Coloring Gravity's Rainbow

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> "Yes, Private, the colors change, and how! The question is, are they changing according to something? Is the sun's everyday spectrum being modulated? Not at random, but systematically [. . .]? Is there information for us? Deep questions, and disturbing ones."[1]

More than a decade after Gravity's Rainbow first appeared, the central question about this enigmatic text remains unanswered. How can we impute coherence to the text without falling into--or creating--the totalizing structures that the text warns us against?[2] As the "Rainbow" of Pynchon's title suggests, color is an important way in which this question is brought into focus. Most readers are aware that certain colors and color combinations occur repeatedly through the text; but so far no one has connected them either with Pynchon's recurrent themes, or with the more general question of how to reconcile the obviously elaborate patterning of Gravity's Rainbow with its paranoid intuition that all patterns originate in death-obsessed consciousness.[3] Encoded into the color transformations of Gravity's Rainbow are complex responses toward the psychopathologies to which fragmented Western thought gives rise, and the ways in which we as writers and readers get co-opted into participating in and reinforcing this fragmentation.

The possibility of co-option is inherent in the way Pynchon constructs his critique. He can create color within his text only by naming it, and he can name it only by classifying it as distinct and identifiable hues. Similarly, we can participate in Pynchon's creation of color only by decoding his color names, which implies that both reader and author are implicated in reducing the rainbow's "endless streaming" to the distinct hues of Newton's spectrum. At the same time, Pynchon's color coding achieves its force because it utilizes Newton's rules for color combination and refraction to create precise transformations

that connect the color names with such far-reaching themes as racism, the link between the dye and munitions industry, and the effect of synthetic chemicals and drugs upon the fragmented consciousness that they both create and control. As the color names become linked with these thematic concerns, a pervasive ambiguity arises: are Pynchon's acts of naming colors an escape from routinization, or an extension of "Their" totalizing patterns?[4]

The problem is inescapable; Pynchon's strategies are correspondingly convoluted. They progress by defining colors through binary oppositions, then by seeking ways to elude or transform the very categories that give the colors significance. The overarching color code consists of a progressive bleaching of color, from the blackness of Pirate's opening dream to the whiteness of Gottfried's descent at the end. Within this framing black/white dichotomy, colors appear not "at random," but as systematic combinations in which complementary colors are paired. Newton showed that when a color is joined with its complement, the combination yields either black or white. The appearance of color in complementary pairs therefore suggests that color is constantly at risk, in danger of collapsing into one or the other of the framing dichotomy's terms.

When colors arise that can mediate between the black/white poles, the implicit hope is that some way may be found to escape the rule of the excluded middle. When color disappears, it is a sign that the binary oppositions of a routinized mentality have taken over. The codes that govern this complex emergence and disappearance of color can be illustrated by three color groupings: the black-red-white triad, the three most pervasive colors; the blue/yellow complements associated with Gottfried and Enzian; and the color transformations that Slothrop undergoes. Before turning to an explication of these color codes, it will be useful to review some of the text's allusions to the dye industry, synthetic chemicals and the development of military-industrial multinationals, to understand how Pynchon's color codes will connect with, and thematically reinforce, these concerns.

The Dye Industry: How Color is Routinized

When Walter Rathenau, "prophet and architect of the cartelized state" (164), speaks of the "succession" connecting the discovery of mauve with the German military, he is historically accurate (166). Mauve, the first synthetic dye, was discovered in 1856 by William Perkin, then a student of Wilhelm August Hoffman, father of coal-tar analysis and successor to Justus von Liebig, the first chemist to work extensively with carbons and hydrocarbons. Dissatisfied with his work under Hoffman, Perkin set up a lab in his home and there, while attempting to synthesize quinine, stumbled across what he called "aniline" or "Tyrian purple." Under the name "mauveine," later shortened to "mauve," the dye was marketed by French entrepreneurs who took over Perkin's patent. The astonishing success of this first synthetic dye stimulated the discovery of hundreds more and ushered in the chemical technology that branched into such fields as photography, plastics, pharmaceuticals and explosives. Historically, the development of the dye industry in Germany proved crucial to the German munitions industry, a fact lamented in a 1921 propaganda pamphlet issued by the American Dyes Institute, urging the public to support the American dye industry so that it too could develop the synthetic chemicals necessary for superior military technology.[5]

The rapid development of the dye industry resulted in numerous color classification schemes, because colors cannot be mass-produced reliably until they can be unambiguously identified. The system that finally won dominance throughout the world was devised by the Commission International de L'Eclairage, whose alternate name comes from the English title for the controlling agency: the International Commission on Illumination, or the ICI. Like the "Icy Eye" of Pynchon's "Imperial Chemical Industries," the ICI color standards represent the triumph of synthetic cognition over natural perception, imposing on the organic unity of the rainbow the routinization that industrial processes demand.

In addition to discussing explicitly the dye industry's role in creating synthetic chemicals suitable for warfare, Gravity's Rainbow encodes this condemnation into its color names by contrasting the vividly true tones of natural colors with the bastardized, muted colors of synthetic dyes. Pirate, in his dream-vision of Hell, notices that the colors there are exclusively synthetic, with "every unpleasant commercial color from aquamarine to beige" represented (548). Opposing these depressing tones are the "true" colors associated with civilizations before they were corrupted by technology and modern analysis. The narrator imagines that the colors of America's pre-technological past were all vivid, "yellow American deserts, Red Indians, blue sky, green cactus" (724-25). Slothrop has a vision of what this lost America must have looked like when he witnesses "the kind of sunset you hardly see any more," resplendent with color like the "landscapes of the American West by artists nobody ever heard of, when the land was still free and the eye innocent, and the presence of the Creator much more direct [. . . an] anachronism in primal red, in yellow purer than can be found anywhere today" (214). The brighter the colors, the freer the imagination; the further the scene shifts away from the vivid hues into the synthetic tones, the more the creative play of the imagination is repressed.[6]

At the same time that this natural/synthetic dichotomy critiques binary thinking, however, it also embodies it, for it too is a simple pairing of opposites that, like the opposition between a "We-system" and a "They-system," operates by excluding the middle. It is thus another version of the central dilemma of how to name colors without at the same time becoming subject to the binary thinking that such naming implies. The search for a solution is the more urgent because the end of analytical fragmentation is, the narrator suggests, inevitable: it is the Rocket carrying Gottfried, the dark annihilation implicit in the flight into whiteness. "What is this death," the narrator asks, "but a whitening, a carrying of whiteness to ultrawhite, what is it but bleaches [. . .] extending, rarefying the Caucasian pallor to an abolition of pigment, of melanin, of spectrum, of

separateness from shade to shade" (759). How can "separateness from shade to shade" be preserved if the opposites that bracket them collapse into each other? The next code can be understood as an attempt to escape from this dialectic: a third term is introduced to mediate between the binary black/white opposition.

White-Red-Black: The Basic Triad

Inserted between the black/white opposites, red, the third term, is meant to open a space in which color can again appear. It too, however, is subject to co-option. The drama is played out in the colors associated with two of Pynchon's major characters, Pointsman and Katje. Descriptions of Pointsman emphasize his absence of color. In the scene where we first meet the "graying Pavlovian," Pointsman is described almost entirely in neutrals, searching through the nighttime wreckage with his foot stuck in a toilet bowl, "vague" eyes of "no particular color" staring out from a Balaclava helmet, a white ear sticking out to the side (42-43). What variations appear in Pointsman's white facade serve to hint at the repressed term of the white/black dichotomy, for when Pointsman is not bleached of color, he is described in shades of brown. "Neutral" Pointsman, treating other people as "human palimpsests" on which he can scrawl "his own brown Realpolitik dreams" (50), exemplifies the repression that is the underside of his scientific objectivity. In the fantasy Pointsman has (and we have?) about hanging out at St. Veronica's Downtown Bus Station to kidnap abandoned children, the principal variations in the monochromatic descriptions are shades of brown. But a touch of color breaks the pattern: the red eyes of the child, a vivid tone that creates an instant of sympathy in contrast to the moral tawdriness of the whole. The red is repeated in the flash of the disappearing travelers' cigarettes--"once, twice--no more" (51).

The flash of red is significant, for red is the mediating third term that comes between black and white to signify a potential for transformation, a germ of passion that could deflect Pointsman from his path of control and repression. It returns when

Maudie Chilkes has oral sex with him in the closet at the PISCES Christmas party. Maudie, the initiator of this "slick and crimson" event, is described in vivid scarlet tones; her knees blush red and she wears a wine-colored hair ribbon. In contrast to Maudie's deep red tones, Pointsman possesses only a "pink Pavlovian cock." But even this weak hue is an achievement for the neutral Pointsman, and he will be granted a rare visitation of color when their "white-lit" moment subsides into visions of green shoals, "sudden tropics in the held breath of war and English December" (168-69).

The pattern established with Pointsman--the complementarity between black and white, modified by a spark of red--is repeated with Katje. Except for her clothing, which she changes as easily as her allegiance, Katje is described solely in neutrals and achromatics. Her skin and features are usually described as white (or in achromatics, such as silver and gold[7]). But when she and Slothrop have sex, her civilized Northern whiteness gives way to the darkness inside, a blackness the more violent because it has been repressed for so long:

> the moonlight only whitens her back, and there is still a dark side, her ventral side, her face, that he can no longer see, a terrible beastlike change coming over muzzle and lower jaw, black pupils growing to cover the entire eye space till whites are gone and there's only the red animal reflection. (196)

Like the red eyes of the child, Katje's red signals a moment of change, if only into bestiality. Her changes are, however, neither lasting nor profound. In her role of Domina Nocturna, Katje will again combine her achromatic blackness with a touch of red, but like Pointsman, she can finally change only superficially. "Secretly she fears the Change," Blicero concludes, "choosing instead only trivially to revise what matters least, ornament and clothing, going no further than politic transvestism" (97).

Despite the inability of red to sustain itself against Pointsman's and Katje's neutral ground, in rare moments of grace this mediating third term does

succeed in opening a space between the binary oppositions that rule the analytical mind. Coming at the extreme lower edge of the spectrum, red can be understood as a "transmarginal" color, associated with moments of passage into another order of being. It appears in the "lurid red altitudes" where infinity lurks (664); in the color of Roger Mexico's scarf as the "young anarchist" argues with Pointsman on the beach (89); in the red rose Lyle Bland holds in his hand at his transcendence. Red is the fiery ball of the Rocket before Brennschluss, the sign of "encrimsoned" Enzian's departure from his people. Signifying transformation, it offers hope that the binary dialectic can be eluded by leaving the realm of rational analysis altogether.

The triadic configuration of black, white and red is fundamental not only because it is pervasive in Pynchon's text, but also because it is associated with the simpler, more innocent mode of vision that the Herero once possessed. Researchers have found that the proliferation of basic color names within a culture correlates strongly with its technological sophistication. Brent Berlin and Paul Kay, for example, examined color terms from 98 languages and found that not only do undeveloped societies have fewer color names than developed ones; the order in which color words appear is consistent between societies.[8] Blue, for example, appears only in languages that also have a term for red; combination tones such as grey, pink and purple appear only in languages that also have words for red and blue. The highest number of basic color categories found was eleven; the least, three. Whereas languages with eleven basic color names include all those spoken in Western countries, three-color languages are found only in third-world countries, and are extremely rare even there. One of the very few documented examples is Herero.[9] Herero, like all three-color languages, names as basic colors the same triad that dominates Pynchon's text: white, black and red.

Early theorists, working in the imperialist tradition, took the paucity of basic color terms in "primitive" cultures to mean that people of color could not, ironically, distinguish between colors.

Later research proved conclusively that this is not the case. People in tribal societies can distinguish between as many colors as those from developed societies; but they do not see the point of assigning separate names to the various hues. Cultures that emphasize black, white and red are thus akin to Pynchon's text in distinguishing between perception and acts of naming; whereas color names are common to the culture, the perception of color is always individual and ultimately unnameable for that reason.10 Opposing the routinization of color names and the parallel development of the dye industry (with all that implies for the formation of military-industrial multinationals) is the hope that the rainbow can still be perceived innocently, without needing to break its subtly nuanced hues into separate color names.

In another sense, however, the psychophysical nature of color perception underscores the complexity of representing (or creating) such innocence. When "They" know the uses of innocence, the attempt to create or re-create it within language points once again to the possibility of co-option. Does the disappearance of color names from Pynchon's text as it draws to its conclusion signify an attempt to return to the simpler, less fragmented mode of vision of the Herero? Or does it recognize, and inescapably re-create, the very division between perception and naming that led to the routinization of color in the first place? In the face of these dual possibilities, we are forced to recognize the subjectivity of our judgment as we attempt to decide if this is a return to innocence, or an extension of analysis. The ambiguity emphasizes that the meanings of Pynchon's colors depend not on the light quanta impinging on the retina or on the stimulation of sense receptors, but on the complex perceptual and linguistic processes that translate those sensations into color names, and hence into signification. To be able to signify, to create color codes that readers can decipher, is inevitably to be subject to this equivocation.

Blue/Yellow Complements: The Collapse into Black and White

The hope that Return is possible and the equally compelling view that attempts to Return are only further perversions are encoded into the two characters who literally attempt to return through the Rocket, Gottfried and Enzian. The colors associated with these characters (blue and yellow for Gottfried, black for Enzian) illustrate how the mutual entailment of complementary colors works. The key to the blue/yellow code lies in the interlocking patterns of absorption and reflection that are joined in color perception.

Yellow pigment appears yellow because it reflects yellow light; it absorbs light in the blue range. Shining a blue light on yellow pigment therefore causes the pigment to be perceived as black, since most of the light is absorbed. In this sense blue and yellow make black. The opposite result can be obtained by combining blue and yellow light, which together make white because their combined wavelengths add up to the same wavelength as white light.[11] Blue and yellow are also linked in human color perception. If you stare at a block of bright blue for thirty seconds without blinking, then shift your gaze to a blank white page, a yellow after-image will appear where the blue image was previously seen.[12] This complementarity is the physical basis for the code connecting Enzian and Gottfried, and explains how they can literally be each other's shadow images.

Because blue and yellow combine to make black, Enzian's color is the "infolded" version of these two chromatic hues. When Weissmann/Blicero (the white one/ the bleacher) names his black lover "Enzian" after "Rilke's mountainside gentian," the boy protests that he is "'red, and brown. . . black,'" but Blicero replies, "'this is the other half of the earth. In Germany you would be yellow and blue'" (101). Blicero leaves Enzian to find in Gottfried's blond hair and blue eyes the "exfolded" version of Enzian's blackness. As Blicero intuits, it is necessary for Enzian to have a blue-and-yellow counterpart on the other side of the earth to fulfill the "mirror-metaphysics" (101) implicit in the color complementarity of the two chromatic hues.

Having been "exfolded" from Enzian, Gottfried's blue-and-yellow coloring will be "infolded" into whiteness when, clad all in white and wrapped in a white Imipolex shroud, he is entombed in the Rocket by the white man who is his lover. Enzian in the 00001 Rocket will attempt to follow Gottfried's path in the 00000. Trying to restore the lost unity of vision that his people once possessed by further "infolding" Gottfried's whiteness and his blackness in the final explosion, Enzian hopes to re-create the coming together of opposites that marked the center of the traditional Herero village (563).

Whether such Return is possible once fragmentation and routinization have taken place is by no means clear. Will a mystic moment of unity arrive? Or is this a mad, parodic inversion of true Return? The ambiguity is inescapable, for these color-coded opposites will finally be united only in the annihilating light that follows when the Rocket falls the "last delta-t"; but before this moment arrives, Pynchon's text ends. The ambiguity potentially extends to all the colors of the rainbow, for each color, combined with its complement, can turn into black or white. Are they therefore in danger of disappearing, victims of Western fragmentation? Or are we to understand that they have been "infolded" back into the holistic vision the Herero see when they name only three colors? The ambiguity reminds us that at the same time that Pynchon's names invest his text with color, they are also evidence that there is no route of Return except through language. When that language reflects the analytical categories that identify color names with dyes and dyes with weapons, recovery and betrayal become a single gesture.

Slothrop's Code: The Two Scales

The color codes we have explored so far can all be understood as variations on binary oppositions. Black and white can mutually entail each other; a mediating third term can arise between them; or color complements can be infolded or exfolded from these apparently achromatic opposites. In Tyrone Slothrop, Pynchon's major character, still another possibility emerges: opposites can pull in different directions until the

phenomenon itself disappears. Representing both a dichotomy and its dissolution, the colors associated with Slothrop constitute Pynchon's most formidable color code. Like the previous codes, Slothrop's color transformations pose the question of how colors can be named without being betrayed.

A divided being, Slothrop has inherited both a "natural" and a "synthetic" self. He is the natural child of his stereotypical American parents, Broderick and Nalline, and a descendant of the Puritans; but he is also the synthetic product of Dr. Jamf's laboratory. In Slothrop, the corrupt natural self that the Puritans believed was a product of Original Sin is juxtaposed with the synthetic self that Jamf foretold when he predicted that carbon chemistry would give way to the inorganic bonds of Si-N. The colors associated with Slothrop suggest that his two selves are represented by two different color scales. When these colors undergo systematic transformation along their respective scales, Slothrop is pulled in opposite directions until he finally dissipates altogether.

The spectral scale, used to represent Slothrop's synthetic self, is based on refraction of light. From Newton on, this scale has represented the triumph of the analytical mind in explaining and controlling the play of light. It is the scale that occurs when light is refracted through a prism, beginning with violet, the shortest wavelength we can see (about 400 mu), and ending with red, the longest wavelength in the visible range (about 700 mu). The pigment scale, less familiar than the spectral scale, was devised by the dye and paint industry to predict whether a given color will appear darker or lighter than another. It arranges colors along a scale according to how far light penetrates into the pigment substance. Beginning with yellow, where light penetration is least, it ends with green, where the depth of penetration is greatest before leaving the chromatics altogether; if this depth of penetration is exceeded, the pigment will be perceived as black.[13] The pigment scale was developed to accommodate the dye industry's need for reliable color reproduction, and hence represents a second route toward the routinization of color. Arrived at by trial and error, it represents not the triumph of

analytical cognition, as the spectral scale does, but the triumph of dogged persistence when expressed through an industrial-military bureaucracy.

As the product both of the Puritans and of Jamf's laboratory, Slothrop is living proof of Max Weber's thesis that Puritanism laid the foundation for the capitalistic ethic which in turn led to the development of the multinationals, an entanglement that Pynchon represents simply as "Them." The more Slothrop tries to escape one aspect of his dual heritage, for example, by his very unpuritanical sexual encounters, the more he finds himself entangled in other aspects of it, for example, in the correlation between his ejaculations and the rocket strikes. Pynchon's strategy in devising a color code for Slothrop is to play upon this mutual entailment by associating Slothrop with the two color scales that emerged from these two interlocking traditions.

The twist Pynchon gives to this already convoluted code is to have the color transformations Slothrop undergoes pull in opposite directions. He is moving along the spectral scale from lowest to highest wavelength, that is, from purple toward red, and by implication toward the white light that is the highest wavelength of all; simultaneously, he is also moving along the pigment scale from shortest to longest penetration, that is, from yellow to green, and by implication to black. As the two scales shift in opposite directions, they encode increasing dissipation into the colors associated with him. Slothrop's "dissipation" can thus be seen as an alternative to mutual entailment; rather than coming together in the complex represented as "Them," Slothrop diverges until he joins the background radiation of the cosmos. Whether this dissipation is in fact a triumph or another example of co-option is the final question that we will explore through Pynchon's color codes.

Slothrop's Initialization: Purple and Yellow

At the beginning of "Beyond the Zero," Slothrop is identified with purple, the color at the lower end of the spectral scale; this serves as the baseline color for his synthetic self. The connection is underscored

by his name "Tyrone," which can be read as a variant of the first important synthetic dye, Tyrian purple. To this color is quickly added yellow, which serves as the baseline color for Slothrop's corrupt natural self. Purple and yellow, the lowest points of the spectral and pigment scales, respectively, therefore define Slothrop's initial state. From this point both scales begin shifting outward, pulling Slothrop in two different directions. The spectral scale moves past red and leaves our visibility range altogether when it becomes white light. The pigment scale, increasing from yellow to green, moves toward black and dissolution. As Slothrop penetrates deeper into the Zone, his two halves keep shifting in opposite directions, his synthetic self toward white, his natural self toward black, until finally he too is transformed into a wave phenomenon like the light that represents him.

We can trace these transformations through Slothrop's changing colors. The first to appear are purple, lowest wavelength on the spectral scale, and yellow, least depth on the pigment scale. These two colors dominate the descriptions of Slothrop's love life, a product of both his natural lust and his conditioning by Dr. Jamf. The collaboration is marked by the stars on his love chart's corresponding to the rocket strikes. The stars include a "violet density," but under yellow electric light (the narrator stresses this point twice) (17-19). Slothrop remembers one of his girlfriends as having skin stained lavender under pastel lights, and his "garden of love" is said to teem "purple and yellow as hickeys" (22).

The dominance of purple and yellow in descriptions of Slothrop includes his vague premonition that there is more to his history than he knows. In an ominous flashback at the beginning of his stay at the Casino, Slothrop recalls a smell that

> brings back a moment of Berkshire Saturdays--bottles of plum and amber tonics, fly-studded paper twists swayed by the overhead fan, twinges of pain from blunt scissors. . . (183)

Slothrop's recurring nightmare, in which he discovers that the definition of "Jamf" is "I," occurs "back

home" on an afternoon of "lilacs and bees" (286-87). The purple-and-yellow combination also appears in descriptions of the Rocket, for example, when Thanatz recalls the last rocket firing on the Luneberg Heath, and connects Slothrop to the Rocket that both reflects and precedes his own sexual activity.

> In the iris sky one cloud, the shape of a clam-shell, rises very purple around the edges, the puff from an explosion, something light ocher at the horizon. . . closer in it seems snarling purple around a yellow that's brightening, intestines of yellow shadowed in violet spilling outward, outward in a bellying curve. (670)

In addition to establishing a baseline against which Slothrop's further transformations can be measured, the purple/yellow pairing hints at the link between Newton, founder of the spectral scale, the dye/munitions industry, that invented the pigment scale, and Slothrop's personal history.

Slothrop's Color Complements: Purple and Green

Already complex, Slothrop's color code becomes even more complicated when the two base colors, purple and yellow, begin shifting along their respective scales. In "Un Perm' au Casino Hermann Goering," Slothrop's natural side, previously represented by yellow, shifts toward green, color of deepest light penetration on the pigment scale. Thus a new pairing is formed between green and purple (or magenta), purple still representing Slothrop's synthetic self. Purple and green are each other's complements, so when they are combined, they transform into white light. After he "produces" a gaudy orange, green and yellow handkerchief and gives it to Tantivy, Slothrop is associated exclusively with green and purple, transforming to white. These colors also dominate the costume changes Katje uses to seduce Slothrop. The first day he meets her,Katje's blonde lashes are "full of acid green (187); later she wears an "emerald tiara" and a "gown of sea-green velvet" (190). That night before they have sex, she changes to a dress of pure white. In the morning, Slothrop dons a purple satin bedsheet in desperate pursuit of his clothes. While masquerading as the "Great Purple Kite," Slothrop gets stuck in a tree and

is surrounded by green "pungent leaflight" (199). Dressed for the party chez Raoul de la Perlimpinpin, Slothrop sports a French green suit with a "subtle purple check" (244). By the time he leaves France for "neutral" Switzerland in preparation for the Zone, Slothrop's outfit has undergone a significant bleaching:

> among all the somber street faces and colors only he is wearing white, shoes zoot 'n' hat, white as the cemetery mountains here. . . (259)

Slothrop's identification with purple and green may indicate that he is being transformed into a projected image, because these colors habitually occur in relation to hallucinated or filmed images.[14] If so, the collapse of the magenta/green complements into white light can be understood as the white light shining through a chemically impregnated celluloid strip that creates the illusion of color in film. In a film image, the perception of color is twice mediated: first because color inheres not in the object itself, but in the interplay of light with the visual receptors as interpreted by the central nervous system; and second because the film image is colored only because light is refracted through a colored object (which, of course, is not colored in itself, because its color too is mediated through the psychophysical processes that comprise color perception). In addition to suggesting his increasing fragmentation, then, the purple/green pairing indicates that Slothrop, like a cinematic image, is receding from us through increasing layers of mediation. The suggestion prepares for the moment when Slothrop will cease to exist as anything other than the wave phenomenon that is white light itself, purveyor of all colors but possessed of none.

Slothrop in the Zone: Green and Red

In the Zone, Slothrop's personality bifurcates still further as his synthetic self shifts from purple to red, longest wavelength on the spectral scale. This redshift places Slothrop at the extremes of both his synthetic and natural selves, for the pigment scale has already shifted to green, color of greatest light penetration before black. As he is pulled apart by these diverging selves, Slothrop's identity goes

from the ridiculous to the absurd: from Ian Scuffling, war correspondent, to cartoon-character Rocketman, to the actor Max Schlepzig, to the pig hero Plechazunga, until finally, stretched beyond the limits of humanity, Slothrop becomes transparent.

During these transformations, Slothrop is associated with varying amounts of red and green. In "go between" Scuffling, the two tones are present in roughly equal amounts, as his escape from the Mittlewerk tunnels illustrates (306-14). Introduced into the midst of Marvy's Mothers when he is swung upside down from a hoist cable, Slothrop's brain is said to approach "the frontiers of red-out" (306). Later, to escape them, he dodges into a paintshop, slips on a patch of "wet Wehrmacht green," and proceeds to fall through "splashes of black, white and red" (308), indicating that his escape is in some sense a return to a more "natural" state. After seeing midget eyes glowing red and green (310), he finally emerges from the tunnel to return to "green mountainslopes" and the "green breath" of woods (312-13).

As Rocketman, Slothrop's association with red and green shifts heavily toward the green side. While in a vegetable patch stealing greens, Slothrop runs into Säure, Trudi and Magda smoking a reefer, the "goldshot green" (365). In this "high" state, Säure crowns Tyrone "Raketemensch" and Trudi and Magda drape a green velvet cape (on the back of which Slothrop imagines sewing a red letter "R") over Slothrop's shoulders (366). Later, when Slothrop develops a hardon, the "ballroom" in his trousers is compared to that in St. Patrick's Cathedral, St. Patrick being of course the patron saint of the Emerald Isle. The stoned quartet journey into the heart of Berlin, walking past lime trees, where they see the Reichstag building--their version of the Emerald City (368). Instead of clicking his ruby-slippered heels together three times and repeating "There's no place like home," Slothrop thrice repeats "Hauptstufe" (446), the last step in the Rocket's firing sequence. Perhaps this is a clue that the only home Slothrop has left is "over the rainbow," the rainbow being an illusion that arises when light is refracted through water, as it soon will be through Slothrop.

As Max Schlepzig, actor, Slothrop is identified solely with green, but comes together with red through his lovers. The pattern had begun when Slothrop made "nasal love" with Trudi, her "pink taste-bud[s]" penetrating his nostrils, until finally she crawled inside "the great red hall" (439) of his erect nose. Later, Bianca is associated almost exclusively with this color: Slothrop catches sight of her gown, a "flutter of red" in the corner of his eye; he unzips her "red taffeta"; her mouth is rouged, her nails are scarlet; and he plants hickeys like "red nebulae" across her body until they climax in maroon light, amidst the "red flesh echoing" (468-70).

Before Slothrop's identity shifts to Plechazunga, he completes his return to his ancestral past and its identification with living green, as he becomes "intensely alert to trees, finally" (552). He acknowledges his family's history of "chopping," "amputating," "grinding," and "bleaching" nature's original green life when he sees that the trees, like himself, are the victims of a system that uses up trees and humans alike in its insatiable demands (553).

Slothrop's Dissipation: The Rainbow

As Slothrop is pulled to the extremes by his two conflicting selves, the synthetic self moves through red toward white, while the natural self moves through green toward black. Stepping into his Plechazunga role, Slothrop dons the "startling" pink, yellow and blue multicolored suit (568). Marked by the colors of the rainbow, the varicolored pig costume symbolizes the refraction Slothrop will soon undergo; the association of pigs with innocence also suggests that Slothrop is in some sense regaining an innocence foreign to either side of his dual heritage. After Slothrop returns to the woods, he takes off his clothes altogether, finds his Orphean harp and becomes "closer to [. . .] a spiritual medium" than he's ever been before. The occasion is marked by the appearance in the sky of

> 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. . . . (626)

The rainbow marks the beginning of the end of Slothrop's dissipation. He will gradually become thinner and thinner until finally he disperses into a wave phenomenon and merges with the background radiation of the cosmos. Like all of Professor Jamf's synthetic products, Slothrop was destined to become transparent. Oneirine ("'It's like stuffing wedges of silver sponge, right, into, your brain!'" [389]) renders consciousness transparent; Kryptosam renders writing transparent; Emulsion J renders faces transparent; Imipolex is so transparent to colors that it can appear white, black or grey as occasion demands. Slothrop finally also becomes transparent when he is unable either to transcend or to unite his two selves.

What are we to make of this most complex of Pynchon's color codes? Slothrop's disassembly is the opposite of Enzian's attempt at transcendence; whereas Enzian tries to enfold opposite colors into a single nameless achromatic, Slothrop is pulled apart through color transformations proceeding in opposite directions. Dissolution through diverging color scales, like the collapse of complementary colors, may be a way to Return; but like Enzian's flight, it is achieved amidst troubling ambiguities. If Slothrop has transcended, or at least escaped, Their designs on him, he has also been pulled to pieces by his fragmenting color transformation. It is true that Slothrop's dissolution removes him from where colors are perceived in all their named particularity--that is, from Western consciousness; but by leaving that realm and entering the region outside the visible spectrum, Slothrop has lost all sense of self and, with it, all possibilities for effective counteraction against Them. To escape the color names is also to become unable to participate in acts of naming--and hence to disappear from the text altogether.

Slothrop's dilemma is another version of the problem Pynchon faces when he creates colors that change "according to something [. . . n]ot at random, but systematically." Colors can be created within the

text only by naming them, but naming them also means that they have been identified as distinct and classifiable hues and hence routinized, their ephemeral fluidity destroyed. A similar double bind applies to the color codes that invest these names with thematic significance. Once decoded, the codes warn of the dangers of analysis and control; but to understand the message we had to analyze and control them. Are the narrator's colorful utterances thus doomed from the start to co-option? Will the rainbow, like the Rocket, be betrayed to gravity, its vivid play of color a nostalgic act of recovery that falls prey to the earnestness of analysis? Is it inevitable that the act of naming will both signify and re-create the loss, betraying color to the codes that give it significance?

Perhaps. But two factors render these conclusions less than certain. The first is the unruliness of Pynchon's profuse imaginings. No matter how comprehensive the code, there will always be data that cannot be fit into it. As the narrator remarks about the data set he compiles under the song title "Sold on Suicide," "The trouble with it is that by Gödel's Theorem there is bound to be some item around that one has omitted from the list" (320), so that closure is impossible. Certainly this is true of our color names. Though some of the data can be fit into one or another of the codes we have explicated, by no means all can; and the colors which have been "omitted from the list" mean, as the narrator says of his song, that "what one does most likely is go back over the whole thing, meantime correcting mistakes and inevitable repetitions, and putting in new items that will surely have occurred to one, and--well, it's easy to see that the 'suicide' of the title might have to be postponed indefinitely" (320). The inability to achieve closure, frustrating as it is for tidy minds, insures that complete routinization does not take place, and hence offers the hope that the final catastrophe may also be, if not escaped, at least deferred.

The second mitigating factor is Pynchon's insistence on the "last delta-t" that separates the name from the thing. The color name is only a black mark on a white page until we connect it with the

color perception that we have learned to associate with that name; but because of the psychophysical nature of color perception, these connections can never be completely standardized. Despite all of the intricate color scales that the dye industry has invented, color remains an ephemeral phenomenon. What Saussure has taught us about language in general is true with double force of color names: the gap between signifier and signified can never be unambiguously closed.

We are now in a position to understand why each of Pynchon's color codes pointed us back to the arbitrariness of language. Each involved a dichotomy that could not be resolved without introducing unavoidable ambiguities into its signification. Thus it is we, not Pynchon, who decide the final tints that Gravity's Rainbow will have. The "last delta-t" that exists between the signs of Pynchon's text and the significations we associate with those signs is the space between prophecy and fulfillment, us and our fate. However narrow the margin, it is a measure of grace; and how we use it--to sing a last song, to touch someone near us, or to contemplate the significance of the way we have colored Pynchon's rainbow--is our contribution, for good or ill, toward the end that awaits us.

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Notes

[1] Thomas Pynchon, Gravity's Rainbow (New York: Viking, 1973), 642. Brackets indicate our ellipses; otherwise they are Pynchon's.

[2] Brian McHale was the first to articulate the problem with clarity, in "Modernist Reading, Post-Modern Text: The Case of Gravity's Rainbow," Poetics Today, 1:1-2 (1979), 85-110. Two important recent works, Thomas Schaub's Pynchon: The Voice of Ambiguity (Urbana: Univ. of Illinois Press, 1981), and Tony Tanner's Thomas Pynchon (London: Methuen, 1982), comment on the problem perceptively, and illustrate how criticism can emerge from the tension between these polarities. Other important essays in establishing consensus are George Levine's "Risking the Moment: Anarchy and Possibility in Pynchon's Fiction," in Mindful Pleasures: Essays on Thomas Pynchon, ed. George Levine and David Leverenz

(Boston: Little, Brown, 1976), 113-36, and Tony Tanner's "Caries and Cabals," reprinted in the same collection, 49-67.

[3] Exceptions are occasional explications of the black/white patterns, for example, Lawrence C. Wolfley, "Repression's Rainbow: The Presence of Norman O. Brown in Pynchon's Big Novel," PMLA 92:5 (1977), 873-89, or Schaub, 94-97. Connections between the black/white patterns and black and white holes are explored in N. K. Hayles's "Cosmology and the Point of (No) Return in Gravity's Rainbow, Markham Review, 12 (1983), 73-77; a fuller treatment appears in The Cosmic Web (Ithaca: Cornell Univ. Press, 1984).

[4] The term "routinization" comes from Max Weber's The Protestant Ethic and the Spirit of Capitalism, as Edward Mendelson noted in "Gravity's Encyclopedia," Mindful Pleasures, 161-96. We extend the term by analogy to the bureaucratic exploitation of color, and by implication of the rainbow itself.

[5] This tract, entitled World Disarmament and the Master Key Industry (New York: American Dyes Institute, 1921), emphasizes that "Who makes dyes today can tomorrow make high-explosives" (2). The attitude of the American tract toward the success of the German dye industry is curiously ambivalent. While despising the German dye industry's strategems, it argues that Americans need to give more scope to their "Master Key Industry" so it, too, can become a multinational corporation.

[6] The centrality of repression in Gravity's Rainbow is discussed by Wolfley, "Repression's Rainbow."

[7] Achromatics are colors derived from black or white, in contrast to the chromatic hues of the rainbow.

[8] Brent Berlin and Paul Kay, Basic Color Terms: Their Universality and Evolution (Berkeley: Univ. of California Press, 1969), 216.

[9] Berlin and Kay, 140-42.

[10] Edwin H. Land summarizes the importance of the perceptual element in color perception, and its relation to changing theories of color vision, in "The Retinex Theory of Color Vision," Scientific American, 237 (1977), 108-28.

[11] A basic text on color equations and their combinations is The Science of Color, Committee on Colorimetry, Optical Society of America (New York: Crowell, 1973). An illustration of how the blue/yellow pair combines to make white or black can be found in

Egbert Jacobson's Basic Color: An Interpretation of the Ostwald System (Chicago: Paul Theobald, 1948), 10-17.

[12] The yellow after-image is caused by the fatigue of the blue receptors in the eye, and the consequent relative stimulation of the green and red receptors.

[13] See Jacobson, 120-23 for pigment absorption patterns. Spectral combinations are shown on ii.

[14] Examples of this use of the green/magenta pair include the "regulation magenta and green" bandanna (69) that Whappo wears in Slothrop's narcosis-induced Western movie; the "humorless green and magenta face of Mr. Ernest Bevin" that Osbie Feel hallucinates (106); and the "notorious white slaver of Marseilles," who gets drawn into this colorful converstion after experiencing the "hallucinogenic Hollandaise" chez Raoul:

> "Hey you," hollering into the trees, "you wanna be a white slave, huh?" "Shit no," answers some invisible girl, "I wanna be a green slave!" "Magenta!" yells somebody up in an olive tree. "Vermillion!" (246)

Similarly, the scene with Darlene and Mrs. Quoad (which later appears possibly to have been hallucinated when Mrs. Quoad turns out to be a chic divorcee rather than a dowdy widow) contains several green and purple reversals. Mrs. Quoad, who suffers from "purples" and "greensickness" (among other things), serves Slothrop a "confection of pastel green, studded all over with lavender nonpareils," as well as a "eucalyptus-flavored fondant" with a core of grape gum arabic ("It is purple in color") (117).