but also by Roger Mexico's discovery that "IG Farben had Slothrop under surveillance... before the war" (GR, 631), as well as during the war through the efforts of Ned Pointsman of PISCES--Psychological Intelligence Schemes for Expediting Surrender—a sub-agency of "The White Visitation," and representatives of the ICI (Imperial Chemicals).
Scott Sanders notes, in "Pynchon's Paranoid History," that Slothrop's paranoia could possibly be dismissed as insanity; for example, as an extreme expression of the Freudian Oedipal Complex, because of his fantasies of a Father Conspiracy:

Unexpectedly, this country is pleasant, yes, once inside it, quite pleasant after all. Even though there is a villain here, serious as death. It is this typical American teenager's own Father, trying episode after episode to kill his son. And the kid knows it. Imagine that. So far he's managed to escape his father's daily little death-plots but nobody has said he has to keep escaping (GR, 674).

Slothrop's father, Broderick, did agree to and arrange for Professor-Doctor Laszlo Jamf's psychological experimentation on his son in exchange for a guarantee of a Harvard education for Tyrone. That fact eliminates the possibility of writing Tyrone's paranoia off as merely a manifestation of insanity. And, Tyrone's continuing paranoia is further justified by Ned Pointsman's experimentation on him--Pointsman picked up where Jamf concluded--and by Pointsman's decision to have Tyrone castrated so that he could study the consequent changes in Tyrone's behavior.

The characters do, then, have a valid basis for their paranoid responses. Next one must consider the origin of the paranoid hypothesis in Pynchon's world, and its ramifications in the consideration of the world view presented in the novel.

According to Scott Sanders, "God is the original conspiracy theory" (Sanders, 177). If the guiding will of the Deity--whether He is merely a construct of the human mind, or whether He indeed exists--
is behind the existence of the universe and the happenings, no matter how trivial, in that universe, then the seemingly chaotic world makes sense; it is perceived as a plot, God's plot.

Of the varieties of Christian monotheism the most totalitarian, and the most radical in its claims for God's omnipotence, is Calvinism--and its analogue in America, Puritanism. Within the Calvinistic—or Puritanic—mind every thing, every action is part of the divine pattern and plan, and every connection that man can perceive is a clue to that plan. Sanders says that for such a Puritanic mind, a mind "disposed to read patterns in every smallest detail of creation, disposed to understand human existence as participation in a divine plot and death as a transition from one role to another within that plot" (Sanders, 177), the removal of the concept of a deity results in a meaningless world. If humanly perceived connections are merely coincidences, if no pattern exists, if all existence is accident, then for the Puritanic mind, all is chaos, and transcendence is, therefore, impossible.

For the individual with a Puritanic mind, disposed to read patterns in life, the discreditation in the modern scientific world view of the hypothesis of God as the Master Plotter leads to a search for an alternate hypothesis that still explains the events of life as the product of a controller. Paranoia is the ideal hypothesis. The world, in the paranoiac's hypothesis, is organized into a conspiracy governed by unseen persons whose omniscience and omnipotence rival God's. Paranoia renders the creation sensible, understandable, and organizable. "Paranoia is the last retreat of the Puritan imagination" (Sanders, 178).
Paranoia in *Gravity's Rainbow*, Sanders argues, is "rooted in a theology from which God has been withdrawn" (Sanders, 178). In other words, the paranoid hypothesis in Pynchon's world develops from the Puritanic consciousness. Evidence in *Gravity's Rainbow* certainly supports Sanders' contention. Pynchon notes, for example, that Tyrone Slothrop experiences "a Puritan reflex of seeking other orders behind the visible, also known as paranoia" when he meets Katje Borgesius after "saving" her from Octopus Grigori (GR, 188).

Tyrone Slothrop may actually have been predisposed to accept the paranoid hypothesis because of his inheritance, through his Puritan ancestors, of the Puritan consciousness. "Maybe Slothrop was genetically predisposed to paranoia—all those earlier Slothrops packing Bibles around the blue hilltops as part of their gear, memorizing chapter and verse the structures of Arks, Temples, Visionary Thrones—all the materials and dimensions. Data behind which always, nearer or farther, was the numinous certainty of God" (GR, 241-42). "He felt his own ancestors in the Zone, "his own WASPs in buckled black, who heard God clamoring to them in every turn of a leaf or cow loose among apple orchards in autumn" (GR, 281).

Through the use of the terms Elect and Preterite, Sanders argues, Pynchon further links twentieth-century paranoia with Puritanism—previously Calvinistic theology. In Calvinist theology, "If elect, one's life is filled with meaning, because one is incorporated into God's scheme of salvation. If preterite, one's life is meaningless,
not so much damned as simply void, because one is excluded from God's plan" (Sanders, 186). Sanders claims that "these are exactly the binary possibilities imagined by Pynchon" (Sanders, 186).

In the paranoid hypothesis of the novel, the terms Elect and Preterite identify those who control (the Elect) and those who are controlled (the Preterite). Pynchon also extensively uses the concept of "being passed over." In the Puritan mind-set of Tyrone Slothrop's and Katje Borgesius' ancestors, the Preterite are "the many God passes over when he chooses a few for salvation" (GR, 555), but in the paranoid hypothesis they are the many who are manipulated by the Elect, the Controllers, "They"—who are, in turn, part of the total scheme, either "a cosmic design" according to Springer (GR, 495), or God's divine scheme of salvation according to Calvinist theology. In the paranoid hypothesis of Gravity's Rainbow, however, preterition grows with the refusal of the individual to see the connections, the plots, extending through the past and future. With every "negligence" preterition grows (GR, 509), and "generation after generation of men in love with pain and passivity serve out their time in the Zone, silent, redolent of faded sperm, terrified of dying, desperately addicted to the comforts others sell them, however useless, ugly or shallow, willing to have life defined for them by men whose only talent is for death" (GR, 747). Thus, if one considers the logical implication of Pynchon's statement that preterition grows with "negligence," one sees that the only way to reduce preterition, in the paranoid hypothesis,
is to be aware of the plots around one.

While Sanders persuasively argues that "the mental structures implicit in Pynchon's fiction, reproduce, although they are secularized, the dominant features of Calvinist and Puritan doctrine,"--specifically the paranoia, not God-centered in *Gravity's Rainbow*, and the concepts of the Elect and Preterite--he also argues that Pynchon's "binary" structure of paranoia and anti-paranoia defines the only two possibilities for the universal structure (Sanders, 187). Sanders sees the binary structure as "the single most important feature of Pynchon's worldview: paranoia or anti-paranoia; either everything is connected, or nothing is connected; reality either radiates from a Center, or it is centerless; history is either wholly determined from without, or it is wholly meaningless; the individual is either manipulated, or he is simply adrift. . . . The pattern of theological expectations is evident: either there is some principle as powerful and absolute as God to order the universe, or else the universe is chaos" (Sanders, 185). And, for Tyrone Slothrop and the other Preterite characters in the novel, according to Sanders, only two possibilities exist: either "subjection to external control, or disintegration" (Sanders, 187).

In his argument that the binary structure of *Gravity's Rainbow* defines the only two possibilities for the universal structure, Sanders fails to realize that while there can be persuasive argument in favor of a Calvinistic origin for Pynchon's conception of a binary universe,
the binary structure can also be considered a reflection of the binary structure found within the physical-sciences. Such a consideration necessarily changes the conclusions that one must make about Pynchon's world view in the novel.

In *Gravity's Rainbow* the two states of consciousness that reflect the binary universal structure can be labeled paranoia and anti-paranoia. Paranoia includes the belief that conspiracies exist, connections are valid. At the center of the plotting that he sees, the paranoiac can place God, They, or Technology, etc.; it does not matter which. Each choice provides a valid base for his paranoia. Anti-paranoia, on the other hand, is the hypothesis in which "nothing is connected to anything" (GR, 434). Anti-paranoia is "a condition not many of us can bear for long" (GR, 434). While "there is something comforting--religious, if you want--about paranoia" (GR, 434), there is no comfort in anti-paranoia.

Paranoia and anti-paranoia in *Gravity's Rainbow* are analogous to, and are rooted as well in, the physical-science concepts of determinism and non-determinism. Essentially deterministic, paranoia is thus "tacitly predicated on belief in cause and effect." Determinism and non-determinism are the two hypotheses used in the physical sciences for describing and predicting observed phenomena. In mathematics the two hypotheses are seen in two mathematical procedures: the deterministic model and the probabilistic (or stochastic) model.

Determinism, as defined by physicist Max Born, "postulates that events at different times are connected by laws in such a way that
predictions of unknown situations (past or future) can be made" (Ozier, 79). Generally, in classical physics, determinism is the belief that, for example, if one knows where all matter is at any given time, one can then reconstruct the past or predict the future paths and locations of all matter. The assumption in classical physics is that "once the laws are discovered, only a matter of calculation is needed to be able to predict events with perfect certainty" (Ozier, 82). In mathematics, "the deterministic model . . . is usually represented by a formula and assumes that the conditions under which an experiment is performed determine the outcome of the experiment" (Ozier, 79).

Simply, determinism is based upon the assumption of causality.

Non-determinism, generally is the belief that it is impossible to reconstruct the past or predict the future. In the strictest sense, non-determinism denies the concept of cause-and-effect; it is rarely, however, carried to such extremes in the physical sciences. It is one thing to argue that it is impossible to collect enough data to reconstruct the past and predict the future, but it is quite another to argue, as Sanders does, that the only alternative to cause-and-effect is chaos. Another alternative appears in the probabilistic (or stochastic) model of mathematics. In consideration of the molecules in a gas, for example, the model is non-deterministic in the sense that so many things are happening at once that an exact mathematical description is impossible, and it is impossible to observe whether or not deterministic laws are operating. Thus, reconstruction of the past and prediction
of the future movement of the molecules are impossible. The probabilistic models do not, then, refute the concept of cause-and-effect entirely. "Probabilities describe the 'likelihood' of a particular outcome if a process is repeated many times" (Ozier, 79). In physics the Heisenberg Uncertainty Principle and quantum mechanics have caused further modifications of the concept of classical determinism and can, therefore be classified as "non-deterministic," but not as "chaotic."

The two concepts, determinism and non-determinism, also appear in statistics. If a certain result is inevitable, the only possible result of a single experimental trial, its probability is defined to be one; if the converse is true, if a certain result is experimentally impossible, its probability is defined to be zero. The belief that observable phenomena can be classified as having a probability of either zero or one is statistical determinism. The zero and one probabilities, then, affirm the concept of cause-and-effect. On the other hand, if an experimental trial has more than one possible result, each result has a defined probability between zero and one. The non-deterministic hypothesis, then, includes probabilities between zero and one. Statistical non-determinism does generally deny cause-and-effect. Certainly, the underlying assumption, "a necessary precondition for the application of the Poisson distribution" (Ozier, 85), is that past events have no effect on the outcome of present or future events. However, statistical concepts, such as "conditional probabilities and coefficients of correlation which assume and measure some relationship
between successive events in an experiment or in history" (Ozier, 85-86), do modify the denial of cause-and-effect by statistical non-determinism.

In *Gravity's Rainbow* the characters reflect the scientific conflict between determinism and non-determinism. Ned Pointsman and Roger Mexico seem most illustrative of the statistical aspects of the determinism/non-determinism dichotomy.

Sander's contention that the binary structure in *Gravity's Rainbow* allows only for a choice between cause-and-effect--paranoia and determinism--and chaos seems to be a complete acceptance of the views expressed by Dr. Edward W.A. (Ned) Pointsman, F.R.C.S., who is an English Pavlovian, an experimentalist dedicated to cause-and-effect, the zero and the one, determinism. "Pointsman can only possess the zero and the one. He cannot, like Mexico, survive any place in between. Like his master I.P. Pavlov before him, he imagines the cortex of the brain as a mosaic of tiny on/off elements. . . . Each point is allowed only the two states: waking or sleep. One or zero" (GR, 55). Pointsman tells Roger Mexico that "Pavlov believed that the ideal, the end we all struggle toward in science, is the true mechanical explanation. He was realistic enough not to expect it in his lifetime. Or in several lifetimes more. But his hope was for a long chain of better and better approximations. His faith ultimately lay in a pure physiological basis for the life of the psyche. No effect without cause, and a clear train of linkages" (GR, 89). Pointsman has defined classical determinism.
Roger Mexico, on the other hand, is dedicated to statistical non-determinism. He is the "Antipointsman" (GR, 55), the statistician who, unlike Ned Pointsman, can survive in the domain between zero and one. To Mexico belong the probabilities. For Mexico, as a statistician, there is no cause-and-effect. He tells Pointsman, "No matter how many bombs have fallen inside a particular square, the odds remain the same as they always were. Bombs are not dogs. No link. No memory. No conditioning" (GR, 56). Roger sees the Poisson distribution as "eminently fair. Everyone's equal. Same chances of getting hit. Equal in the eyes of the rocket" (GR, 57). No Elect. No Preterite. No "damned Calvinist insanity" (GR, 57).

Mexico feels that Pointsman, and Pavlovians in general, are too "strong on the virtues of analysis" and asks, "Once you've taken it all apart, fine, I'll be the first to applaud your industry. But other than a lot of bits and pieces lying about, what have you said?" (GR, 88). Roger Mexico's answer to his own question is to argue for the necessity of a move away from the sterility of cause-and-effect:

... there's a feeling about that cause-and-effect may have been taken as far as it will go. That for science to carry on at all, it must look for a less narrow, a less ... sterile set of assumptions. That the next great breakthrough may come when we have the courage to junk cause-and-effect entirely, and strike off at some other angle (GR, 89).

Roger Mexico, at least in his consideration of inanimate objects, as the "Antipointsman," is a non-determinist.

Einstein notes that "it is the theory which decides what we can observe" (Ozier, 88). Pointsman's dedication to Pavlovian theory
leads him to see everything in terms of stimulus and response (or cause-and-effect). His greatest concern is in proving that determinism is the reality of life. While Roger Mexico sees Slothrop as an example of "statistical oddity," Rollo Groast of "precognition," and Edwin Treacle of "psychokinesis," Pointsman sees Tyrone Slothrop as a perfect example of a subject responding to a conditioned response—or, in this case, over-deconditioned response since Pavlovian "extinction can proceed beyond the point of reducing a reflex to zero" (GR, 84-85). Slothrop's erections can then be explained as the effect of the conditioning stimulus happening in reverse. For Pointsman, then, the cue, the stimulus, must be occurring, and thus, must be discoverable. The discovery of the stimulus would prove the "determinacy of everything":

But if it's /the stimulus/ in the air, right here, right now, then the rockets follow from it, 100% of the time. No exceptions. When we find it, we'll have shown again the stone determinacy of everything, of every soul. There will be precious little room for any hope at all. You can see how important a discovery like that would be (GR, 86).

The "determinacy of everything" is the key issue for Pointsman. Determinacy, or cause-and-effect, is directly related to control; thus the importance of "little room for any hope at all"—that is, hope for freedom from control. Pointsman is forced into further despair, if cause-and-effect is not valid, because he sees determinism and non-determinism as simple opposites. Just as the alternative to God-as-Controller was simply chaos in Calvinistic theology, so to Pointsman the alternative to cause-and-effect (determinism) is chaos. Pointsman sees in Roger
Mexico's statistics the wreck of "the elegant rooms of history," a threat to "the idea of cause and effect itself" (GR, 56). Anti-paranoia, non-determinism, means "nothing but 'events,' newly created from one moment to the next," "no links," "the end of history" to Pointsman (GR, 56). Pointsman equates anti-paranoia and non-determinism to chaos.

Pynchon repeatedly portrays Pointsman as a ludicrous figure in the novel, however, and the reader must seriously question the validity of seeing the only possible choice as a choice between cause-and-effect (paranoia) and chaos. Pynchon paints a grim picture of Pointsman; he is an unsympathetic character. Pointsman is described as a "vivisectionist" the first time he is introduced (GR, 37). Roger Mexico realizes that Ned Pointsman wants "more than his good will, his collaboration. But wants him. As one wants a fine specimen of dog" (GR, 46). When Jessica Swanlake thinks of Pointsman in relation to Roger Mexico she "sees so plainly her limits, knows she can never protect him as much as she must . . . from Mr. Pointsman, and Pointsman's . . . bleakness. . . . Scientist neutrality. Hands that . . . could as well torture people as dogs and never feel their pain" (GR, 58). And Pointsman does in fact dream of humans on whom to experiment: "How Pointsman lusts after them, pretty children" (GR, 50). The children are the innocents, the tabulae rasae, which he can use; he can "write on them new words of himself" (GR, 50). What Pointsman wants, what he "needs," in his own words, "is not a dog, not an octopus, but one of your fine Foxes human beings, patients. Damn
it. One, little, Fox!" (GR, 53).

When Pointsman finally gets his "fox" in the person of Tyrone Slothrop, he is prepared to go to any lengths to get the results (answers) he wants. "We may have to starve, terrorize, I don't know... it needn't come to that," he tells Roger Mexico. "But I will find his Slothrop's_7 spots of inertia, I will find what they are if I have to open up his damned skull, and how they are isolated, and perhaps solve the mystery of why the rockets are falling as they do--though I admit that was more of a sop to get your Roger Mexico's support" (GR, 90). And, Pointsman does order that Slothrop be castrated.

Pynchon also undercuts the Pavlovian expectation of a 100% probability of a response following a conditioned stimulus. Tyrone Slothrop was conditioned to respond to a loud sound with an erection. When he was deconditioned he went "beyond" into the "ultraparadoxical phase" in which the response precedes the stimulus that the unconditioned observer can perceive (GR, 49). Thus, Tyrone Slothrop gets an erection before the falling of a rocket and the subsequent blast of its explosion. Yet, during the shooting of a tank shell during a party, he doesn't have the expected response to the stimulus. "But loud noise and all... he doesn't seem to have an erection... This is a datum London never got, because nobody was looking" (GR, 248).

The reader later discovers that Pointsman is concerned only with what he calls "a rather strictly defined, clinical version of the truth" (GR, 272). "The early data seem to show," he mentally reports, "a number of cases where the names on Slothrop's map do not appear to
have counterparts in the body of fact we (/the PISCES researchers/) 've been able to establish along his time-line here in London" (GR, 272). As far as Ned Pointsman is concerned, "If many--even if most--of the Slothropian stars are proved, some distant day, to refer to sexual fantasies instead of real events, this would hardly invalidate" his approach (GR, 272).

Sanders, as noted previously, sees the binary possibilities of Pynchon's structure as allowing only two choices for men such as Slothrop: "subjection to external control or disintegration" (Sanders, 187). According to Sanders, "Slothrop would rather be the object of someone else's scheme than simply drift in the chaos of history" (Sanders, 186). Sanders states, "To be passed over; to drop out of all plots, is to lose one's identity. Isolated from external schemes, character dissolves" (Sanders, 186). Thus, Slothrop must choose either paranoia (with its assumption of external control) or disintegration. Sanders obviously feels that opting out of paranoia is a bad thing, and claims that "Pynchon always speaks of freedom . . . as a freedom from conspiracies, and hence as a ticket to death" (Sanders, 187).

Pynchon, however, never sees paranoia nor preterition--involvement in conspiracies--as good things. Paranoia inhibits action, leads to stasis and non-involvement with life. Slothrop, for example, "only wants to lie still . . . isn't that every paranoid's wish? to perfect methods of immobility?" (GR, 572). Stasis precludes transcendence. The Preterite are Preterite because they are addicted to the "useless, ugly or shallow" comforts that others sell them, and they are "willing
to have life defined for them by men whose only talent is for death" (GR, 747). There is no life to be found in any aspect of paranoia; there is no life to be had by the Preterite when the Elect are able to deal only in death. Pynchon further undercuts paranoia--cause-and-effect--as a "life" choice when Rathenau speaks from beyond death through Peter Sachsa to the members of the firm, to They. Rathenau "was prophet and architect of the cartelized state" while he was alive, yet from beyond he says, "All you [the Firm, They] believe is real is illusion. . . . The activities of the Firm are all the impersonation of life. The real movement [of the Firm's discovery and production] is not from death to any rebirth. It is from death to death-transfigured. . . . What you call 'life': the growing, organic Kartell . . . [is] only another illusion. A very clever robot. The more dynamic it seems to you, the more deep and dead, in reality, it grows. . . . The Firm, the Kartell, offers only death converted into more death. . . . All talk of cause and effect is secular history, and secular history is a diversionary tactic. . . . If you want the truth . . . you must ask two questions. First, what is the real nature of synthesis? And then: what is the real nature of control?" (GR, 164-167).

Sanders, then, believes that "to be passed over, to drop out of all plots, is to lose one's identity" (Sanders, 186). If the only alternative to paranoia--cause-and-effect or membership in plots--is chaos, then the loss of identity must certainly be a bad thing. Pynchon, however, through Franz Pökler, defines the issue as a choice between "personal identity" and "impersonal salvation" (GR, 406).
Pirate Prentice and Katje Borgesius wish to opt out of the Firm—out of plots—but they retain their "personal identities" and are thus unable to succeed. Dodson-Truck tells them, "The Firm knows perfectly well that you've come here. They'll expect a full report from you now. Either voluntary or some other way" (GR, 543). Pirate is making a "passage" in his life, "but it's still a passage They can touch quite as easily as that of any client" (GR, 543-544). He chooses stasis in his life and realizes that "it will be possible, after all, to die in obscurity, without having helped a soul: without love, despised, never trusted, never vindicated--to stay down among the Preterite, his poor honor lost, impossible to locate or to redeem" (GR, 544). He has "never felt this stillness" (GR, 546). Pirate and Katje will not transcend.

In contrast, the life of Tyrone Slothrop in Gravity's Rainbow provides support for the concept of "impersonal salvation." Pirate and Katje are told, "No one has ever left the Firm alive, no one in history--and no one ever will" (GR, 543), yet Slothrop eludes the grasp of the Firm. And, according to Oberst Enzian, he has transcended the Firm:

"If he is alive," he may have changed by now past our recognition. We could have driven under him in the sky today and never seen. Whatever happened at the end, he has transcended. Even if he's only dead. He's gone beyond his pain, his sin--driven deep into Their province, into control, synthesis and control . . . (GR, 660-661).

Tyrone Slothrop's life is a "cycle" (GR, 434) and the part of his life-cycle visible to other men resembles the path of the rocket, the
parabola. The rocket moves upward under power from the engines—under the "control" of the engineers who designed and fired it. At the Brennschluss point the engines run out of fuel and cut off. The rocket passes on, rising beyond the Brennschluss point, until its momentum is lost; the flight is then given over to the control of gravity, the rocket passes through the "zero point"—the point of instantaneous change and reversal on the parabolic curve—moves beyond the zero, and falls to earth. For Slothrop, and Katje, "it is not only a rocket trajectory, but also a life. . . . between the two points—the Brennschluss point where engine control cuts off and the zero point where gravity's control is exerted, in the five minutes, it lives an entire life" (GR, 209).

The "zero point," the point of instantaneous change and reversal, occurs in the lives of men as well as in the life of the rocket. Pynchon likens the "zero point" to being struck by lightning and living through it:

Most people's lives have ups and downs that are relatively gradual, a sinuous curve with first derivatives at every point. They're the ones who never get struck by lightning. No real idea of cataclysm at all. But the ones who do get hit experience a singular point, a discontinuity in the curve of life—do you know what the rate of change is at a cusp? Infinity, that's what! A-and right across the point, it's minus infinity! How's that for sudden change, eh? Infinite miles per hour changing to the same speed in reverse, all in the gnat's-ass or red cunt hair of the ∆t across the point (GR, 664).

For humanity the "zero point," "the change from point to no-point, carries a luminosity and enigma at which something in us must leap and
sing, or withdraw in fright" (GR, 396). Pynchon quotes Rilke, "Want the Change. 0 be inspired by the Flame!" (GR, 97). The Change, the transformation at the "zero point," will come to each man either during his life, like a lightning bolt, or in his death. The young rocket engineers, including Roland Feldspath, fail, for example, to make the connection between Feedback (the mechanism for yaw control in the rocket) and "yaw" control in their own lives. They are moving, during their lives, toward the "zero point," toward "another order of being," but they lose--or it is interfered with--their Feedback, their control. Roland finally finds the connection in his death, with "a host of other souls feeling themselves, even now, Rocketlike, driving out toward the stone-blue lights of the Vacuum under a Control they cannot quite name . . . the illumination out here is surprisingly mild, mild as heavenly robes, a feeling of population and invisible force, fragments of 'voices,' glimpses into another order of being . . ." (GR, 239). Tyrone Slothrop, in contrast, sees the control over him and finds his "zero point" during his life.

Slothrop's early life, like the rocket's trajectory, is under external control. "All in his life of what has looked free or random, is discovered to've been under some Control, all the time, the same as a fixed roulette wheel" (GR, 209). Slothrop becomes a full-blown paranoiac as he sees the control They have over his life. Then he ventures into the Zone and escapes Their direct influence. He escapes, for example, Pointsman's castration attempt. He is, in a sense, in the Zone between the Brennschluss point, where the external control of the
engineers ceases, and the "zero point," where another external control is exerted. "The specific shape whose center of gravity is the Brennschluss point. . . . is most likely an interface between one order of things and another. There's a Brennschluss point for every firing site" (GR, 302), and every life. Slothrop has crossed the interface between paranoia (awareness of external control) and anti-paranoia. In the Zone, "Slothrop feels himself sliding onto the anti-paranoid part of his cycle, feels the whole city around him going back roofless, vulnerable, uncentered as he is, and only pasteboard images now the Listening Enemy left between him and the wet sky" (GR, 434). Finally, Slothrop reaches, and passes through, the "zero point" of his life's rocket-trajectory. Suddenly, everything becomes "blindingly One"; he becomes "a crossroads, a living intersection" (GR, 625). Now "he could make it all fit" (GR, 626).

... and now, in the Zone, later in the day he became a crossroad, after a heavy rain he doesn't recall, Slothrop sees a very thick rainbow here, a stout rainbow cock driven down out of pubic clouds into Earth, green wet valleyed Earth, and his chest fills and he stands crying, not a thing in his head, just feeling natural . . . (GR, 626).

After this Slothrop moves on, beyond the zero, under another control he cannot name. He cannot go back.

But nowadays, some kind of space he cannot go against has opened behind Slothrop, bridges that might have led back are down now for good (GR, 490).

He begins to "disintegrate," as Sanders puts it. "Disintegration" isn't quite the proper term, however. "Disintegration" implies an end in obliteration, extinction, nothingness. But Pynchon tells us
that Slothrop is "scattering" and that he is "transformed." Slothrop is "scattered all over the Zone. It's doubtful if he can ever be 'found' again, in the conventional sense of 'positively identified and detained'" (GR, 712). Seaman Bodine is "one of the few who can still see Slothrop as any sort of integral creature. . . . Most of the others gave up long ago trying to hold him together even as a concept—'It's just got too remote''s what they usually say" (GR, 740). "Some believe that fragments of Slothrop have grown into consistent personae of their own. If so there's no telling which of the Zone's present-day population are offshoots of his original scattering" (GR, 742).

Slothrop's "personal identity" has "died," but he has found "impersonal salvation" through transformation. He has "transcended."

Pynchon begins Gravity's Rainbow with an epigraph from Werner von Braun:

Nature does not know extinction; all it knows is transformation. Everything science has taught me, and continues to teach me, strengthens my belief in the continuity of our spiritual existence after death (GR, 1).

There is a "mystical" life force operating in Nature and in the cycle of transformation in Nature that is discussed and illustrated in the novel. The cycle of transformation in Nature is the key to the truth about synthesis and control. It is precisely this truth which Rathenau says is crucial: What is the real nature of synthesis? What is the real nature of control?

New means of synthesis and control were opened by organic chemistry, whose development rests on Kekulé's discovery of the benzene
ring. Pynchon tells of Kekulé's dream of the Great Serpent and describes the perversion of its message:

Kekulé dreams the Great Serpent holding its own tail in its mouth, the dreaming Serpent which surrounds the World. But the meanness, the cynicism with which this dream is to be used. The Serpent that announces, "The World is a closed thing, cyclical, resonant, eternally-returning," is to be delivered into a system whose only aim is to violate the Cycle. Taking and not giving back, demanding that "productivity" and "earnings" keep on increasing with time, the System removing from the rest of the World these vast quantities of energy to keep its own tiny desperate fraction showing a profit: and not only most of humanity--most of the World, animal, vegetable and mineral, is laid waste in the process. The System may or may not understand that it's only buying time. And that time is an artificial resource to begin with, of no value to any one or anything but the System, which sooner or later must crash to its death, when its addiction to energy has become more than the rest of the world can supply, dragging with it innocent souls all along the way (GR, 412).

They have taken the Serpent to mean "that the six carbon atoms of benzene are in fact curled around into a closed ring" (GR, 413). "The Serpent whispered, "They can be changed, and new molecules assembled from the debris of the given..." (GR, 413). Nevertheless, "one of Their favorite slogans" is a quote from Rilke: "'Once, only once.' ... No return, no salvation, no Cycle" (GR, 413). Consequently, They spread a belief in death. As the Devil's Advocate, Father Rapier, "here to preach ... against return," says, "Death has been the source of Their power. ... If we are here once, only once, then clearly we are here to take what we can while we may. If They have taken much more, and taken not only from Earth but also from us--well, why begrudge
Them, when They're just as doomed to die as we are? . . . But is that really true? or is it the best, and the most carefully propagated, of all Their lies, known and unknown?" (GR, 539). The Devil's Advocate continues, "To believe that each of Them will personally die is also to believe that Their System will die—that some chance of renewal, some dialectic, is still operating in History. To affirm Their mortality is to affirm Return. I have been pointing out certain obstacles in the way of affirming Return . . ." (GR, 540). It is to Their advantage to deny the Cycle, to deny transformation, and it is to Their advantage to use the twisted logic of a devil's advocate to keep the Preterite from realizing that transformation is possible.

The rocket, however, leads men to the truth, and ironically, since it brings "death," to a renewal of hope. The rocket, Enzian says, "comes as the Revealer. Showing that no society can protect, never could. . . . They have lied to us. They can't keep us from dying, so They lie to us about death. . . . We can't believe Them any more. Not if we are still sane, and love the truth" (GR, 728). As another of Their lies, They deny the concept of the Aether in space and They separate each individual in time:

What if They find it convenient to preach an island of life surrounded by a void? Not just the Earth in space, but your own individual life in time? What if it's in Their interest to have you believing that? (GR, 697).

But Rocket state-cosmology--the lack of symmetry in the rocket's trajectory--"leads to speculating that a presence, analogous to the Aether, flows through time, as the Aether flows through space. The
assumption of a Vacuum in time tended to cut us off from one another. But an Aether sea to bear us world-to-world might bring us back to a continuity ...." (GR, 726).

Squalidozzi tells Slothrop that "in the openness of the German Zone, our hope is limitless" (GR, 265). Pynchon repeats that "there is a key, among the Wastes of the World" (GR, 667), "the key that will bring us back, restore us to our Earth and to our freedom" (GR, 525). Ilse, of the new generation, "will not be used" because "hiding, out among the accidents of this drifting Humility, never quite to be extinguished, are a few small chances for mercy." Ilse will find "help when least looked for from the strangers of the day" (GR, 610). And, "just as there are, in the World, machineries committed to injustice as an enterprise, so too there seem to be provisions active for balancing things out once in a while. Not as an enterprise, exactly, but at least in the dance of things" (GR, 580).

The Cycle, transformation, is the key to the message of Gravity's Rainbow. Man is not faced with a simple binary choice between paranoia--determinism, cause-and-effect--and chaos. Transformation doesn't equate simply with chaos or with causality, and while anti-paranoia--non-determinism--may not be "comforting," "religious," or certain, it does allow for possibilities beyond death and for transcendence over the waste that the System (dedicated to cause-and-effect) creates. "Death" becomes a transformation, not an extinction, across the zero, and as Roger Mexico realizes, the statistical oddity of Slothrop
"implies moving . . . beyond the zero—and into the other realm," a direction, "you do realize," in which "you ought to be moving" (GR, 85).
NOTES


2 Scott Sanders, "Pynchon's Paranoid History," *Twentieth Century Literature*, 21 (May 1975). Hereafter, citations from this article will be made parenthetically within the text.


4 Lance W. Ozier, "Antipointsman/Antimexico: Some Mathematical Imagery in *Gravity's Rainbow*," *Critique*, 16, No. 5 (1974), p. 78. Hereafter, citations from this article will be made parenthetically within the text.


SUPPLEMENTAL BIBLIOGRAPHY

This bibliography includes reviews and critical articles which were not quoted in the argument and which do not necessarily pertain to the argument presented, yet which pertain to Gravity's Rainbow as a whole.


