Pynchon's Prophecies of Cyberspace

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On the face of things, it would seem paradoxical if not plainly contradictory to claim Thomas Pynchon for the pantheon of cyberspace prophets. For one thing, the most challenging and most rewarding novelist of our period would seem to have a pronounced aversion to anything binary. How can cybernauts and cyberpunks have the nerve to claim Pynchon as a literary ancestor, when the implied author of *Gravity's Rainbow* so clearly thinks of the digital domain as fodder for fascism and as hospitable only to the forces of dehumanization?

Take Ned Pointsman, for instance, the experimental psychologist who can't wait to get his hands on a human subject. Pynchon's narrator tells us:

[I]n the domain of zero to one, not-something to something, Pointsman can only possess the zero and the one. He cannot, like Mexico, survive anyplace 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. [. . . E]ach point is allowed only the two states: waking or sleep. One or zero. (GR 55)

To be somewhat brusquely shorthand about it, Pointsman (who is even explicitly named for the binary switcher at a railroad junction) is an evil character. He wants to use the poor oblivious Yank, Tyrone Slothrop, and the map of Slothrop's sexual progress across London, to prove "the stone determinacy of everything, of every soul" (86), and thereby establish a Pavlovian "true mechanical explanation" for human behavior (89). And just in case we don't catch the dangerously anti-humane flavor of Pointsman's binary mindcast, "Roger will remember [Pointsman's] smile—it will haunt him—as the most evil look he has ever had from a human face" (89).

When it is not being associated with evil, as in Pointsman's case, the digital domain seems to be a side-manifestation of madness in Pynchon's novel. What else are we to make of the Polish undertaker who takes a rowboat out in a storm to see if he can get hit by lightning? "He's a digital companion all right, everything gets either a yes or a no, and two-tone checkerboards of odd shape and texture indeed bloom in the rainy night around him and Thanatz" (663).

Yet despite the narrative's seemingly unambiguous hostility to the binary and its manifest ridicule of the digital, Pynchon in his 1973 novel not only curses but *precurses* what we now glibly dub cyberspace. He does so in a variety of ways, foremost among which is his imbuing *Gravity's Rainbow* with a subterranean sense, as it were, that the planet we inhabit is itself alive. There is thus a central tension in *Gravity's Rainbow* between suspicion of the digital realm and hinting that the Earth itself is a sentient creature. And this tension is prophetic, since if the planet is growing itself a nervous system, that global neural web might well resemble the Internet. Down with the binary, yet up with the most global of circuitries: here is the ambivalent crux of Pynchon's prophecies of cyberspace.

Since there is no cogent way to address the entirety of *Gravity's Rainbow*, I will look at four sample and perhaps representative sections: 1) the opening pages of the novel; 2) a vision attributed to Slothrop's uncle, businessman Lyle Bland; 3) "The Story of Byron the Bulb"; and 4) the fate of Slothrop himself. Finally, by way of closure, I will return to the image of the novel's title.

As Norbert Wiener explained to the American Academy of Arts and Sciences in March 1950: "The word cybernetics has been taken from the Greek word κυβερνήτις [kubernētēs] meaning steersman. It has been invented because there is not in the literature any adequate term describing the general study of communication and the related study of control in both machines and in living beings" (790). We mean by cybernetics, then, those activities and ideas that have to do with the sending, carrying, and receiving of information. With that definition in mind, we see that the opening section of *Gravity's Rainbow* just teems with potential cybernetic references.

"A screaming comes across the sky"—from the start the theme is communication. On the literal level, the reference is understood to mean the post-impact sound of a missile racing to catch up with its supersonic source. But note that Pynchon's memorable initial sentence—"A screaming comes across the sky"—also invokes verbs of expression, transmission, and disembodiment. Expression, transmission, and disembodiment happen also to be (are they not?) the dominant features of electronic communication, or e-mail. Expression, transmission, and disembodiment.

When Pirate Prentice glimpses the far-off flash of an early-morning rocket-bomb aimed at London, his involuntary thought is, "'Incoming mail'" (6)—a cybernetic sarcasm for the target's view of artillery headed its way. This conceit of the rocket as a signal sent and received, as information—less a physical object than a packet of information—runs the length of Pynchon's novel. Later in this opening

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episode, Pirate receives a phone call—another cybernetic jab—from an SOE superior, who

tells Pirate now there's a message addressed to him, waiting at Greenwich.

"It came over in a rather delightful way," the voice high-pitched and sullen, "none of my friends are that clever. All my mail arrives by post." (11)

The distinction is between a new communications medium and good old snail mail—snail mail, that is, avant la lettre.

In this same first episode we get a description of Pirate's "Condition," which is that he *receives*, through unexplained but reliable means, other people's fantasies. The most comic and memorable of these is Lord Blatherard Osmo's fantasy of a huge adenoid slurping up victims around London and requiring hods of cocaine. In Pirate's condition we have again a form of disembodied, apparently instantaneous communication of information—in this case, information in the form of imagery, which makes Pirate something like a GIF file receiver. Pirate receives J-PEGs and GIFs as if through some disembodied spiritual cybernetic node. Pirate *is*, in a sense, a node.

Another relevant characteristic in the novel's opening is the curious relation between the animate and the inanimate, as complex and unstable in this episode as throughout the novel. We recall that Part 1 is prefaced with an epigraph from Wernher von Braun concerning the "continuity of our spiritual existence after death." The dead persist in Pynchon; we know that well: there are séances, revenants, ghosts, and angels. In this first episode, Pirate's banana breakfasts are offered as a way of telling Death "to fuck off"—a way of sending a message, as it were, to the Other Side. As Edwin Treacle tells Roger Mexico later in the novel: "'There are peoples—these Hereros for example—who carry on business every day with their ancestors. The dead are as real as the living. How can you understand them without treating both sides of the wall of death with the same scientific approach?'" (153; emphasis added).

Analogous to this porous boundary between life and death, the line between the animate and the inanimate is frequently blurred in Pynchon. In the dream of Pirate Prentice with which the novel opens, the human refugees are described as "stacked about among the rest of the *things* to be carried out to salvation" (3; emphasis added). Stepping out like Buck Mulligan onto the roof of his Chelsea maisonette, Pirate groans as the cold "hits the fillings in his teeth" (6), reminding us that we compose *ourselves* from inorganic materials too—way before the

"six million dollar man" prostheses of TV fantasy. In this opening episode, in fact, Pirate's "skull feels made of metal" (5)—just as, later, Tchitcherine appears as a kind of smuggler across the animate/inanimate boundary: "In and out of all the vibrant flesh moves the mad scavenger Tchitcherine, who is more metal than anything else" (337).

In the novel's ethically Manichean division between Us and Them, They are the forces of the inanimate, while the good guys are the forces of life. But Pynchon continually focuses on the boundary between the two, and it dissolves beneath his scrutiny. A lavish sentence on the novel's first page conjures up "the smells begun of coal from days far to the past, smells of naphtha winters, of Sundays when no traffic came through, of the coral-like and mysteriously vital growth, around the blind curves and out the lonely spurs, a sour smell of rolling-stock absence, of maturing rust." Just to begin unpacking these last phrases: Coal is at the interface, an organic mineral, and so is naphtha, another once-living fossil fuel. The "coral-like growth," "mysteriously vital," depicts minerals as if they were vegetable. "Blind curves" and "lonely spurs" both apply anthropomorphic epithets to inanimate objects. And "maturing rust" likewise blurs the line between inorganic and organic chemistry, an image that seeps like a solvent across the inorganic/organic boundary.

We might compare Pynchon's strategy here to Gregory Stock's argument in his recent *Metaman: The Merging of Humans and Machines into a Global Superorganism.* Stock adopts the somewhat McLuhanesque conceit that a computer is an extension of the mind. The difference between the memory banks in your head and the data on your disks is at root unimportant. One's memory means, in this view, being able to access, being able to download—being able to search your memories and recall things. Recalling and downloading are virtually the same thing.

Gravity's Rainbow does not speculate as explicitly or prosaically as Stock's valuable study, but the novel does, as we have noted, blur the boundaries between the animate and the inanimate—in this opening episode and elsewhere. On the first page "the walls break down," just as at its very end the difference between animate and inanimate continues to erode:

With a face on ev'ry mountainside, And a Soul in ev'ry stone. . . .

Now everybody - (760)

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By blurring the line between what is alive and what isn't, Pynchon enables us to see organic processes carried on by inanimate means. Metals in particular are understood to carry on life's electric impulses without loss of vital spirit. After a lengthy description of what happens, eventually, to "thousands of old used toothpaste tubes," Pynchon writes:

Yet the continuity, flesh to kindred metals, home to hedgeless sea, has persisted. It is not death that separates these incarnations, but paper: paper specialties, paper routines. The War, the Empire, will expedite such barriers between our lives. The War needs to divide this way, and to subdivide, though its propaganda will always stress unity, alliance, pulling together. (130; emphasis added)

Our former engineering student's sense that the metallic can be made kindred to flesh if it is wired to the human spirit seems to foresee a path for the ultimate extension of human thought and expression across the phone lines, silicon chips, and phosphor screens of cyberspace.

Gravity's Rainbow even predicts the significance of silicon in extending life into the reaches of the inanimate. The prediction comes complete with theological punchline, from infant Tyrone's tormentor and an inveterate binarist, Laszlo Jamf, in his annual last lecture to his students at the T.H. Munich:

"You have the two choices," Jamf cried [...] "stay behind with carbon and hydrogen, take your lunch-bucket in to the works every morning with the faceless droves who can't wait to get in out of the sunlight—or move beyond. Silicon, boron, phosphorus—these can replace carbon, and can bond to nitrogen instead of hydrogen—[...] move beyond life, toward the inorganic. Here is no frailty, no mortality—here is Strength, and the Timeless." Then his well-known finale, as he wiped away the scrawled C—H on his chalkboard and wrote, in enormous letters, Si—N.

The wave of the future. (580; all emphasis except the first added)

observes the sardonic, prophetic narrator.
In a less Machiavellian, more cosmic mode, Lyle Bland

imagines that he has been journeying underneath history: that history is Earth's mind, and that there are layers, set very deep, layers of history analogous to layers of coal and oil in Earth's body. [. . .]

[I]t's hard to get over the wonder of finding that Earth is a living critter, after all these years of thinking about a big dumb rock to find a

body and psyche. [. . .] To find that Gravity, taken so for granted, is really something eerie, Messianic, extrasensory in Earth's mindbody. (589–90; emphasis added)

Pynchon articulates here a vision it has become fashionable of late to refer to as the Gaia hypothesis—the idea, based on theories first put forth by English climatologist James Lovelock, that the life forms on Earth help to maintain a steady-state in the climate, and that, by extrapolation, the planet itself may best be thought of as a living metaorganism, one to be named after Gaia, the ancient Earth goddess.

If we give this conceit the respect Pynchon himself seems to accord it, we may be led to see analogies between such a global organism and the evolving nervous system humans have woven for the planet in cyberspace. *Gravity's Rainbow's* subterranean sense that the planet is alive invokes a level of connectedness, that is, that maps rather neatly onto a World Wide Web. For if the Earth is indeed evolving into what Pynchon's narrator calls "a living critter," then the far-flung synapses of cyberspace would seem to embody that global entity's mind, or its conscience, or even its soul.

Perhaps the clearest prophecies of cyberspace in *Gravity's Rainbow* occur in the late episode subtitled "The Story of Byron the Bulb." In the framing scene, Pfc. Eddie Pensiero has been ordered to give a haircut to an unnamed but garrulous colonel from Kenosha, Wisconsin, while Eddie's friend Private Paddy McGonigle hand-cranks a generator to power the light bulb overhead. Pynchon's narrator tells us:

Now it turns out that this light bulb over the colonel's head here is the same identical Osram light bulb that Franz Pökler used to sleep next to in his bunk at the underground rocket works at Nordhausen. [. . .] But the truth is even more stupendous. This bulb is *immortall* It's been around, in fact, since the twenties, has that old-timery point at the tip and is less pear-shaped than more contemporary bulbs. Wotta history, this bulb, if only it could speak—well, as a matter of fact, it can speak. (647)

And so we get "The Story of Byron the Bulb," who gets into trouble with the international light-bulb cartel by not burning out when he is supposed to. The other light bulbs notice his unusual longevity, and compare it to other cases they have heard of, communicating on what Pynchon calls, with a capital G, the Grid. Other light bulbs

can recognize his immortality on sight, but it's never discussed except in a general way, when folklore comes flickering in from other parts of the Grid, tales of the Immortals, one in a kabbalist's study in Lyons who's

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supposed to know magic, another in Norway outside a warehouse facing arctic whiteness with a stoicism more southerly bulbs begin strobing faintly just at the thought of. (650; emphasis added)

So the Grid is a kind of webspace, the global circuitry not of T-1 lines and telephone links but of the primordial power grid itself, adapted for the sake of this fantasy to the needs of instant communication. In the style of a recent *New Yorker* cartoon, you might say that on the Internet of this prophecy, nobody knows you're a light bulb.

As Byron the Bulb's hours of use continue to climb, threatening to throw all the capitalist averages out of whack, the Committee on Incandescent Anomalies—whose author knows we can spell that one out for ourselves—sends out a Berlin agent

to unscrew Byron. The other bulbs watch, in barely subdued terror. The word goes out along the Grid. At something close to the speed of light, every bulb, Azos looking down the empty Bakelite streets, Nitralampen and Wotan Gs at night soccer matches, Just-Wolframs, Monowatts and Siriuses, every bulb in Europe knows what's happened. (650; emphasis added)

Such a global information network operating "at something close to the speed of light" was not even taken seriously as science fiction when Pynchon let Byron the Bulb shed his light. But in retrospect, the episode was prophetic, and now every bulb in Europe—or every wired monitor screen in the world—does know what's happened.

Interestingly, Pynchon mentions prophecy itself at the end of Byron the Bulb's story, for it is Byron's fate—like that of so many e-mail addicts—to have access to all the information in the world yet be able to do little with it:

Someday he will know everything, and still be as impotent as before. His youthful dreams of organizing all the bulbs in the world seem impossible now—the Grid is wide open, all messages can be overheard, and there are more than enough traitors out on the line. Prophets traditionally don't last long—they are either killed outright, or given an accident serious enough to make them stop and think, and most often they do pull back. (654–55)

One of the hottest topics in Pynchon criticism has always been the interpretation of Slothrop's dissolution well before the end of the novel of which he is presumably the protagonist. In Joseph W. Slade's early reading, for example, Slothrop's disintegration is a metaphor for the helplessness of innocence before the immensity of power: "He literally

fragments, cut to pieces by energy grids, the victim of his innocence, which is no defense against the complexities of the systems that reform after the war" (184). William Plater reads Slothrop's disintegration as a metaphor for the Heisenberg uncertainty principle: "Slothrop even begins to disperse and spread throughout the Zone as his psychoanalytical observers learn more about the sexual energy he appears to derive from the Rocket" (102). And according to Edward Mendelson, "Slothrop's disintegration . . . summarizes the historical fate of literary modernism" (166).

In my own earlier work on *Gravity's Rainbow*, I concentrated on Slothrop's falling apart as a metaphor for entropy and as a source of paradoxical power (153–55). But it now strikes me that Slothrop's fate is tied in no inadvertent manner to that of . . . *paper itself*—and that here lies a most relevant reading for the metaphor-mongers and hunters of cybertextual allegory among us. Early in the novel, while laying out the Slothrop family's New England heritage, Pynchon, as it were, staples his character's identity to that of paper:

what stayed at home in Berkshire went into timberland whose diminishing green reaches were converted acres at a clip into paper—toilet paper, banknote stock, newsprint—a medium or ground for shit, money, and the Word. [. . .] Shit, money, and the Word, the three American truths, powering the American mobility, claimed the Slothrops, clasped them for good to the country's fate. (28)

When I read the call to this Pynchon conference at Warwick, it was not on paper, that "medium or ground" for the Word—it was on the luminous screen of my laptop, which, like Byron the Bulb's friends on the Grid, had received the word, the latest data and gossip, by pulses of electricity. E-mail is a disembodied medium, sending information instantaneously about the globe without killing a single tree or burning any petrol in a courier's lorry. Paper shows up from time to time in the process, but it has lost its continuous, coherent agency in the communications enterprise for much of what we do. What happens to Slothrop when he grows faint, vague, and eventually invisible altogether is precisely prophetic of what is now happening to paper in the culture of information. The claiming and clasping of the Slothrops by paper, as Pynchon describes it, makes his protagonist's fate eerily iconic of the fate of materiality itself in a virtual world.

The title *Gravity's Rainbow*, finally, evokes the colored band of light sent as a sign from God in the Old Testament, the icon signifying God's promise never again to wipe out humanity by a flood. If the digital domain of on or off is dear only to bumbling bad guys like Ned

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Pointsman, then the novel's title reminds us of the colorful spectrum between the extremes, the analog glories that hang suspended above the on-and-off of black and white.

Pynchon specifies, however, a rainbow subject to Gravity—suggesting, perhaps, a *subterranean* loop that completes the aerial parabola of the rainbow to create an eternally returning cycle of wholeness. I offer cyberspace as this underground link-connector, since, given the T-1 phone links that make the Internet possible, cyberspace is, in fact, a subterranean spectrum. The relay switches of geostationary satellites are *too slow* for the massive data transmissions of the Internet; and so cyberspace is not the "out-there" the word cyberspace would seem to suggest, but a "down-there," a nervous system whose links and branches flicker and spark *beneath* Earth's skin.

The Internet came into being, let us not forget, first as ARPANET and then as DARPANET—that is, as the US Department of Defense's array of research communications links among its nuclear missile sites. The very circuits that signalled the Cold War's threats of annihilation now make up the benign and gossipy information superhighway, just as the colorful sign of God's promise was suspended on drops of moisture left over from the Flood.

For that is what cyberspace has turned out to be: a broadband subterranean spectrum of light-speed transmissions—in other words, a gravity's rainbow.

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