Notes

MLA Convention Special Session #477: "Impact of Science and Technology on Language, Style, and Structure in the Work of Thomas Pynchon." Wednesday, 29 December, 1982, 1:45-3:00 p.m., San Pedro Room, Westin Bonaventure Hotel, Los Angeles. Program arranged by the Division on Literature and Science. Presiding: Joseph W. Slade, Long Island University, Brooklyn.

"Paradigms Reclaimed: The Language of Science in Gravity's Rainbow," Dwight Eddins, University of Alabama.

"Cosmology and the Point of (No) Return in Gravity's Rainbow," N. Katherine Hayles, Dartmouth College.

"Pynchon's Center of Gravity," Molly Hite, Cornell University.

"Pynchon's Fields of Force: Continuities, Discontinuities, and Closures," Richard Pearce, Wheaton College.

For copies of papers, send $1 to Joseph W. Slade.

Abstracts of three of the four papers follow; the fourth was unavailable.

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Paradigms Reclaimed. . .

Though hardly the first to dispute claims that scientific language is "value-free" and entirely objective, Thomas Pynchon offers in Gravity's Rainbow an unusually dramatic and vivid exposé of the biases and camouflaged control mechanisms inherent in this language. Ironically, however, the very drama, vividness, ingenuity, and humor of the exposé revitalize and lend complex coloration to the supposedly neutral language, revealing it as a system of useful alternative metaphors for describing the fertile intricacy of our experience.

The epistemological framework that makes this reclamation possible is intuited by Leni Pökler, who is actually trying to defend her astrology against scientific attacks: "'It all goes along together. Parallel, not series. Metaphor. Signs and symptoms.

Mapping on to different coordinate systems'" (GR 159). What we really have here is a description of the episteme that governs the novel and assures that multiple analogous systems interpenetrate in a sort of semantic orgy. What science loses in uniqueness and dominance it gains in humanistic richness and relevance to the immediacies of existence.

Even partial differential equations are redeemable. One such, describing "motion under the aspect of yaw control" (GR 239) is literally reproduced by Pynchon, and shown to be a metaphor for a "bourgeois" mode of life that uses "feedback" mechanisms to avoid any social or spiritual challenge to its vapid complacency. The mathematical symbols also evoke "Rainy days" marked by a "haughty glass grayness" and "a monochrome overlook of valleys crammed with mossy deadfalls." It is true that this landscape is an unhealthy one, a harbinger of spiritual entropy, but it is at the same time haunting and touchingly elegiac.

Just how tendentious scientific description can be is revealed to us by Dr. Laszlo Jamf, who advocates a Nazi chemistry that would explore the synthetic possibilities of ionic bonding--in which electrons are fascistically seized--in opposition to covalent bonding--in which electrons are communistically shared. Jamf's interpretation of the facts is, of course, gratuitously extreme; but the basic antithesis that produced it is clearly shown as a generator of metaphors, a demonstration that the human psyche cannot avoid finding mirrors of its own tensions in what would seem to be the most inhuman, objective phenomena of nature. And once a given mirroring has been made explicit it remains bonded--whether covalently or ionically--to the phenomenon as one of its overtones.

Perhaps the richest of Pynchon's linguistic jeux d'esprit is his exploration of the two shallow S's that constitute the double integral sign. Here he combines the logical associations of scientific formulae with a free-wheeling semiotics of visual analogy. The things that resemble this sign are the two lightning flashes of the elite Gestapo unit, the tunnels of the Mittelwerke, the ancient rune that stands for yew trees and death, and--most incongruously--two lovers asleep in bed. Pynchon finds in the double

integration that turns acceleration into distance a "backward symmetry" (GR 301)--a grotesque mirror-reversal of human processes, a reminder of the reciprocal reflection between human experience and inhuman science. But while this reminder constitutes a warning against letting the Rocket have this "life of its own," it also constitutes an opening of scientific language toward the fullness of experience. Runes, symbols, simulacra--all suddenly acquire that degree of ominous connectedness that leads us to paranoia. And paranoia--linguistically speaking--is the state of ultimate signification, a condition of overwhelming metaphorical richness that invests the most abstract signifiers with the color and the human relevance of a contiguous poetry.

A last bit of evidence that Pynchon is as concerned with rehabilitation as with exposure is provided by passages in which the language of science is used almost entirely for purposes of comic enrichment. This is the case where we find the GI barber Eddie Pensiero concerned with questions of frequency modulation and Fourier analysis as one observes and classifies human shivers. Pynchon then applies a similar scientific grid to the hairs Eddie is cutting. While there is a mock-scientific tone here reminiscent of Gulliver's voyage to Laputa, the prevailing impression is of science domesticated and brought into an affirmative familiarity with the poor preterite people whom its misapplications threaten.

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Pynchon's Center of Gravity

The rhetoric of Gravity's Rainbow continually suggests that the novel's Center, or central insight, lies buried beneath layers of semantic accretion, and appears to encourage a modernist reading that would take the "gravity's rainbow" of the title as a structural metaphor. Such a reading might examine how, by bringing in the image of an arc determined by the Newtonian "force" of gravity, Pynchon surreptitiously invokes a whole context in which the concept of a determining "force" undergoes successive reinterpretations until, in the nineteenth century, gravity replaces God as center and source of a mechanistic

universe, and the second law of thermodynamics gives this universe a direction (downward, "betrayed to Gravity") and a destination (in terminal heat-death). A reading governed by the metaphor of the rocket's arc would thus be deeply pessimistic, confining the action to what seems to be a preordained historical curve and counseling gravitas in the face of an inevitable grave-ward decline.

But such a modernist reading, based on metaphors derived from modern (i.e., pre-Einsteinian) science, paradoxically emphasizes the novel's postmodernism, for Gravity's Rainbow does not sanction a definitive reading or yield an unambiguous central insight about the shape and direction of history. Instead, it overflows the boundaries that it appears to have set for itself, and derives the rationale for this overflowing from developments in twentieth century physics and mathematics. Relativity theory denies the centrality of gravitational "force" in physical explanations; similarly, Pynchon, by denying his novel what amounts to a center of gravity, is able to open up a fictional universe that might have remained a closed system, subjecting it to an outrageous application of Gödel's theorem "restated" as Murphy's Law and suggesting that any purportedly universal ordering principle is still subject to "surprises."

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Pynchon's Fields of Force. . .

We don't know much about Thomas Pynchon. We don't know how he writes. We don't know what he has in mind. We do know that he studied science as well as English at Cornell, that he worked for Boeing aircraft before starting to write full time, that physicists and mathematicians have verified the accuracy of his complex scientific allusions, and that he has written three novels. The more we learn about modern physics, the better we understand Pynchon's novels--not only thematically but structurally as well. I would like to focus on the structures. I will not attempt to explain them or reduce them by application of scientific theory. I will simply start with the assumption that Pynchon has a thorough understanding of and feel for both physics and literature. And with this assumption

in mind, I will examine, as empirically as possible, the endings of his three novels. I will draw on Heisenberg's uncertainty principle (that the more certain we are about the location of an electron, the more uncertain we are of its velocity), Bohr's concept of complementarity (that contradictory views or models of a phenomenon are not mutually exclusive), field theory (that the pattern or structure of a field, rather than its material manifestation, is the reality), and calculus (the science of endings).