Death in the Circuit, Life in the Word

(Communication Theory as a Governing Metaphor in the Early Work of Thomas Pynchon)

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INTRODUCTION

One of those cases where you couldn't just fold. God, across the table of

Fate, was picking His nose, scratching His ear, laying on tells with a

prodigal hand, it had to mean something, and a faulty guess would be

better than none. (218)

- Thomas Pynchon, <u>Against the Day</u>

Thomas Pynchon is one of the most fascinatingly elusive authors of the last fifty

years, partially because of his avoidance of the public eye, but also because of his novels,

which are notoriously complex, cryptic, and dense. His name has, over the years, been

closely associated with the opening movements of the new post-modernist literature, with

the science of thermodynamics, and with the integration of pop culture into "high"

literature. The unflagging interest which his novels have generated among successive

generations of readers is due in part to their immense richness, as well as the author's

refusal to comment on them publicly. They resist attempts to describe or explain them in

simple terms. Readers are compelled to impose some kind of meaning on the world

presented to them, to orchestrate an ordered pattern which is not readily available. We

are compelled to do this because all our expectations tell us that an accomplished author

does not write books which are devoid of any meaning whatsoever.

Of course, a number of critics, especially in the beginning of Pynchon's career,

have questioned his accomplishment as an author, and many continue to regard his work

with some distaste, or at least with some reservations. It is true that Pynchon pointedly,

and gleefully, ignores most of the accepted standards of story-telling. His interests may

sometimes seem prurient, with an emphasis (some would say over-emphasis) on the sexual, the gastronomical, and the fecal. Furthermore, he does not resolve all the conflicts he introduces, he includes apparently non-pertinent facts, and he has ended one novel in mid-sentence. Some critics have chosen to perceive him as an immature (though enormously intelligent) artist, often elated by his own wit and cleverness, but incapable of completing a cohesive work; more damning, some have argued, is his apparent inability to identify with his own characters beyond their existence as easily-abandoned "tools" or objects in his larger scheme. Such a glib treatment, the argument runs, betrays a certain casuistry, which might indicate a similar attitude toward readers (Leverenz 5). At best, from this perspective, the author may be considered merely cynical. Attacks on Pynchon have come from official channels, as well as critical: the Pulitzer Advisory Board, for example, overturned the judges' unanimous decision to give the 1973 award to Gravity's Rainbow—adjectives used to describe the novel included "unreadable," "turgid," "overwritten," and "obscene" (Newman 4).

Granted, it has been some years since Pynchon has had to defend himself to anyone (not that he ever bothered to do so, then or now). Time and the course of his subsequent career have so far vindicated him, and even critics who may still dislike Pynchon's work on a personal level will usually acknowledge his brilliance. Still, I believe it is important to take into consideration these early doubts about Pynchon's work and goals. They open us to a fresher interpretation of Pynchon's novels, which have been analyzed and over-analyzed, dissected and vivisected, spliced and catalogued—until they resemble some sort of biology project, splayed and spread across a table with arrows and tags everywhere to clearly identify the processes and organs which once operated in

darkness. This is especially true of <u>Gravity's Rainbow</u>—and it is, of course, true of all great works of literature to one extent or another, depending on how long they have been available for readers to scrutinize. It sometimes seems that the richness of a work is directly proportional to the number of critics and scholars which will inevitably mine it for its treasures. Untapped veins become rarer and rarer, interpretation and information multiply, and new generations bring new theories to bear; simultaneously, and paradoxically, the novel as a whole becomes "just too remote" (Pynchon, <u>GR</u> 740) to grasp in any coherent way. A holistic view seems to recede even as the body of published critical material continues to grow.

Doubtless, Pynchon views this process in relation to his own work with a certain amount of wry humor, for they mirror one of the main driving conflicts of his novels. Early critics accused him of emptiness and nihilism—later literary theorists have, almost inadvertently, imposed a set of static structures on his novels which have become so complex and specific that they have, in turn, lost much of their meaning. These ordering attempts are at their most self-defeating, to my mind, in those books in which a critic sets out to analyze one of Pynchon's novels thoroughly and exhaustively. These efforts to identify and categorize every narrative thread and symbol are doomed to failure, simply because Pynchon so dooms them. Through interminable thematic variation and the establishment of countless subtle connections, his works resist such an encyclopedic approach. They effectively remove themselves from any possibility of static structures, which are all but always the tools of the "enemy" control-systems in any case.[1]

That is why, in this thesis, I take a very focused approach to Pynchon along a vector which has received relatively little critical consideration so far. I will consider a

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[1] Usually simply called "the Firm" in Pynchon-scholarship patois.

single aspect of the literature in great depth—specifically, his treatment of communication theory—finally resulting in a better understanding of the basic nature of Pynchon's literary objectives. I will proceed through the material chronologically though not comprehensively, beginning with the short story "Entropy," followed by an especially pertinent chapter of V., and concluding with Gravity's Rainbow. To direct me in this, I will follow a very specific but influential strain in Pynchon's thematic and symbolic structures. As his style matures, becoming more subtle, the influence of this "chosen metaphor" becomes more diffuse, eventually coloring major aspects of the author's worldview, as well as his approach to his own work. I will in no way attempt to be all-inclusive beyond what emerges naturally from my chosen theme, nor do I make any claims to a full and complete reading of any of Pynchon's novels, let alone his work as a whole. I believe any such effort is futile, not to mention counter-productive. The only truly adequate key to each novel is the novel itself. Even this thesis, conscientiously narrow as its focus is, puts an unnatural and static form around the written works which it considers.

Therein, of course, lie the special difficulties and pleasures of reading Pynchon. Like his characters, we impose order on the reality of the world around us through some kind of unifying system—be it religion, historical fatalism, faith in the scientific method, nationalism, or any other structure of belief which allows an individual to live in peace with the universe. Pynchon forces us to question what makes a fundamentalist's God, for example, any different from Stencil's V., Slothrop's conspiracy, or Oedipa's Trystero. It is naturally uncomfortable to question these assumptions; without them, the world becomes much more perceptually horrifying. When we enter the world contained in one

of Pynchon's novels, we are forced to inspect our underlying conceits regarding the nature of literature, and this in turn might lead us to a consideration of how we order the world outside the novel. Thomas H. Schaub points out that as we conduct these "organizing efforts" through "acts of thought," we both impersonate the characters in the novel *and ourselves as characters in the real world* (Schaub 13). Furthermore, as John O. Stock has noted, the problem of pattern interpretation for Pynchon's readers, Pynchon's characters, and real-life individuals revolves around the fact that we have *too much* information, rather than too little, to construct a pattern (Stark 65). Unifying visions retreat even as we reach out to grasp them—we are incapable of processing the informational effusion in any meaningful and inclusive way.

There is, therefore, an important caveat which must be acknowledged for any study of Pynchon's work which aspires beyond simple summary. Any ordering of the world is simultaneously constructive and reductive, as any imposed system must exclude and re-order if it is to be of any use whatsoever. Likewise, any in-depth consideration of Pynchon from a specific direction—including this study—is bound to simplify and reduce. To consider the relationship between Pynchon and communications theory, as this paper will do, is to leave out many of his other important points. Pynchon's breadth of vision is one reason for the fascination his work continues to exercise, but it can be very frustrating to anyone hoping to attempt some sort of holistic study. Nevertheless, there is a degree to which the study might be *useful* in its illumination to a particular facet of Pynchon's work. Incomplete it may be, but if the chosen vector of approach is a good one it will yield valuable insights that may contribute to a better understanding of something which approximates a whole.

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With that said, this thesis will explore the theme, running throughout Pynchon's artistic output, of communication, information, and interpretation, particularly in light of the mid-twentieth-century theories of Claude Shannon and Norbert Wiener—two (primarily scientific) writers and thinkers who exercised an important influence over the development of Pynchon's literary approach and ideals. The very earliest of his literary efforts contain terminology, metaphors, and descriptions pioneered by communication theorists, and though their influence becomes more subtle through his literary career, an understanding of these ideas is one path to a better understanding of his work as a whole.[2] Furthermore, I believe an understanding of this theory (especially Shannon's unique conception of entropy) makes clearer Pynchon's ultimate literary goals, as well as his efforts to maintain the "continuous and spontaneous nature" of his work (Levine 115).

It is also a path which has been largely neglected so far in the field of scholarship, as I have insinuated. The attempt to stake out new ground in Pynchon criticism is "a daunting task given the highly competitive industry that Pynchon criticism has become" (Simmons 151). It is surprising that no one has so far conducted an in-depth analysis of communication theory's influence on Pynchon's work. Many critics have considered Wiener as an obvious source of ideas—he is, after all, mentioned by name at least once. Attention has also been given to Clerk Maxwell, one of the intellectual ancestors of communication theory, whose "Demon" figures prominently in The Crying of Lot 49, and receives mention in Gravity's Rainbow. But the broader implications of the theory

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[2] Note: in more recent times, the term "communication theory" has been superseded by the term "information theory." Both terms describe the same field of study—the latter has simply become more widely-used, perhaps because of its broader implications. In any case, through the course of this thesis I will use "communication theory," because this is the term which was used by the scientists whose works I consider to describe their own area of expertise (i.e., Wiener and Shannon).

on Pynchon's work, and especially Claude Shannon's importance, have been so far neglected to the best of my knowledge. The critics who seem *most* aware of the theory's importance to Pynchon are usually scholars of information theory (like Katherine Hayles), and therefore more likely to notice its presence in literature. These commentaries, however, never go beyond the level of a cursory overview of Pynchon's role in bringing certain aspects of communication theory to the popular imagination. They are not in-depth literary analyses. So far as I know, such an attempt has not been made in the published body of Pynchon criticism. It is my intention to fill in this rather notable gap, and in that way this thesis is unique. Moreover, and more importantly, an understanding of communication theory permits syntheses of several interpretations of Pynchon which have seemed, so far, to be distinct.

CHAPTER ONE: THE GOVERNING METAPHOR

You don't see something until you have the right metaphor to let you

perceive it. (Gleick 262)

- Verbal remark attributed to Robert Shaw, early communication theorist

Occasionally, uninformed writers and scholars will attribute to Pynchon an

undergraduate degree in engineering. While this is wrong, it is true that in his first year

and a half of undergraduate work he focused on engineering classes before switching to

English (Winston 257) and later in life (over the period of time in which he wrote

Gravity's Rainbow, in fact) he worked as a writer of technical documents for Boeing in

Seattle (Winston 260). Scholars of the ways in which science and literature interact—

rare as they are—attribute to Pynchon a degree of scientific consciousness which is

seldom to be found in other accomplished authors of creative prose or poetry (Wilson

118). Scientific concepts and formulae, from the fields of physics, chemistry, biology,

and engineering, suffuse his work and lend it much of its unique character. Equations,

diagrams, molecular structures and the like are used as metaphors or images which he

applies to the larger scheme, in order to derive points or make observations regarding our

daily lives and the forces which control them. These parallels are drawn by characters

and by the narrator, and the reader is left to decide, like Oedipa Maas, what weight or

import the conclusions contain, if any. Is there "high magic in low puns" (Pynchon,

Crying 105)? Can aspects of science, or convenient ways of illustrating ideas, be applied

to life at large? Is there any importance in accidents of correlation? These may be the

thought processes of the paranoiac, but if there is one lesson to be found in Pynchon's

work it is not to dismiss paranoia offhandedly. If nothing else, the points drawn from this

sort of exercise might provide us with novel and necessary ways to think about the world, and therein lies their value. On that note, we turn to communication theory itself in the hope of understanding the metaphors and meanings Pynchon chose.

Communication theory was one of the areas that inspired Pynchon as a young author, probably because of its contemporary significance and growth. The field saw strides throughout the twentieth century, but most notably in the years following World War II. Remarkable scientists of this period included Claude Shannon and Norbert Wiener, who were influenced by one another, as well as by the nineteenth-century information theorist James Clerk Maxwell, another favorite of Pynchon's. Wiener, a well-known child prodigy and later inventor who considered himself a scientist with a social conscience, wrote a few books designed to be understood by laymen, in which he analyzed history, current events, and prospects for our future from the perspective of a renowned scientist. Shannon's work, though largely in the same field, was much less broad in scope—he was a scientist through and through, with few aspirations toward popularizing his own theories. His most notable dissertation (The Mathematical Theory of Communication, 1948) was obviously intended for other mathematicians, as those lacking a background in calculus would find themselves doomed after only a few pages of equations and graphs. The dissertation, however, contained interpretations of the concepts of entropy, communications, and the transfer of information which were fascinatingly different from those of Wiener and other contemporaries. Because of this, Warren Weaver, a mathematician from The Rockefeller Foundation with a more literary bent, published a more layman-friendly companion piece only a year later.[3] Before

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[3] Recent Contributions to the Mathematical Theory of Communication, 1949—it is from this convenient source that I draw most of my Shannon-related material.

investigating the different theories of Wiener and Shannon, though, it is necessary to

define some of the basic terms and concepts of communication theory.

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"Communication" is a word which encompasses an incredibly broad range of

phenomena; according to one definition, it includes "all of the procedures by which one

mind may affect another," which encompass "not only written and oral speech, but also

music, the pictorial arts, the theatre, the ballet, and in fact all human behavior." By

another, even broader, definition, it also includes "the procedures by means of which one

mechanism [. . .] affects another mechanism" (Weaver 3)—in other words, it does not

preclude communication between inanimate objects.[4] To many of its theorists, including

Norbert Wiener, communication theory and its companion fields, like cybernetics,

constituted a "universal theory of knowledge" (Hayles, Posthuman 90).

On a basic level, any communication system is concerned first and foremost with

the transmission of information, and can be defined in terms of two theoretical objects:

the *transmitter*, which is the source of information, and the *receiver*, which is the

destination of the information. The specifically chosen combination of information is the

message; its transmitted form is the *signal* (Shannon 34). The message is formulated into

specific units of communication—ones and zeroes, for example, or words in a specific

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[4] The definitions quoted are Warren Weaver's, and it is relevant that the example of object-object communication he uses is that which takes place between "automatic equipment to track an airplane" and "a guided missile chasing this airplane." This is a reference to one of Norbert Wiener's major inventions during WWII: a airplane-tracking system for use by American gunships in the Pacific. (His work on the project propelled much of his later thinking on the communication theory of computers and mechanical prosthetics, though he later abandoned military research for moral reasons [Hayles, Posthuman 86].) This, along with other off-handed allusions on the part of both Wiener and Shannon, goes to illustrate the close interplay between theorists in the field—communication theory was a fairly small and intimate area of study, assuring Pynchon's early exposure to both authors. In addition, his obvious interest in rocket and missile technology paralleled Wiener's, another point which doubtless drew Pynchon to communication theory.

language—by the *encoder*, which is part of the transmitter, and it is re-constituted into a meaningful message by the receiver's *decoder*. The catch-all word for anything that interferes with this process is *noise*. A noise source, located outside of the transmitter and the receiver (but not necessarily outside the channel, in which it may exist as an integral part) distorts, changes, or interrupts the message by interfering with the signal. Thus, the *signal-to-noise ratio* describes the "amount" of signal which ends up at the receiver, as compared to the "amount" of noise. A signal which has been utterly subsumed by noise is called "white noise" (Shannon 65). The fundamental problem of communication theory is to define and explain differences between the message which is transmitted and the message which is received. A system in which the receiver can perfectly reproduce and understand the information sent by the transmitter is a perfect communication system—a so-called "noise-free circuit."

Communication theory, as stated, encompasses more than radio technology; it can be applied to any dialogue between machine and machine, between human and human, between human and machine—even between human or machine and inanimate objects. Thus, a blind man is in communication with his cane, and "noise" in such a system might translate to irregularities in the surface of the road, as in Gregory Bateson's question to his graduate students: "Is a blind man's cane part of the man?" (Hayles, <u>Posthuman</u> 84). The answer is that the cane and the blind man are united in a *system of communication* through which information flows, and to this extent they are united in the same network. Thus "[i]t is not communicationally meaningful to ask whether the blind man's stick or the scientist's microscope are 'parts' of the men who use them" (Bateson 251). This can be phrased another way: the blind man and his cane, or the scientist and his microscope,

or for that matter a newscaster and the ten million or so viewers of the news program, all compose *informational systems*. Wherever communication is present, according to the theory, so is information, since any communication network, of whatever magnitude, is concerned first and foremost with the flow of information. The nature of these systems is defined by the *type* of information which is being transmitted and received, as well as the channel along which the information proceeds. An informational system, furthermore, can encompass multiple circuits of communication, on multiple levels.

Clearly, this makes the scope of the field absolutely huge. To go one step further, anyone is in communication with the outside world (through perceptions), to the extent that signal (accurate perception) is not overwhelmed by noise (flaws in or interference with perception). We are in communication with the various parts of our bodies through our nervous system. And we are, of course—very often—in communication with other human beings. A proper understanding of communication theory makes it almost universally applicable, accounting in part for the influence it exerted over Pynchon's imagination.

Almost anything and any process can serve as an example of communication theory at work, but a fairly simple, straightforward one will suffice for the time being. A physics professor sends an E-mail concerning experimental data to a colleague on the other side of the country—the colleague proceeds to include the new data in a lecture he gives to his students, but in so doing he accidentally uses the wrong sign in an equation. From the perspective of communication theory, there are at least four easily-identifiable communication circuits at work in this chain of events (each one composed of a transmitter, a receiver, and a channel): 1) the first professor and his computer through the

keyboard; 2) the first professor's computer and the second professor's computer through the Internet; 3) the second professor's computer and the professor himself through the words on the screen; and 4) the second professor and the students in his classroom through his spoken lecture. The information is also encoded and decoded numerous times: from thought to written language to a string of computer data to written language again, and at last to spoken language. Noise has the opportunity to make itself manifest at any point throughout the series of communications, but assuming that the first professor transcribed his ideas properly and the E-mail was not corrupted, then noise first affects the message in a *serious* way only at the end, when the second professor confuses the equation. The signal-to-noise ratio, in other words, would seem to be fairly high until this point—but notice that, if the mistake affected a crucial portion of data, rendering the equation insoluble or simply wrong, then the message the students receive might as well be nothing *but* noise, and can fairly be called "white noise." Though it may retain the initial appearance of rationality, the message no longer has any meaning.

There are a couple of phenomena here which are worth noticing, for they will become important at points in Pynchon's novels. First, since the message was a mathematical equation, the infiltration of even a tiny amount of noise was enough to render it useless. But what if the professors are literary, rather than scientific, scholars, and the message which the first E-mails to the second was a quote from a recently-published novel rather than an equation? The second professor, then, in his lecture to his students makes a mistake which on the surface is comparable to our earlier example: he leaves a single word out of the quote when he writes it on the blackboard for his students to copy. In this case, though—depending on the significance of the forgotten word—the

message could very easily retain its significance despite the incursion of "noise." There is still a probability that the students will be able to reconstruct, more or less, what the author was trying to say. Communication theorists have a word for this: they would say that the quote has a higher level of *redundancy* than the mathematical equation, because its meaning is not dependant on the perfect communication of every single piece of information. This would become a crucial element in the work of Claude Shannon.

The other point to be made is that, while I have identified four specific communication circuits at work in this example, together they compose a much broader informational system. The size and scope of an information system is determined by communication—the more information transmitted and received, the larger the information system becomes. In this case, the system extends across the country, between the first professor and the second professor's classroom, via the network of the Internet. Of course, an informational system can be as broad or as narrow as we choose to define it. An individual human being and his or her immediate environment compose an informational system, through the five senses—for that matter, a single cell in the body is a much smaller informational system, in contact with its surrounding cells through natural bodily processes. Looking in the other direction, one might honestly say that all civilization represents one massive informational system, held together by art, literature, music, technology, economies, governments, the Internet, postal services, media, businesses, etc. Aside from illustrating the omnipresence of communication theory, this makes clear a point which is especially applicable to Wiener: *only* animate objects are capable of information transmission, with the interesting exceptions of inanimate objects like books or computers which might store or communicate

information. But even these must be specifically designed or modified by animate beings before they can enter the informational system. Inanimate objects respond to the laws of physics alone—in the absence of consciousness, the very term "information" loses all meaning.[5] This is closely linked to the theory that "information" and "entropy" are *opposite forces*, as the following section will explain.

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Entropy is an idea which is crucial to communication theorists. In its original sense, entropy refers to the progress of all closed systems, from the smallest to the largest, toward a standardization of energy. That is, energy—particularly heat—tends to spread itself evenly as time progresses. This is a grossly simplified description, but adequate on a basic level. Moreover, the simplification need not bother us, because the strict scientific definition of entropy is not as important as the status it came to assume in popular consciousness. Throughout the nineteenth century and into the twentieth, non-physicists and even non-scientists seized upon entropy as a way of describing processes they sensed or perceived in the world at large. To many observers, *all* things, including human cultures, seemed to move toward an eventual featureless blank, devoid of variation and energy. This image worked powerfully upon the imaginations of authors like Henry Adams (another powerful influence on Pynchon), who saw a metaphor for history and his own civilization. "[The] tension," as Hayles puts it, "between the first and

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[5] From this point of view, the concept of an organizing consciousness—of a divine or semi-divine order—serves to integrate even inanimate objects into an omnipresent and eternal information system. This is obviously an encouraging way to look at the world, unscientific as it might be. Therein lies the parallel between a God and an all-encompassing conspiracy theory. Both serve the same purpose in human consciousness: they are both vast informational systems beyond individual understanding, which organize and encompass widely-scattered, disparate pieces into a meaningful whole. "God," as Scott Sanders points out, "is the original conspiracy theory" (139).

second laws, between stability and degradation, runs like a leitmotiv through turn-of-the-century cultural formations" (Posthuman 101).

Communication theory, however, was the first of the *scientific* fields outside of physics to use entropy in a precise and mathematical way. Ludwig Boltzmann was instrumental in this process, as he generalized entropy by defining it, not just as the diffusion of energy, but as a mathematically-stated probability function equal to the measure of randomness in a system. This step was crucial to the eventual linkage of entropy with areas of thought outside of physics and heat engines (Hayles, Posthuman 101). Another important thinker, Willard Gibbs—to whom Wiener believed twentieth century physics owed its greatest debt—pioneered the idea of an essentially probabilistic world, rather than a deterministic one. He postulated that our world is merely one possible outcome out of an infinity of possible outcomes, and that no realistic course can be charted for anything because there was no absolutely certain effect proceeding from any given cause (Hayles, Posthuman 88-89). The idea contained the germs of chaos theory, a field which was to become prominent in the latter half of the twentieth century; in its time, it made a deep impression on Wiener. He combined Boltzmann's new interpretation of entropy—as a probability function—with Gibbs' theory of a probabilistic universe and concluded that "as entropy increases the universe, [. . .] and all closed systems in the universe, tend naturally to deteriorate and lose their distinctiveness, to move from the least to the most probable state, from a state of organization and differentiation in which distinctions and forms exist, to a state of chaos and sameness. In Gibbs' universe order is least probable, chaos most probable" (Wiener 22). In communication theory, however, this statement applies, not to the dispersion of energy,

but to the dispersion of *information*. But how can energy and information be considered in any way connected?

The point of linkage came through a theoretical entity called Maxwell's Demon (a favorite reference of Pynchon's, used most memorably in The Crying of Lot 49). James Clerk Maxwell proposed the idea of the Demon in 1871 as an imaginary figure in a logic problem—not unlike Schillinger's "Cat," or Occam's "Razor." Basically, the Demon has the theoretical power of "sorting" air molecules according to their level of energy, or heat. The resultant process represents a sort of anti-diffusion, and a potential scenario for contradicting the Second Law of Thermodynamics. Maxwell himself described the Demon as "a being whose faculties are so sharpened"

> that he can follow every molecule in his course, [. . . and] would be able to do what is at present impossible to us [. . .] Now let us suppose that such a vessel is divided into two portions, A and B, by a division in which there is a small hole, and that a being, who can see the individual molecules opens and closes this hole, so as to allow only the swifter molecules to pass from A to B, and only the slower ones to pass from B to A. He will, thus, without the expenditure of work raise the temperature of B and lower that of A, in contradiction to the second law of themodynamics. (Maxwell, 328-29)

At no point did Maxwell intend that this "being" should be considered to have any real existence (only later would it come to be known as "Maxwell's Demon," for reasons which remain obscure). The description was purely hypothetical—it merely proposed a new way to think about entropy, and no one was meant to take it seriously enough to actually attempt to *build* the machine he describes and then rely on a metaphysical

presence to appear and sort the air molecules inside. Though John Nefastis, in <u>The Crying of Lot 49</u>, does just that, Pynchon means the scenario to be taken humorously and metaphorically, rather than literally.[6] Nevertheless, Maxwell's musings had an immediate effect on imaginations in the scientific community, and debates began almost immediately. The significance of the Demon is that it is theoretically capable of *reversing entropy*, an achievement formerly thought to be impossible. No such Demon existed, but who could say that man could not someday make one? It could do what was "at present impossible to us," as Maxwell phrased it, but someday perhaps human beings might reverse entropy on the molecular level. The Demon, in other words, came to represent "a liminal figure who stands at a threshold that separates not just slow molecules from fast but an ordered world of will from the disordered world of chaos." Early debates focused on just how human-like the Demon was, and whether human beings would ever be able to organize and sort energy at the level Maxwell specifies for the Demon—"[c]larifying this ambiguity was tantamount to establishing the relation of humanity to an entropic universe" (Hayles, <u>Chaos</u> 43).

In 1951 the computer theorist Leon Brillouin, almost inadvertently, solved the problem in an elegant and fascinating way. He pointed out that before Maxell's Demon could begin its sorting process, it would need to obtain information about the molecules in question through some manner of illumination, and that this would consume more energy than it could produce. Thus, the increase in information gathered by the Demon is offset, or "paid for," by an equal increase in entropy (Hayles, <u>Chaos</u> 45). The implication of this observation was that information and entropy were somehow related inversely— leading Brillouin to propose the term "negative entropy" or "negentropy" to signify

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[6] Some scholars who ought to know better have missed this point (Friedman 87).

information (Mangel 91-92). After this, it became possible for communication theorists like Norbert Wiener to integrate a conception of "entropy" into their field—with the force of "energy" replaced by that of "information" or "negentropy."

The importance of this development cannot be overstated. The apparent connection between information and heat energy was lent even more weight, and perhaps strengthened beyond metaphor, by the fact that the equation which described the breakdown of a signal, and the equation which described entropy in a heat system, was in fact the same equation. Namely, in a system describing H (entropy) and p (the set of possible outcomes of the system), $\mathbf{H = -\sum p_i \log p_i}$. The graph of this equation is, I should point out, a downward-opening bell curve (Shannon 50-51). It is the shape of a rainbow, or the path of a rocket, and it is described by Pynchon as "that shape of no surprise, no second chances, no return" (Gravity's Rainbow, 209).

The apparent similitude between entropy in the thermodynamic and communicative fields was too tempting for communication theorists to pass up. In light of the "negentropy" concept of information given to them by Brillouin and the "accidental" correspondence between the equations, communication theorists began to use the word "entropy" to describe processes within their field, and the word came into brisk use in descriptions of communication systems, especially during the fifties. It should be apparent by now that, through this development, entropy re-established itself as a major force in the cultural imagination. If all living things are considered information systems, as I have already illustrated, and if information is the *opposite* of entropy, then the destruction of a communication circuit, an individual human being, or a human civilization are all manifestations of the same phenomenon—that is, entropy.

Entropy in communication theory, then, came to initially represent two concepts, which were closely intertwined. On the immediate level, it described the process of distortion through noise, and gave a mathematical way to calculate the precise signal-to-noise ratio of all communications. On a broader, more cosmic level, entropy could be seen as embodying the decay of all organized informational systems, from highest to lowest. All distributions of information will eventually tend toward the most probable state: that is, universal sameness of information. The usefulness of information, however, is obviously based on its variation—in a system where no one knows more than anyone else, communication of information is obviously meaningless.[7] Variation in information depends upon the existence of living organisms in communication with one another. Thus, a universe where information is equal everywhere translates to a universe of inanimate objects, from which all manifestations of life—especially human beings—are absent. In such a universe there is no information to communicate, and no one to communicate it, and the two phenomena are very closely linked to one another.

Informational systems are, according to Wiener, "local enclaves whose direction seems opposed to that of the universe at large and in which there is a limited and temporary tendency for organization to increase. Life finds its home in some of these enclaves" (Wiener 25). Nevertheless, such islands are constantly surrounded—and corroded—by the inexorable tides of entropy. Likewise, communication, in whatever form chosen, requires "a certain amount of [. . .] power in the circuit in order that the message itself may not be swamped" by noise (Wiener 24). There is hope in this dismal worldview, then, but all victories of information over entropy are hard-won and,

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[7] "Information is a difference that makes a difference," as Gregory Bateson put it at the Macy Conference (Hayles, Posthuman 51).

ultimately, temporary. Pynchon cites "Wiener's spectacle of universal heat-death and mathematical stillness" as one of the influences on his early fiction (Pynchon, "Introduction," 13), and most readers of Pynchon would have little trouble recognizing the resemblance to his particular species of apocalyptic fancy. According to Hayles, Wiener's work is "[s]o firmly rooted in this perspective that he comes close on several occasions to saying that entropic decay is evil. [. . .] Wiener associated entropy with oppression, rigidity, and death" (Postmodern 103).

This brief description of communication theory would not be complete without some discussion of Wiener's "communication of control"—an important theme in V., and a definitive one in Gravity's Rainbow. For Wiener, the form of communication which best represented "static" communication, rote repetition, rigidity, and inflexibility was the communication of control. Control systems automatically move toward a more rote-like form of communication between hierarchies. The autonomy of individuals disappears. This is an "inhuman use of human beings"—which is defined by Wiener as "any use of a human being in which less is demanded of him and less is attributed to him than his full status," a state of affairs which he decried as "a degradation and a waste [. . .]" (15-16). This is nothing more nor less than a transformation of people into "cogs and levers and rods," and "it matters little that their raw material is flesh and blood. What is used as an element in a machine, is in fact an element in the machine" (Wiener 185). Aside from the obvious exploitativeness inherent in such control systems, Wiener feared them as an ideal system through which entropy might work. The limiting of communication to rigid channels, tight perscriptions on the kind of "messages" which may be sent, and a highly specific division horizontally into regiments and units, and

vertically in a strict hierarchy . . . These are all characteristics of such a control-system. The process of transfiguration which Wiener perceived in his own world, toward greater and more perfect systems of control, outraged and terrified him. It would do the same for Thomas Pynchon later, as we will see.

The first, narrow conceptions of entropy, as the encroachment of noise during communication, is the most broadly-accepted definition in communication theory. The latter, more cosmic depiction of entropy as the dissolution of all information systems into inanimacy, often through the establishment of control systems, was an idea which largely came from Norbert Wiener. It was in his works, furthermore, that entropy came to assume its *moral* dimensions, as Hayles points out. Most communication theorists, of course, were ordinary scientists, more straightforward and perhaps less metaphysically- or politically-minded than Wiener. They were content with entropy as an equation, and left abstract ponderings like Wiener's alone, for the most part, at least in their published papers. Still, Wiener's larger portrayal of entropy was closely linked to the traditional one. The same cannot be said of every theory of entropy—the most fascinating variation came from Claude Shannon, who approached the concept from a different direction entirely.

. . .

This new vision of entropy came only two years before the publication of The Human Use of Human Beings, in a seminal paper which Shannon rather uninspiringly entitled A Mathematical Theory of Communication (1948). The article is highly technical, but Pynchon's scientific and technical acumen made this source more available to him than it might be to most, and his engineering background made it all but inevitable

that he would come into contact with Shannon's ideas. Shannon takes an essentially different approach to what entropy means for prospects of communication. In Shannon's terminology, the words "information" and "entropy" were not opposite to one another, but were basically interchangeable. The mathematics are complicated, but the idea makes some sense from a layman's perspective if we take entropy to signify the increase of randomness in an organized system. A perfectly organized system, from the perspective of a communication theorist, is one in which only two possible messages can be transmitted, and therefore the chances of the receiver losing or misinterpreting the message are very low. A system, on the other hand, with a high amount of randomness is one in which a large—even an infinite—number of possible messages may be chosen for transmission. Here, "randomness" translates to "choice," and "entropy" to "information" (Weaver 13). This seems counter-intuitive, and it is a little difficult at first to wrench one's mind into this new way of perceiving entropy. Nevertheless, Shannon's conception of information as linked to entropy has been at least as influential as Brillouin's definition of information as "negative entropy." Hayles describes it as "a crucial crossing point, for [it] allowed entropy to be reconceptualized as the thermodynamic motor driving systems to self-organization rather than as the heat engine driving the world to universal heat death" (Posthuman 102-03). The difference between these two radically different notions of entropy in information and communications led to much of Pynchon's ambivalence on the matter; we see entropy as standardization of energy and spiritual/cultural heat-death on the one hand, and entropy as chaos, randomness, and choice on the other.

Wiener and Shannon were both well aware that, the more repetitive a message becomes, the more likely it is to be distorted by noise.[8] Such a system of communication is *inflexible*, and as a result more prone to noise distortion. For this reason, the high "redundancy" of written English is helpful to communication—even if half the letters are missing, it can be read (in most cases, at least). Fifty percent is a more-or-less precise statistic, at least according to Shannon, which, interestingly, is just about enough to make a crossword puzzle possible. A language in which the redundancy exceeded fifty percent could make a more complex crossword possible (Shannon 56). In any case, a more varied, "redundant" set of messages puts up greater resistance to noise-encroachment. Paradoxically, then, a greater level of "Shannon's entropy"—randomness and choice— leads to a lesser level of "Wiener's entropy"—in which informational systems are corroded and lost, either through noise or death.[9]

. . .

I have outlined, in the preceding paragraphs, two very different definitions of a single word, "entropy," from two theorists which were contemporary with one another. Of course, it is ironic that this word should carry two such different meanings and present such difficulties for interpretation, for this is precisely the sort of linguistic problem in which linguistic communication theorists might be interested. In another example (one which Pynchon uses, as we will see later), take a word like "love"—if entropy has two

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[8] Almost everyone knows this from experience. Consider how quickly a story is exagerrated or reshaped through repeat tellings—the familiar party game called "Telephone" is very relevant, though it is not an example used by Wiener or Shannon. A single sentence (a "message") is whispered in a circle, from ear to ear. Inexplicably, though it may have been clear to the original recipient, the words will almost invariably change by the time they reach the original "transmitter" again. The larger the circle, the greater likelihood that the original information will be lost. "Noise has the best chance against rote repetition, where it goes to work at once to introduce randomness" (Hayles, Posthuman 104).

[9] Henceforth, for simplicity's sake, I will henceforth include the name of the theorist whose definition I am using in parentheses—i.e., entropy (Wiener).

possible meanings, how many does this four-letter word have? How are we to differentiate between this range of possible messages when we are engaged in communication with others? What good is a system in which even simple concepts are so hard to get across?

The problems involved in interpersonal communication should be abundantly clear to anyone who uses language to interact with other individuals—in other words, any human being who exists in a society of other human beings (literally, all of us). In the first place, humans (unlike machines) often tune out or ignore one another, making communication impossible. Furthermore, the ambiguity of language, combined with the perceptual filter through which we all view the world, means that any attempted message is inevitably distorted in its (ostensible) comprehension by its receiver. We may take entropy to mean, as Wiener does, the loss of signal and breakdown of comprehensibility; or we may interpret it as Shannon does, as greater complexity and choice in the matter of available information—which, in its turn, places a greater demand on the receiver, making it less likely that the message will be re-constructed perfectly on the other end. Both concepts beg the question: Is true communication possible between individual humans? Or do the inherent limitations of language make the effort futile, dooming any interaction even as it is attempted? To be sure, it is the only reasonable tool for communication that we have at our disposal—but what good is it, really? These are problems which Pynchon considered in depth, though he sometimes seems to offer few possibilities for their resolution.

All of which is to say that communication theory should not be viewed as some obscure subject upon which Pynchon happened by coincidence or whim; properly

understood, the issues it takes up are vitally important, and these are the ideas Pynchon explores in his novels and stories. Over the course of this paper, I will trace the influence communications theory has had on Pynchon's novels and early short stories, as described earlier. My main goal is to explore the tension Pynchon creates between Shannon's and Wiener's varying conceptions of entropy, the literary methods he uses to explicate these conceptions, and the way in which they worked upon his broader personal worldview, or at least the cosmology of his novels. In conclusion, I will consider what it means to Pynchon to be a *novelist*—that is, a transmitter of a written message to receivers with whom he is unfamiliar and from whom he is disconnected. This explication will, I believe, serve to illuminate aspects of Pynchon's overarching artistic objectives.

. . .

Before our survey begins, however, it might be useful to examine some specific examples of Pynchon's use of communication theory in his fiction. The concepts described in this first chapter may seem a little too abstract at this point, and our goal is to understand how the author *applies* them. The process of identifying and carefully analyzing certain key passages in a novel is familiar to any student or teacher of literature—in the language of literary studies, this is often referred to as "close reading" or as "unpacking" a passage. Its purpose is to understand and gain fuller insight into the author's intentions or message.

The choice of the word "message" is a deliberate one, for a well-trained reader is actually part of a specific type of communication circuit. The author (in this case Pynchon) is the transmitter, and the specific grouping of words he chooses to compose the novel is the message. The novel itself is the signal, and the reader is naturally the

receiver. This circuit, like all communication circuits, also involves a process of *encoding* on the part of the transmitter and *decoding* on the part of the recipient. On a mundane mechanical level, the message is encoded by words in a language, in this case the English language, and only someone who can read and comprehend English can hope to access the message. This is equally true of novels, road signs, and an instruction pamphlet on how to program an alarm clock radio. Novels, however, often (if not always) carry a further encoded message, in literary mechanisms like metaphors, themes, and symbolic structures. Careful readers are able to decode this part of the message only through study and analysis of the novel.

Pynchon, of course, was fully conscious of the way communication circuits applied to the author-reader relationships, and this was, perhaps, one of the reasons for his interest in communication theory as a "governing metaphor." In using it as he does, he subtly and wittily establishes a source of reflexivity between the events in the novel and his own interaction with the reader. Moreover, this provides a source of commentary on the reader's own efforts to "decode" the "message" of the novel, as will become more apparent in my consideration of V. For the time being, it is sufficient to recognize that communication theory is a metaphor which effortlessly transcends the novel itself to encompass the process of novel-reading. Later we will see to what effect Pynchon uses this interesting phenomenon.

For the purposes of the current illustration, two passages will be taken up for consideration. Both come from The Crying of Lot 49, a novel which will not receive in-

depth analysis in my thesis,[10] but one which lends itself well to a simplistic interpretation through the lens of communication theory.

The first of these passages comes at the end of Oedipa's long night spent roaming the city, half-searching for signs and agents of Trystero as she does. After helping a very old man up the stairs to his room, she considers his mattress, which keeps "vestiges of every nightmare sweat, helpless overflowing bladder, viciously, tearfully consummated wet dream, like the memory bank to a computer of the lost" (Crying 102). The mattress is consciously identified as an inanimate unit of information storage, a function most famously served by computers. This train of thought, not surprisingly, causes her to remember the Maxwell-obsessed character which serves as the novel's chief elucidator of communication theory: John Nefastis. She remembers him, "talking about his Machine, and massive destructions of information.

> So when this mattress flared up around the sailor, in his Viking's funeral: the stored, coded years of uselessness, early death, self-harrowing, the sure decay of hope, the set of all men who had slept on it, whatever their lives had been, would truly cease to be, forever, when the mattress burned. She stared at it in wonder. It was as if she had just discovered the irreversible process. It astonished her to think that so much could be lost [. . .]. (Crying 104)

Any conscious and detailed consideration of the specific subject of "information" on Pynchon's part usually signifies a connection to communications theory. The field helped to imbue several terms with a near-cosmic significance—one was "entropy," and another was "information." Wiener famously considered *all* living organisms to be

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[10] See Ch. 4

nothing more than self-contained informational systems, which expanded or contracted according to the amount of communication the organism is performing at any given time.

The fact that Oedipa specifically compares the mattress to a computer is also significant, since Wiener formulated theories which were integral to the early development of computers, and he was one of the first to recognize their true status as *inanimate objects which can store and communicate information.* This may seem self-apparent in 2007, but it was a revolutionary concept of great significance in Wiener's time. Pynchon, characteristically, chooses a strange and irreverent way to express the concept, imagining a mattress as the storage unit instead of a computer, containing "information" in the form of bodily fluids and "the set of all men who had slept on it." Still, it is information, of a sort. One might call it "preterite" information, to twist a favorite word of Pynchon's—that is, information which is traditionally discarded, ignored, cast aside. The mattress' inevitable destruction, occurring in tandem with the old man's, will represent a "massive destruction of information"; it will be lost to "the irreversible process," which of course can only mean entropy. Wiener, as we have observed, considered living things (including human beings) and information-storing/organizing objects (like books and computers) to be "isolated enclaves which run counter to the general trend" of entropy. These enclaves are, however, eventually doomed to dissolution by outside forces. Oedipa seems to focus on the inevitable tragedy of the bed burning more than the simultaneous burning of the man with it, but both events are in essence variations on the same thing: the breakdown of an informational system via entropic forces.

There is another, even more subtle analogy at work here, which is readily apparent to anyone who has studied communication theory, but which might escape the casual reader otherwise. By envisioning the *burning* of the old man and his mattress, Pynchon is referencing the convoluted relationship between entropy as applied in thermodynamics, and the way in which it is conceptualized in communication theory. From the perspective of a communication theorist, the conflagration is equivalent to the dissolution of two information systems, the man and his bed, and therefore it is entropic by Wiener's definition. On a more banal level, the fire will release all the energy contained by the two objects' matter, dispersing it into the atmosphere—an example of thermodynamic entropy. Entropy is, perhaps, merely "a figure of speech [. . .] a metaphor," as John Nefastis describes it, which "connects the world of thermodynamics to the world of information flow"—but in this passage Pynchon, like Maxwell's Demon, "makes the metaphor not only verbally graceful, but also objectively true" (Crying 85). This is characteristic of the author's subtle integration and elucidation of aspects of communication theory. In this case, however, by having Oedipa remember Maxwell's Demon, and therefore the earlier connection between entropy and information, Pynchon provides readers with the "key," so to speak, by which to decode his metaphor. At other times he is more cryptic.[11]

The "mattress" quote owes much to Wiener, but in other portions of the novel Pynchon relies more heavily on Shannon's conception of communication theory. Later in the novel, Oedipa ponders the possibility that there really is a "Trystero," a shadowy

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[11] In fact, an increased subtlety and reluctance to provide readers with "clues" for the "decoding" process can be traced through the course of Pynchon's work. In the first piece I consider in depth, his short story "Entropy," the author makes explicit reference to communication theory; by the time of Gravity's Rainbow, his influences manifest themselves in much more understated ways.

mail organization which has operated at the fringes of society since the Renaissance. She

wonders if she has "stumbled indeed, without the aid of LSD or other indole alkaloids,

> onto a secret richness and concealed density of dream; onto a network by which X
>
> number of Americans are truly communicating whilst reserving their lies,
>
> recitations of routine, arid betrayals of spiritual poverty, for the official
>
> government delivery system; maybe even onto a real alternative to the
>
> exitlessness, to the absence of surprise in life, that harrows the head of everybody
>
> American you know, and you too, sweetie. (Crying 141)

I observed earlier that the use of the term "information" is often indicative of the

applicability of communication theory. Pynchon's decision to use a *post service* as one

of the central presences of the novel—a system which is by definition overwhelmingly

concerned with communication—should also indicate the theory's possible applicability.

If the parallel is not obvious enough, Oedipa, upon receiving her initial lecture on the

Demon's relation to the Second Law of Thermodynamics, observes: "Sorting isn't work?

[. . .] Tell them down at the post office, you'll find yourself in a mailbag headed for

Fairbanks, Alaska without even a FRAGILE sticker going for you" (Crying 68). The

quip is characteristic of Pynchon's pithy and irreverent attitude toward his own sources,

but it also draws a pointed connection between postal organizations (such as Trystero)

and Maxwell's Demon (and therefore communication theory).

The important concept to remember in unpacking this passage is Shannon's focus

on variation and unpredictability as a source of renewal. The "official government

delivery system" is associated with "exitlessness" and "absence of surprise in life"—the

only messages this channel carries are "arid" and "routine." The U.S. Postal Service is a

communication system with a very low level of entropy (Shannon). Trystero is an alternative communication system, one which is open to possibility and surprises; it has a high level of entropy (Shannon), illustrated in the novel by its elasticity and mutability (mailboxes appear and disappear, agents come and go, the history is shrouded in shadows). Because of these characteristics, it offers a way for Americans to "truly communicate" and overcome the rigidity of officialdom.

There is also a hint in this passage of things to come in Pynchon's work. His association of official channels of communication with aridity, sterility, and repetition owes much to Wiener's hatred of control-communication, as observed earlier in the chapter. Trystero is the first example of what Pynchon would later call the "Counterforce"—the highly-entropized, mutative, chaotic drive toward life and communication, which resists the Entropy of control systems.

. . .

This will receive much more attention in time. Hopefully, it is now clear how the terms and concepts of communication theory can be practically applied to Pynchon's work. Words like "information," "signal," and "redundancy" have a peculiar meaning in the context of this thesis' governing metaphor—at least one word, "entropy," has two. Pynchon's understanding of these concepts would inform his writing as early as his first published story, "The Small Rain": the main character, Nathan "Lardass" Levine, is a communication specialist (27). Pynchon uses this as a deliberate irony, for Levine displays a total apathy toward communicating with anyone, an apathy mirrored in all the characters to one degree or another.

Still, it was not until Pynchon's second short story that he began to use communication theory to serious effect. This fledgling effort, suitably titled "Entropy," will be the first sizable work that we will decode using communication theory. It is uniquely well-suited for this, given its simplicity—Pynchon explains, ruefully, that he made the mistake of beginning "with a theme, symbol, or other unifying agent," and then trying "to force characters and events to conform to it" ("Introduction" 12). It is somewhat fortunate for our purposes that he did so, however, for the "unifying agent" he chose was communication theory.

CHAPTER TWO: EARLY TENSIONS

> He found himself in a land where no one had ever penetrated before;
>
> where order was an accidental relation obnoxious to nature; artificial
>
> compulsion imposed on motion; against which every free energy of the
>
> universe revolted; and which, being merely occasional, resolved itself
>
> back into anarchy at last. (457-58)
>
> - Henry Adams, <u>The Education of Henry Adams</u>

Aside from the useful "mistake" Pynchon acknowledges, he criticizes "Entropy" as "committing on paper a variety of abuses, including overwriting" ("Introduction," 15) and describes it as "a fine example of a procedural error" ("Introduction," 12). Other, later critics have taken a brighter view of the story, as would I for that matter. The story displays Pynchon's early cleverness in his attempts to apply scientific concepts— particularly communication theory—to a fictional construction, and though the author abhors its lack of subtlety, this same feature is an advantage to us, as I have implied. In "Entropy," Pynchon makes no effort to cover his tracks. His influences are readily apparent. He goes out of his way to acknowledge in the "Introduction" that the theme of the story is derivative of what two authors had to say: Henry Adams in <u>The Education of Henry Adams</u> and Norbert Wiener in <u>The Human Use of Human Beings</u> (13). This admission is hardly necessary, though, since Adams is mentioned explicitly (Pynchon, "Entropy" 84) and one character, Saul, is a communication theorist in the Wiener tradition (Pynchon, "Entropy" 89). Tony Tanner writes that "[w]hereas some novelists would prefer to cover the philosophic tracks which gave them decisive shaping hints for their novels, Pynchon puts those tracks on the surface of his writing [. . .]. A philosophy,

a theory of history, a law of thermodynamics—any one of these may be a 'trail' and their significance may reside not so much in their verifiable applicability as in the human compulsion to formulate them" (49).

"Entropy" is most important "because it is the first full treatment of thematic material that is to form the cornerstone of Pynchon's novels" (Newman 22), including the "hothouse/street duality in which characters either choose to seal themselves within a protective and unchanging environment or to participate in the chaotic mutability that defines the outside world" (Newman 6). The terms "hothouse" and "street" would not be used until V. (Pynchon, V. 487), but the duality was present as a theme before the novel was ever written. It finds its simplest expression in "Entropy," in the thermodynamic contrast between two apartments—in this chapter, though, I identify another implication of the hothouse/street duality, which is informed by communication theory. Simply put: characters associated with the "hothouse" are those who set themselves up in resistance to entropy (Wiener), while those associated with the "street" are those who embrace and open themselves up to entropy (Shannon).

. . .

As stated, "Entropy" deals with two systems—one which is obviously an "open system," in thermodynamic as well as communicative terms, and another which is "closed." The dualistic nature of the story is spatial, with the action proceeding in two separate apartments between which none of the characters venture. Callisto's apartment is a "closed system," a delicately balanced eco-system unto itself, requiring a constant temperature and the constant presence and supervision of its creators: Callisto himself and his lover, Aubade. No intrusion of any sort is permissible; to do so would upset the

balance the two have achieved and maintain. Callisto obsesses about the outside temperature, superstitiously worrying that the universe will soon reach the final heat-death, a total triumph of entropy. The lower apartment, rented by "Meatball" Mulligan, is the "open system": Strange individuals continually come and go (through the windows as well as the doors), there is no schedule or order to speak of, drugs and alcohol are constantly consumed, and everything generally seems to be in a continual state of chaos. It is completely open to the outside world, and whatever it brings. Even the writing style is quick-moving, jumpy, while the scenes in Callisto's apartment, by contrast, slow to a long-paragraphed crawl. As the story progresses, a number of parallels emerge between the apartments, which are inherently thermodynamic and information/communication-based mirror images of one another.

Appropriately, the only examples of near-communication between the apartments are described in terms of meaningless noise, indecipherable to the characters involved. Callisto and Meatball are awakened by the conclusion of the same song, *The Heroes Gate,* being played in Meatball's apartment—in Callisto's case from an "uneasy sleep" (Pynchon, "Entropy" 83), while Meatball is "hurled wincing into consciousness" (85). The first noise of which both of them become aware, after the song, is the monotone hiss of the rain, described as a "whisper" (85). This is the closest the two central characters come to sharing a connection, and the subsequent description of the rain in terms of a whispering voice is deliberate; half-communication, meaningless and impossible to interpret, is as much as most voices ever manage. Any connections the two apartments share throughout the rest of the story are also described in terms of sounds or noises: sounds of Earl Bostic's alto sax rising through the floor (88), or "the improvised discords

of the party downstairs" after the sailors arrive, "which peaked sometimes in cusps and ogees of noise" (92). The fact that only "noise" is capable of getting through, rather than any discernible signal, comments on the problems inherent in all communication, and further illustrate Pynchon's reliance on communication theory in constructing the story.

The "entropy" of the title is most clearly seen in the constancy of the temperature outside the apartment; throughout the story, it remains at a steady 37 degrees despite variances in weather and the change from morning to day. To Callisto, this is an ominous, apocalyptic sign of what he calls the "ultimate, cosmic heat-death." The Second Law of Thermodynamics has become an fixation' with Callisto, anticipating in some ways its later importance to Pynchon himself. Callisto has come to see and apply entropy, not only in simple physical systems, but everything: the realization came from a vision in which the "horrible significance of it all dawned on him: only then did he realize that the isolated system—galaxy, engine, human being, culture, whatever—must evolve spontaneously toward the Condition of the More Probable" (Pynchon, "Entropy" 87). The echo of Wiener contained therein is entirely self-conscious; Callisto himself makes reference to the same authors that influenced the development of Wiener's ideology, notably Gibbs and Boltzmann, who "brought to this principle the methods of statistical mechanics" and thus led Callisto (like Wiener) to his understanding of the "horrible significance" of the theory (87). The knowledge, which carries the ring of prophecy, has (apparently) driven Callisto to his current lifestyle of hermitage in the midst of a carefully-crafted ecosystem of his own. He attempts to conquer the force of death and chaos in his own little piece of reality, even as the thermometer seems to tell him that the outside world has already reached its gray, featureless state of

thermodynamic balance. And of course, for all the order on the upper levels, the party

rages on downstairs.

. . .

The story transpires in these two apartments, in two parallel but separate threads.

Meatball faces crisis after crisis, including a hangover, a friend with marital problems in

need of counseling (Saul), and an invasion of uninvited sailors. His life, like his party,

trembles on the verge of total chaos at all times. Callisto, meanwhile, nurses a sick bird

at his chest and dictates his thoughts to his partner Aubade, while obsessing over the

constancy of the temperature. Pynchon called the story a concept with characters forced

into it, causing him to "short-change the humans in the story" and leaving them

"synthetic, insufficiently alive" ("Introduction" 13). Certainly the characters are used as

vehicles for very specific ideas. All the four main characters mentioned above—Saul,

Aubade, Callisto and Meatball—illustrate communicative entropy in different ways,

allowing Pynchon to express different aspects of the concept which serves as the story's

title, that property which is so "far-fetched . . . obscure and difficult of comprehension"

(Pynchon, "Introduction" 14).

Saul, Meatball's soon-to-be-divorced friend, is a communications theorist; he has

a very clinical grasp of the stakes, which he imparts to Meatball. (His character,

incidentally, unquestionably represents the most inexpert and blatant integration of

communication theory in the story. One senses that the author wanted to establish his

sources beyond a reasonable doubt.) Saul describes subjective language to Meatball as

being nothing more than "Ambiguity. Redundance. Irrelevance, even. Leakage. All

this is noise. Noise screws up your signal, makes for disorganization in the circuit" (90-

91). In this, Saul commits a fairly crucial error, or at least a drastic over-simplification.

Namely: ambiguity and redundancy are *not* the same as noise. Noise, as previously

stated, comes from a source outside of the transmitter and the receiver. It interferes with

the signal, certainly, and leads to greater disorganization (another nod to Wiener), but

"ambiguity" and "redundancy" as defined by communications theory are by no means

bad things. Redundancy implies a high level of adaptive potential, as previously stated,

and ambiguity, for Claude Shannon at least, is another way of describing entropy—that

is, the availability of a broad spectrum of information to use in possible messages.

The example Saul uses, of course, is the phrase "I love you." The "I" in the

sentence is not in question (we could call it the transmitter), nor is the "you" (the

receiver). The ambiguity exists in the subjective word "love," describing as it does the

relationship between the human transmitter and the human receiver. This word is

difficult to define, and can lead to any number of misunderstandings—*but that sort of*

misunderstanding is not the same as noise. Noise reduces the complexity of a message,

possibly rendering it meaningless, while ambiguity simply means that the message is

more complex, that a high number of possible interpretations might be applied to it. In

other words, the entropy (Shannon) is high. What is the alternative? The answer is: a

binary language, reductiveness, simplification. In Saul's apparent opposition to

complexity and "ambiguity," he comes close to being one of the "cold, dehumanized

amoral science types" his wife accuses him of being. Meatball comes closer to the truth

(and illustrates it in a charming way) when he points out that Saul is "sort of, I don't

know, expecting a lot from people. I mean, you know. What it is, most of the things we

say, I guess, are mostly noise." But the real problem which came between Saul and his

wife, as Meatball also astutely observes, is that they "were using different words" (90-91). The distinction is an important one. It may be the same word—"love," for example—but its conceptual malleability, or ambiguity, means that totally different meanings might be given to it by different people. The question, again, is whether or not this is undesirable. To Meatball, the answer seems to be "no," and his answer would be based on fundamental ideological grounds, as will later become clear.

Aubade, the "part French and part Annamese" girl who is the other resident of the upper apartment (84), represents a sort of mirror-image for Saul's character. Her grasp of communication theory concepts is intuitive, rather than learned, permitting the author to describe them in highly poetic language. Aubade is highly sensitive to sound; in fact, all sensations come to her "reduced inevitably to the terms of sound: of music which emerged at intervals from a howling darkness of discordancy" (84). The sounds of the chaotic world outside the apartment are described as "hints of anarchy" that threaten "[t]he architectonic purity of her world"; sounds of traffic, bird-chatter, and music from Meatball's apartment below are "gaps and excrescences and skew lines, and a shifting or tilting of planes to which she continually had to readjust lest the whole structure shiver into a disarray of discrete and meaningless symbols" (88). The chaotic, disharmonious sound of Meatball's apartment upsets Aubade's "precious signal-to-noise ratio" (92), another example of the use of communication theory's terminology. Aubade is afraid of this delicately balanced equation being pushed, in Callisto's words, "to some unutterable and indeterminate ratio" which she is "afraid to calculate" (88).

This leads us to the two main characters, Callisto and Meatball, which (as I have already insinuated) are representative of the approaches taken to entropy by Wiener and

Shannon, respectively. To Callisto, entropy signifies the onset of linguistic and communicative decay, eventually rendering intercourse impossible. The view is inherently pessimistic. Ambiguity in the signal becomes just another kind of noise working to "screw up" the circuit. In his efforts to maintain his hermetic hothouse, and his aversion to the outside world, Callisto seems to have no grasp of how entropy might *beneficially* complicate a system; confronted with a world over which he can exercise no control, he responds with retreat and ultimately a sort of hopeless suicide. Entropy is an enemy to be resisted, but defeat is the inevitable result. One cannot push back or even resist the process.

Meatball, on the other hand, seems to subscribe intuitively to a view of entropy that is more Shannon's than Wiener's. He is not as educated as Saul, nor as eloquent as Callisto, but his natural impulse is to move with chaos, to accept it with all it entails. As a result, he is able to respond to unforeseen circumstances as they arise much better than Callisto. Wiener and Shannon are agreed that a perfect communication system is impossible, but to Shannon the disorder, ambiguity, and uncertainty of language, as with any system of communication, makes it more adaptable and more able to overcome the noise which is such an unavoidable part of the system. He is uncrippled, at the end, by the unpredictable vicissitudes with which he is surrounded.

. . .

The two stories' penultimate moments are both concerned with entropic climaxes; it is appropriate, in light of the thematic importance of noise, that in Meatball's case this comes when "[t]he noise [. . .] reached a sustained, ungodly crescendo," complete with drunken singing, a brawl, a screaming girl, and an argument between members of the

band formerly attempting communication through imagined music (96). At this point, the scale has tipped so far in favor of noise over signal that it seems nothing else—"white noise," so to speak. Concurrently, Callisto becomes aware, because of "something from downstairs—a girl's scream, an overturned chair, a glass dropped on a floor," that the sick bird he has been holding since the story's beginning is finally dying, its heartbeat ticking "a graceful diminuendo down at last into stillness" (97). Callisto is filled with wonder and horror that his nursing did no good, that his body failed to communicate the heat the bird needed. "'Has the transfer of heat ceased to work?'" he asks. "'Is there no more . . .' He did not finish" (98). Here we see the heat-death—the thermodynamic aspect of entropy—and pure noise—the communicational aspect of entropy—paralleled very explicitly, as in the mattress example from The Crying of Lot 49. It is also one more moment, like the beginning, when the ghost of a sound connects Meatball and Callisto in their own individuated worlds.

In the end Callisto and Aubade do, in fact, surrender. The bird dies; Callisto fails at his goal of "communicating life to him, or a sense of life" (97-98). And at last, feeling as though it is "the single and unavoidable conclusion to all this," Aubade smashes out the glass of the window with her hands, opens their system to the outside, and waits with Callisto until the "moment of equilibrium," what Callisto calls the "Final Equilibrium," a time "when 37 degrees Fahrenheit should prevail both outside and inside, and forever, and the hovering, curious dominant of their separate lives should resolve into a tonic of darkness and the final absence of all motion" (98). In this, Aubade finds a way to overcome the earlier-considered problem of communication, to be sure: erasing individualism into "darkness" and the "absence of all motion"—in other words, a heat-

death. Entropy is, of course, the *only final solution* to the question of how to make perfect communication, without all the "leakage," possible; when everything has reached a state of sameness, ideas no longer have to transfer, nothing has to be transferred at all, because there is equal distribution. Various critics have interpreted this ending in various ways; to me, it seems clear that it is tantamount to a surrender, a cessation of effort, a recognition of futility and an embrace of the inevitable.

Meatball, on the other hand, seems a suitable candidate to settle into entropy as a sort of natural habitat. If, as previously mentioned, Callisto's apartment characterizes order and resistance to outside heat-death, Meatball's is a manifestation of chaos, culminating in the moment described earlier with the "ungodly crescendo" of noise. And Meatball contemplates surrender: locking himself in a closet until everyone has gone away. But the closet is "dark and stuffy, and he would be alone. He did not feature being alone" (96). So instead, over a period of many hours, he calms his guests down, plays mediator, lends a sympathetic ear to Saul, and calls to have his refrigerator fixed. In other words, he asserts himself over the chaos and, in so doing, keeps it from becoming absolute. In fact, his is a more admirable choice than the one made in the apartment above him. The key moment is when he decides he "does not feature being alone," and proceeds to (mostly verbally) establish some marginal control over the party. His choice is opposite to Callisto's and Aubade's: although previously informed of language's limitations by Saul—who ought to know—he accepts it as the only viable method by which to avert his party's particular version of the total heat-death. "To separate oneself from language," for all its shortcomings, "in an attempt to be free from its imposed order,

is to enter a world of chaos and vacancy" (Mendelson 169). The struggle might be futile, but we are made to understand that it is, nevertheless, necessary.

. . .

Considering the fascinating insights which "Entropy" offers into Pynchon's readings of communication theorists, it seems peculiar that it has received so little consideration from critical channels. The few such analyses that do exist cover a wide range of quality. At least one important Pynchon scholar seems not to have actually *read* the story, as he cites the "constant temperature" as being that of Callisto's apartment, rather than the temperature outside, and makes much of a completely non-existent character who "directs persons arriving at a party to one of a house's two levels and thus works like Maxwell's Demon" (Stark 52). Another takes a less-than-useful Freudian approach, with Callisto's apartment representing the Ego and Meatball's representing the Id (Tanner 50). No one has attempted a detailed reading based on a more than cursory understanding of communication theory. Robert Newman comes closer when he identifies the two "paradoxical ways" in which entropy manifests itself: "In one sense order breaks down, resulting in the random dispersement of energy. In the other the distinctions between the elements of a closed system vanish, resulting in a sterile homogeneity" (Newman 23). Still, he lacked the necessary vocabulary to identify and trace the sources behind these two paradoxical versions of entropy, as we have been able to do.

Critical sources become a little more useful, however, when they speculate on the *moral* implications of the choices made at the end by Callisto and Meatball. Some maintain that the characters represent separate "extremes," both of which are "inherently

self-deluding in [the] attempt to impose meaning" (Newman 6). Callisto's unhealthy obsession with the past, and Meatball's vigorous brand of hedonism, are seen as the same in that "both [. . .] constitute a rejection of the present" (Madsen 198). I tend to reject such interpretations, and feel it is very clear that Meatball is the triumphant one at the end, while Callisto is paralyzed by his own inefficacy. "Entropy" presents "the human alternatives of working inside the noisy chaos to mitigate it or standing outside, constructing patterns to account for it." Working inside the chaos is the only hope for enough adaptive potential to survive the destruction of patterns, portrayed in "the configuration of the shattered window and Callisto's paralysis" (Tanner 51). All victories over entropy are "often Pyrrhic and always ephemeral" (Newman 25), but a more fluid approach makes it less likely to be swamped by noise and more partial to the healing forces of ambiguity and redundancy. This, of course, is Meatball's choice, and it is the only way of "avoiding deterioration into the lifeless sameness that constitutes the entropic system" (Newman 23-24). I believe the most important accomplishment of "Entropy" is that in it Pynchon establishes a *moral* dimension to Claude Shannon's work, which was formerly absent.

Wiener, on the other hand, was abundantly conscious of the cosmic and metaphysical implications of much of his work. Thus he perceives entropy as evil, and the "isolated enclaves" which work against entropy as good. But in "Entropy" we see one of these isolated enclaves broken down, as is inevitable given the thermodynamic and probabilistic facts of the matter. The intrusion comes, in fact, not from any outside source, but from the *inside*, with the bird's death: entropy is inside the hermetic enclave, the "hothouse." It is the canker in the rose, the worm in the apple. It is insidious, and

utterly irresistible in the end. But the point is that the struggle to erect enclaves is futile; it is better, as Shannon theorizes, to embrace complexity and the breakdown of order, or at least to work with it; rigidity is not only naïve, it is tantamount to a death sentence.

Still, one thing gives pause. The very fact that the story "Entropy" exists represents some kind of judgment on the part of the author. Callisto, like Pynchon, is a recorder of his memories—his memoirs, dictated to Aubade, are a statement on his continuous efforts to assert himself over the inevitable process he fears so much. Considering the imperfection of communication—of which Callisto, like Pynchon, cannot be unaware—and the ultimate conclusion to *all* systems, what place have records like the one he is making? It is notable that no one in Meatball's apartment shows any signs of writing or otherwise preserving thoughts; everything is verbal, ephemeral, conversations changing at as rapid a rate as everything else. Callisto's efforts to sustain and record are, in fact, part of his constant defiance of entropy, his attempts to be "strong enough not to drift into the graceful decadence of an enervated fatalism" (Pynchon, "Entropy" 87). His efforts as a recorder and story-teller parallel those of the author, Pynchon, who is writing the story of which Callisto is a part. Does Pynchon insinuate, in this, that Callisto has the right idea after all—that in this, at least, he is more correct than Meatball?

I believe not. Callisto is meant to represent a nineteenth-century worldview and literature. In addition to the influence which Henry Adams is explicitly stated to have had on Callisto's worldview (Pynchon, "Entropy" 84), he refers to himself—like Adams—solely in the third person. His age, which exceeds that of any of the other characters (Meatball and his friends are all in their twenties) also identifies him with a

bygone era. Here, the youthfulness of the author at the time the story was written makes itself felt. Callisto's literature represents the literature and worldview which is *past*. His writings are designed to invoke a stereotype of modernist literature. He has a tendency to lose himself in his own nostalgia, and to think of the world in terms which are void of humor. This is a crucial point at which his writings differ from Pynchon's—while Callisto takes his thermodynamic metaphors very seriously, Pynchon's treatment of information theory "is at least partially satirical. His characters frequently take scientific concepts in an absurdly serious manner [. . .] Pynchon sees the humor in this and often handles his characters' involvement with science in a loosely satirical way" (Mangel 95). Of course, "the ideas from science and information theory still form the basis both for his characters' predicaments and also for Pynchon's own style of writing" (Mangel 95), and "in [Pynchon's] comedy there is always conscience, born of seriousness and fear and wonder" (Newman 13), but humor and satire are still crucial to Pynchon's artistic goals. This will receive further attention in my fifth chapter, but for now suffice it to say that Pynchon's irreverence provides a rejuvenating influence to his literature which prevents him from the sort of paralysis which ends up seizing Callisto. Perhaps if, like Pynchon and Meatball, he could have taken himself less seriously, things might have gone very differently for him.

CHAPTER THREE: DIE WELT IST ALLES WAS DER FALL IST

. . . No, it is impossible; it is impossible to convey the life-sensation of any

given epoch of one's existence—that which makes its truth, its meaning—

its subtle and penetrating essence. It is impossible. We live, as we

dream—alone . . . (95)

- Joseph Conrad, The Heart of Darkness

In "Entropy," we saw the beginning of the "hothouse/street duality," as it is

identified in Pynchon scholarship, which would become a major strain in Pynchon's

literature. Furthermore, "Entropy" provides a "key" of sorts by which to decode other,

later novels. Specifically, the "hothouse" translates to Wiener/Callisto's search for an

isolated enclave which can provide some resistance to Entropy. The "street," on the other

hand, is a place of chaos, adaptation, and entropy—its value was elucidated by Claude

Shannon and illustrated by Meatball Mulligan. This code is useful because the

hothouse/street duality runs as a theme throughout V. (where it is first phrased precisely

in those terms), and later through Gravity's Rainbow. With an understanding of variant

entropic systems, this duality assumes another set of values which pertain to

communication theory.

V., for example, follows two distinct storylines—like "Entropy"—which only

merge at the end. One is that of adventurer Sidney Stencil, the other of *schlemiel* Benny

Profane. Stencil is determined to construct some understanding of the identity and

significance of the woman "V." He strives to re-construct a "signal," one which is

completely lost in places, impossibly ambiguous in others, and sometimes becomes

completely swamped by noise (non-pertinent information, in this case). Profane, for his

part, is a hapless drifter with no real interest in information-synthesizing attempts. His last line in the novel—"offhand I'd say I haven't learned a damn thing" (Pynchon, <u>V.</u> 454)—says it all. Profane (like <u>Gravity's Rainbow</u>'s Tyrone Slothrop) has less interest in understanding the whole than he does in obtaining a bed, some food, some drink, and (hopefully) a community of other human beings.

Translation in this case, using the "key" we derived from "Entropy," is not very difficult. Clearly Stencil's domain is the "hothouse." Like Callisto, he is a near-obsessive pattern-maker. Like Callisto (and Henry Adams), he has a habit of speaking in the third person. His middle-age links him with the modernist era—he was born in 1901, "the century's child" (Pynchon, <u>V.</u> 52). He is determined to impose some kind of order on the seemingly random facts which present themselves to him—with "V." serving as his particular preoccupation. In all these things, his character emerges as a hero of the Wiener mold, a fashioner of ordered enclaves, a resistor of entropy. Benny Profane, in contrast, is assuredly a creature of the "street" through and through. This is not only because the street is where he spends most of his time, sleeping and waking. His willingness to abandon himself to the vicissitudes and movements of the chaotic world around him make him a Shannon-esque exemplar of entropy. He is the Meatball to Stencil's Callisto.

With that said, it is probably a sign of Pynchon's maturation as an artist that he no longer portrays this character-type as a hero, ambiguous or not. <u>V.</u> is in many ways a cautionary tale, which exhibits the danger of both approaches. Benny is a totally static character who learns nothing and ultimately achieves nothing because he never establishes meaningful connections to the world around him. He is a "yo-yo," eternally

in motion, never resting, and he ends the story exactly as he began. Stencil, for his part,

is unable to synthesize the various truths he uncovers, and the significance of "V.," if

any, remains beyond his comprehension. His efforts to impose an ordered system on the

lady's appearances are doomed to failure, like Callisto's, because they are inevitably

limited in their comprehensiveness.[12] The final moral, if there is any, is jazz musician

McClintic's "Keep cool, but care"—one must strike a balance, if possible, between

Stencil's excessive "care" and Profane's debilitating "cool." The soundbite-esque

glibness of this "moral" is entirely self-conscious and self-effacing, a commentary on the

questionable usefulness of simplistic morals in *any* story. "Take cool, but care" has

meaning, to be sure, but it is what Shannon called a "compression of semantic content"

(56). On its own, it is basically worthless—only the story imbues it with significance.

. . .

This self-consciousness about the role of story-telling and the potentialities of

literature is something that only becomes apparent in Pynchon's later novels—I would

venture to guess that the much longer, involved process of writing a novel, as opposed to

writing a short story, made these issues much more clear to Pynchon, as well as providing

him with the space necessary to explore them. Increasingly, he questions the nature of

communication through stories, and the relation these stories have to the story-teller, or

transmitter.

Nowhere is this illustrated better than through Chapter Nine of V., entitled

"Mondaugen's Story." While the story is of events which happened to a man named Kurt

Mondaugen, it cannot be ascribed to Mondaugen alone, because Mondaugen is *not* the

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[12] The allegorical applications to encyclopedic literary interpretations of works like Pynchon's should be obvious. Pynchon's symbolic structures, like "V." herself, are intentionally too complex to sum up in a neat or rigid way.

narrator, *per se*. In the last few paragraphs of the preceding chapter, we are informed of the torturous path which the story has taken on its way to us: Stencil interviews an aging German man at a Long Island plant which is engaged in the manufacturing of communication equipment. This engineer, Kurt Mondaugen, tells Stencil the story of his experiences in Southwest Africa—a tale which has already been acted upon, of course, by over thirty distorting years. The reliability of Mondaugen's memory aside, we are informed that the version we receive, the version retold by Stencil to the dentist Eigenvalue, has "undergone considerable change: [. . .] become, as Eigenvalue put it, Stencilized" (Pynchon, V. 228). The skeptical listener Eigenvalue observes some odd details in the course of the story, and points out that it is "strange that he [Mondaugen] should remember an unremarkable conversation [. . .] thirty-four years later. A conversation meaning nothing to Mondaugen and everything to Stencil" (249). Stencil calls it "serendipity," apparently dismissively, but there is some question as to whether he believes his own story. Eigenvalue's subsequent observation regarding Stencil's ambivalent attitude toward V. seems to further imply that it is Stencil's story and not Mondaugen's at all, at least not anymore. To complicate things further, portions of the tale are "removed from any controlling principle of verisimilitude" by the fact that a scurvy-ill Mondaugen might have hallucinated them (Grant 131).

These questions of verisimilitude suggest to the reader the unreliability of the narrator and the multi-layered nature of the story—important concepts which in some ways define V., not to mention the rest of Pynchon's work. Moreover, it speaks to the unreliability and ambivalence of *all* stories (or information, for that matter). The phenomenon we observe in this chapter is that of a certain "message," a body of

information, being transmitted not only through time but between individuals. Distortion of the message is inevitable: some things will be added, some things will be left out, and others will be changed.

Here we also see the source of an important question in communication theory. Namely: if a message changes, is it necessarily a function of entropy? The answer is yes, as both Wiener and Shannon would agree. But they would actually be saying different things. In Wiener's terms, the message in its *perfect* form would be a clinical, flawlessly detailed description of the Siege Party, accurate in all possible respects, in which case it certainly has become corrupted by the time we receive it (just as in the "Telephone" game described in my first chapter). But Eigenvalue's observation about Stencil's attitude toward V. implies something very important: that Stencil has actually *added* to the information content of the story rather than reducing it. In his editing, he has inserted information which was not necessarily a part of the original sequence of events as they really occurred, but it is information which makes clearer our picture of *Stencil*, and therefore very pertinent indeed. In Shannon's terms, then, what has occurred is a benign, complexifying entropy. The information has adapted itself to various transmissions, and in its final form it is complicated and multi-layered enough to afford multiple interpretation. Information is therefore maximized. A totally rigid, unchanged and unchanging report which afforded only one interpretation would, for Shannon, represent a highly entropized message.

This alternate view of things becomes particularly fascinating when we consider it in terms of the fiction writer's role and function: to selectively edit details, to imaginatively recombine events, to establish levels of interpretation and implication

which go beyond the merely mundane. Indeed, it seems the more levels there are—the more complicated and ambiguous the text becomes—the more highly it is valued as a source of information. Most of the great literature throughout history, by anyone's canon, has achieved this kind of multiplicity. Shannon himself, in <u>A Mathematical Theory of Communication</u>, makes a very interesting and seemingly out-of-place comment. In the work's sole reference to literature, Shannon mentions <u>Finnegan's Wake</u>, saying that "Joyce [. . .] enlarges the vocabulary and is alleged to achieve a compression of semantic content" (Shannon 56). Shannon recognizes here that, in literature, wild departures from the straightforward like Joyce's might enlarge the information content, rather than corrupt it; the *multiplicity* of the creative vision is more important than a simply definable body of information, communicated easily and unambiguously.

. . .

The manner by which the story reaches us is fascinating, the story itself even more so. "Mondaugen's Story" is, in fact, one of the most important chapters in <u>V.</u>, for conducting an analysis of communication theory. Perhaps the most glaring clue that the theory will be of some pertinence comes from the fact that Mondaugen is a radio technician. The period in which the story takes place (1922) preceded the time that communication theory came into its own as a science by some twenty-five years, but Mondaugen is involved in a field which would greatly influence its development. Mondaugen's job is to study "*sferics*"—that is, atmospheric radio disturbances which take the form of seemingly random whistles, clicks, and other noises, of some indeterminate cause. No one knows what the cause is behind the *sferics*, although some sort of natural phenomenon is theorized (Pynchon, <u>V.</u> 230). Mondaugen's subsequent

efforts to derive some kind of meaning from the *sferics* represents one of the most delicate treatments of information-gathering and interpretation in the novel. Furthermore, his actions are set against the brilliantly poignant yet disturbing backdrop of the 1922 native rebellion in South Africa. In the course of this ill-fated attempt, over forty thousand Hereros, Hottentots, and Bondels were massacred by European colonist soldiers (Haarhoff 26). Few of those who have read V. can forget this chapter.

The plot proceeds on two parallel levels, just like "Entropy" and the novel as a whole, but in this case the two plot threads are temporally separated by a gap of eighteen years. The rebellion forces Mondaugen to take refuge in the estate of Foppl, a German farmer-colonist and ex-soldier. Once there, he re-mounts his equipment and continues to monitor the *sferics*. Meanwhile, Foppl has declared a "Siege Party" in his house for the other colonists, in which any kind of debauchery is permissible, until the rebellion is over. Over time Mondaugen becomes convinced that the apparently random noises he has been studying have some pattern or meaning, "a regularity or patterning which might almost have been a kind of code. But it took him weeks even to decide that the only way to see if it were a code was to try to break it" (V., 146). Throughout the remainder of the chapter, as the chaos rages outside and the party inside becomes more and more horrible, Mondaugen works on this project with a devotion that may verge on the obsessive.

The "other" plot comes through Foppl's tales of the "Days of Von Trotha," the German general who crushed the 1904 native African rebellion and killed tens of thousands of them in the process. The real-life Herero tribe was all but wiped out over the course of this terrible suppression, and the numbers of the Bondels and Hottentots were severely diminished. This is the historical period in which the character Foppl

served as a soldier, and he recollects with fondness his own participation in various

outrages, both during the rebellion and afterwards, when he became an overseer at

Swakopmund. The two plots intertwine with one another as the narrative progresses,

especially in the course of Mondaugen's fever dreams during an illness (another example

of the unreliability of the narrator), until the events of the two storylines seem to blend

together.

Critics have identified a number of literary sources for "Mondaugen's Story,"

including Joseph Conrad's Heart of Darkness (M. Sanders 82) and Edgar Allen Poe's

"The Masque of the Red Death" (Dugdale 92). To these I would like to add a third,

apparently disregarded before now: the Marquis de Sade's 120 Days of Sodom. I feel

this book's vision of power run amuck is especially apt, and although the sexuality in

"Mondaugen's Story" is less explicit, it is based—like Sade's—largely on tropes of

humiliation and degradation of the weaker individuals (in this case the African servants)

by the stronger. In this there is a strong emphasis on *systems of control*, which were

important to Wiener, as we have already seen, and which will receive extensive

consideration in the following chapter.

. . .

But for the time being, our attention will remain on Mondaugen, and his attempts

to decipher the *sferics*. Mondaugen does not even have any particular idea *who*—or

what—might be sending the broadcasts he imagines he detects. When Weissmann, one

of the revelers, confronts Mondaugen about his activities, he answers cryptically: "I'm

monitoring their little broadcasts" (Pynchon, V. 252). Weissmann seems to understand.

But it is never vocalized who the "*they*" at the source of the broadcasts might be. The

obvious answer might be the natives participating in the uprising—but if so, why is there no mention of them? The whole thing seems to be cloaked in a sort of conspiratorial silence between Weissmann and Mondaugen, where both sense somehow that they are engaged in something important, but neither is quite sure what, or at perhaps not quite comfortable saying it out loud. The eventual "message" they discover reinforces the oddness of the entire episode, but that will come in time. For now, a word should be said about the parallels Pynchon consciously draws between the efforts of these characters and the novel's readers.

. . .

Wiener, in describing the early information theorists, notes that they "ignored noise-levels and other quantities of a somewhat random nature" (Wiener 6), and points out that this is where their theories were inadequate. A proper theory of communication, he argues, must include the possibility that messages might be corrupted in transit, and a way to identify which messages are good and which have been distorted. One way of doing so was to look for breaks in an established pattern. If a pattern is apparent in a transmission, then it can almost certainly be considered to have some sort of information content. The theory behind this is basically that chaos is more likely to occur naturally than a pattern: "regularity is to a certain extent an abnormal thing. The irregular is always commoner than the regular" (Wiener 6-7). The idea is that patterns imply attempts at communication, and a way of discerning the artificiality of a transmission is to look for such a pattern. It plays an important part in "Mondaugen's Story," for Mondaugen follows the communication theory textbook approach for determining the information content of a transmission: he sets out to determine the nature of its apparent

pattern. Thus we have Mondaugen, obsessively and attentively trying to understand a message that may or may not be a message, his chief goal as the chaos rages outside of the Siege Party, and an increasingly rigid pattern of sadistic hierarchy reigns within. Applying the situation to the broader implications of communication theory gives it a tragically heroic quality, because it bears such a powerful resemblance to the way we all interact with the universe. Mondaugen's can be seen as the age-old question in human history, to which countless answers have been proposed: is there a pattern to what we see, or is someone, somewhere, trying to tell us something? Practically the entire story of human religion is concerned with establishing that human beings *are* in communication, of some sort, with the universe, and explaining the nature of that connection. Mondaugen's efforts, then, are a "statement of the relationship between literary interpretation, which stands for the act of making meaning in an infinitely various world-text, and all epistemology, which often seems to be no more than listening to the atmosphere speak to itself through a jerry-built radio" (Porush 124).

We, too, must make efforts at discerning some sort of pattern or patterns in the story. We want to give some meaning, to find some order, in apparently random facts. This process, fundamental to the interpretation of novels, consciously mirrors Mondaugen's methods and goals. The clearest example of this I can find proceeds from the brief description we are given of Mondaugen at the beginning of the chapter: he is a "native of Leipzig" who exhibits "aberrations peculiar to the region," including his "Saxon habit of attaching diminutive endings to nouns, animate or inanimate, at apparent random" (Pynchon, V. 229-30). The last three words should trigger some kind of reaction in anyone familiar with communication theory and its function in Pynchon's

work, especially in the context of Mondaugen's interest in randomness and patterns. Are his attached diminutives *really* random? Are the *sferics*? The careful reader might identify to which nouns, and in which situations, the diminutives occur.

There are three specific cases found in the chapter: the first comes during Mondaugen's first encounter with the vaguely sinister, cyclopean woman "Vera Meroving" (who may or may not be V. herself). As Mondaugen mounts his equipment, she sees him and calls to him from a window. He nearly tumbles off the roof in surprise, and then: "'My little antennas,' he gurgled" (236). This is a curious sentence, and a very curious moment for Mondaugen's "Saxon habit" to manifest itself, given the importance the antennas play in the action and theme of the chapter. Moving on, the second instance comes, once again, during a conversation with a woman, this time the highly seductive Hedwig Vogelsang. Mondaugen enters her room as she applies makeup to her eyes, and he observes that "Your little eyes look so antiquated" (250). The third and final diminutive has already been mentioned; it comes in his conversation with Weissmann, when Mondaugen informs him that "I'm monitoring their little broadcasts" (253).

These three cases seem anything but random. They all occur in the presence, or in reference to, *instruments or methods of communication*. Antennas, broadcasts—the only exception seems to be Hedwig's eyes, but this is easily resolved if we apply communication theory. Eyes are exactly like antennas, in that they are receptors of information, specifically pertaining to the human body's communication with the outside world.[13] This analysis is a fairly simple one, of course, readily apparent to any attentive reader (although, oddly, published critics have not pointed it out, to my knowledge).

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[13] Wiener discusses this at some length in his analysis of the theory behind prosthetics and other mechanical aids to the impaired—Chapter XI of The Human Use of Human Beings, "Some Communication Machines and Their Future."

Observe the process which just took place: I set out to investigate the possibility of a pattern in a series of occurrences—what Wiener and Shannon would call an "information series." To do so, I broke Pynchon's fairly simple "code," or symbolic structure. There is nothing so remarkable in this process, which is familiar to anyone who undertakes even the most basic literary analysis. But it has a special meaning in this context because it is *exactly* what Mondaugen endeavors to do with the *sferics*. Once again, Pynchon draws a conscious parallel between the structuring activities of the characters and the structuring activities of his readers. An extra layer of irony comes with the fact that the solution to our "code" is that each diminutive refers to communication devices.

There is another use of the diminutive which occurs in the chapter, by the way, though Mondaugen does not utter it. As he tosses and turns in a feverish state, he sees an odd spectacle which might in fact be one of the chapter's hallucinations: Weissmann enters the room in a ruffled white dress, "circa 1904," and approaches the communication equipment. As he does, it bursts into a three-part tune, to which Weissmann sings a little ditty dedicated to "You, I, the night/And a *little black sjambok*" (260-61—italics mine). This would seem to be a random coincidence, except for two facts: 1) it is unclear whether or not Mondaugen has dreamt the incident, so the diminutive might very well have come from his own head, making it important to us, and 2) a sjambok[14] is an instrument of communication, just as much as an antenna, an eye, or a radio broadcast. Specifically, it is an instrument of the specialized field of communication known as control, as my next chapter will make clear.

. . .

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[14] A species of short whip, made of rhinoceros or hippopotamus hide and often used by European slavers in Africa.

The thematic climax of "Mondaugen's Story" comes when Weissmann (apparently) breaks the *sferics'* code. The translation appears to be a random string of letters, but Weissmann points out that, if every third letter is isolated, it reads: GODMEANTNUURK—which letters, rearranged, spell Kurt Mondaugen. The remaining letters (apparently a message to Mondaugen) spell: DIEWELTISTALLE-SWASDERFALLIST—which, translated from German to English, means: "The World Is All That The Case Is." Observes Mondaugen: "I've heard that somewhere before" (Pynchon, V. 278). This is a fascinating moment, and a great amount of critical ink has been spilled on its account, reaching toward all sorts of wildly disparate conclusions. I posit that the message serves in some ways as a sort of Rorschach test: the way in which it is read and interpreted reflects the way one chooses to read the chapter as a whole.

The most obvious way to take the first part of the message is to accept Weissmann's idea: it signifies that the message is addressed to Kurt Mondaugen himself. This is wonderfully ironic. The notion that the universe has crafted a message specifically for him from random atmospheric disturbances ties neatly into the quasi-religious nature of his investigation, as discussed earlier. But one cannot escape the feeling that, given enough random letters and enough determination to make sense of them, it is *inevitable* that a message will be found. A handy example comes when we consider the popular critical ruminations regarding the cryptic GODMEANTNUURK; not everyone accepts that it is a simple anagram, and at least two critics have theorized that the "real" translation is "God Meant New York" (Porush 124, Stark 42). This is, I feel, a classic illustration of something long understood and pointed out by communication theorists. Namely: considering the expansiveness and redundancy of

language, it is almost inevitable that a random collection of letters, given the proper manipulation, can be construed as sensible communication. This does not mean, however, that any such message actually exists (Shannon 43-44). It is possible, by random re-combination of words, to "get a remarkable semblance of a language [. . .] The gibberish which one thus obtains has a remarkably persuasive similarity to good English," but is a "meaningless simulacrum of intelligent speech" (Wiener 89). I argue that GODMEANTNUURK is a perfect example of this; the presence of the three first letters is probably the source of the critical conviction that it *must mean something*. Their determination to find information in this "gibberish" is essentially the same as Weissmann's. David Porush hits closest to the mark when he speculates that it might, if anything, be "a sign that God is babbling nonsense" (Porush 124).

Certainly this interpretation makes sense when we take into consideration the remainder of the message ("The World Is All That The Case Is"). This is a sentence that Mondaugen certainly *has* heard before, at least if he has read Wittgenstein's *Tractatus*—it represents the first statement and primary assertion of the book. In the *Tractatus*, Wittgenstein makes the case that reality is composed solely of facts divorced from any meaning, thus rejecting as illusory the following concepts: 1) the possibility of "transcendence," or "a world beyond the world of facts," 2) any existence of "absolute values which could guide human behavior in a binding way," and 3) that there is a "holistic order of reality" which synthesizes individual facts into a larger system—as per Aristotle, Hegel, Marx, etc. The world described by Wittgenstein is one "which to the thinking individual must appear as profoundly senseless, strange, and incoherent," a "shattered cosmos" composed of facts "without metaphysical meaning [. . .] without

value [. . .] and essentially isolated from one another" (Bramann 4). We are faced, then, with a strange paradox. According to the message of the *sferics*, there is no higher meaning, no reality beyond the reality we perceive. Yet the fact that this message is derived *from* the *sferics* seems to indicate a consciously directed communication of some sort, apparently from the cosmos—unless this is just a remarkable coincidence, or wishful thinking on Weissmann's part. In the end, this paradox leaves us no closer to a satisfactory conclusion than we were before. This is the point, in a way: the message, real or imagined, that we take away from reality is largely preconditioned by the expectations we bring to bear on it.

. . .

This epiphany from the sky, in tandem with the horrors of the Siege Party, apparently becomes too much for Mondaugen to bear. Shortly after Weissmann brings him the translation, he flees Foppl's estate, as the party guests sing valedictory choruses to his departing form (Pynchon, <u>V.</u> 279). Mondaugen's character consistently resists human contact of any sort, preferring a search for transcendent meaning in the *sferics* or the sky; it is not until the end that he realizes this is wrong, and that no message will be forthcoming from the heavens. The only hope, as always, is to realize that the world is all the case is—a realization which is only as tragic or demoralizing as one considers the world to be.

In the end, Mondaugen's re-integration into the world and human communication comes when he hitches a ride on a wagon driven by a one-armed native and dozes "on and off, his cheek against the Bondel's scarred back." As they move through the empty spaces, the Bondel begins to sing, "in a small voice which was lost before it reached the

nearest Ganna bush. The song was in Hottentot dialect, and Mondaugen couldn't understand it" (279). Comprehension is still beyond Mondaugen, and may always be, but it is hard not to feel some sense of fulfillment on his behalf. He is not a bad man through the course of the chapter, nor an apathetic one, but his patterning-impulses blind and limit him. His efforts are not unlike Stencil's (Madsen 42); he is a resident of the "hothouse." The end of the chapter sees him out of the hothouse and onto the street, so to speak, where transcendent patterns are less important than individual communion and communication.

CHAPTER FOUR: SWAKOPMUND AND THE DAYS OF VON TROTHA

> You forgot you were parts of a machine. Because of your forgetfulness
> the machine is inefficient. [. . .] You, in your chaotic state, may experience
> our efforts in value-laden terms; feelings of degradation, shame and
> humiliation are common. These states are simply the reaction of a
> damaged subjective unit during its return to the objective reality of the
> machine. (132)
>
> - Grant Morrison, Kissing Mister Quimper

Mondaugen's "lesson" comes when he turns away from the hothouse to the street,

and the most important defining characteristic of Foppl's estate, for our purposes, is that

it is a more or less hermetic ("hothouse") system. For this reason, one might consider

conventional entropy to be at a minimum—like Callisto's apartment, it has no connection

to the outside world, making it possible to preserve "energy" (or information). The fact

that there is no entropy, though, also means that there is no openness, no new

information, and consequently no opportunity for change and evolution. The system is

condemned, therefore, to rigidity of one sort or another. This real and symbolic isolation

is completed by the fact that there is no equipment for transmission—only for reception,

as Mondaugen points out (Pynchon, V. 251).

We have already observed that a system like this one will have no potential to

adapt, and will settle unavoidably into rigidity. From Wiener, we are given a suggestion

as to what this rigidity might look like. In The Human Use of Human Beings, he defines

an improper use of communication in society, namely the kind of communication in

which the "Fascists," "businessmen," and "governors" specialize: "an organization in

which all orders come from above, and none return. The human beings under them have been reduced to the level of effectors for a supposedly higher nervous organism." Wiener also makes it clear that he believes this is an "inhuman use of human beings; for in my mind, any use of a human being in which less is demanded of him and less is attributed to him than his full status is a degradation and a waste [. . .]" (Wiener 15-16). For him, the ultimate exemplar of this sort of society comes through a study of ants, in which the only communication is based on control, on tyranny of the higher and servility of the lower ranks. This form of society is perfectly suited for ants—but when it occurs in humans, Wiener defines it as a moral travesty of the worst kind. Unfortunately, it is a trend to which we are very susceptible. Wiener perceived it all around in his own time; he describes modern "progress" as "the age of a consistent and unrestrained exploitation: of an exploitation of natural resources; of an exploitation of conquered so-called primitive peoples; and finally, of a systematic exploitation of the average man" (Wiener 35).

Foppl's siege party fits this exploitative, control-based model precisely—the German word which describes the pervading spirit is, perhaps, "Herrenschaft," which translates loosely to "power" or "total domination." There is an unflinchingly rigid hierarchy in place between the Europeans and the black slaves, who are regularly tortured sexually and subjected to fulfillments of sadistic fantasies of control. A system of control becomes total when the privileged have absolute power over the life or death of the subjugated—the power to completely dissolve the individual "pattern," in Wiener's terms. It is not accidental that so many of the perversions in which the revelers engage is

sexual, since this is one of the most effective methods of control. Rape is one example; like murder, it is an act that utterly subjugates its victim and supersedes his or her will.

Sado-masochism is another sexual context for hierarchy and control. This is one of the favorite pastimes at the Siege Party. At one point, Mondaugen finds Foppl beating his Bondel slave, Andreas, with a sjambok (cattle whip) and Foppl tells him: "Don't touch him. [. . .] He doesn't want you to help. Even to sympathize. He doesn't want anything but the sjambok. [. . .] You like the sjambok, don't you, Andreas" (240). This unsettling statement echoes one of the passages with which Wiener closes his book: he writes that he sees the greatest potential of mankind "violated and crippled by the present tendency to huddle together according to a comprehensive prearranged plan, which is handed to us from above. *We must cease to kiss the whip that lashes us*" (217—italics mine). Andreas' participation in the beating is unwilling, and while he may be too weak to struggle much, neither does he kiss the whip. But the image was a calculated one on Pynchon's part, and highly characteristic of the control system he set out to describe. The pain inflicted has nothing to do with punishment or motivation; it is, in fact, *another form of communication*—just like murder or rape—designed to express and represent control.

. . .

A society based on rigid hierarchy and the "communication of control" is prone to the most awful excesses—but I would argue that, in Pynchon's portrayal of events, there are some methods of control that are more dehumanizing than others. It may sound strange to say it, but perversion, cruelty, and "inhuman uses of human beings" can still retain some vestige of human connection—when even this disappears, the rigid hierarchy

becomes completely static, austere, and divorced from passion, dehumanizing the oppressors and the oppressed alike. In an ant society, to utilize Wiener's example, even the leaders are mindless cogs. This total dehumanization leads to a state of affairs that we, to use a phrase from Sartre, might call the "omniscience of the inanimate," characterized in Pynchon's literature by lifeless expanses and mindless, unresisting passivity. Later he would come to describe, like Wiener, in the same terms as a machine.

While Foppl's party revolves around fantasies of control, it does not fit this mode of complete dehumanization. Pervading every scene in the estate is a sort of carnival-esque atmosphere, a sense of celebration and fierce excitement. It is an "eternal Fasching"[15] (Pynchon, V. 234)—and a Siege it may be, but it is also a Party. Even Mondaugen is not immune to such feelings. Despite his isolation, he is occasionally caught up in dances, drunkenness, and sexual marathons with the rest of them. The frequent cross-dressing—of Weissmann when he enters Mondaugen's room, of Gondolphin and Vera Meroving at the end—cements the Siege Party's atmospheric relationship to traditional carnivals, in which social roles were often reversed through the donning of costumes. A parallel is drawn between the Siege Party and another Fasching of Mondaugen's memory, one which took place in Munich during the inflation years, when death and starvation was everywhere. Despite this, the mood in the beer hall he visits is unmistakably celebratory, filled with sex and laughter (244). The situation at Foppl's estate is very different—less egalitarian, for one thing, and no one seems to be starving to death—but there is a similar element of elated, bawdy, debauched behavior in close conjunction with death and violence.

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[15] The Munich equivalent of Mardi Gras.

Furthermore, Mondaugen is repeatedly reminded by the revelers that this sort of party spirit pervaded the veldt once before, in the Days of Von Trotha, 1904-1907. At this time, the historical Great Rebellion of the Bondel, the Hottentot, and the Herero tribes was brutally suppressed by the German general Lothar von Trotha. This officer issued the order that, "the German forces were [. . .] to exterminate systematically every Herero man, woman and child they could find" (245). In the course of the three years, 60,000 people were killed (Haarhoff 25). This is the period of time remembered with such fondness by all the colonists—but especially Foppl himself, who participated directly in the military actions. He reminisces nostalgically on such bygone days to Mondaugen, and these flashback accounts compose the chapter's "other," simultaneous narrative.

"What was 1904 to these people?" Mondaugen wonders early on (Pynchon, V. 237). The answer is that it was the last time they had the opportunity to exercise a truly *human* side of oppression. Since then, their relations with the natives have been characterized by necessity and economics—with the Days of Von Trotha back again, the door is open for a return of the truly spectacular orgies of death remembered by Foppl and the others. It is a break from the monotonous austerity which characterized the era following the Great Rebellion, and which is represented in Foppl's mind and the chapter itself by his time spent as an administrator at Swakopmund.

It may seem morally outrageous to say that a massacre or a genocide is more "human" than the day-to-day tedium of administration. Certainly, one might argue, the two systems might be separated by narrow differences in the experiences of the *oppressors*, but for the unfortunate natives the humiliation, degradation, and tyranny has

only shifted in kind, not in degree. But here is another resemblance between the two "Fasching"-times, the one in 1904, the other in 1922. In both, there is a *rebellion* in progress—a rebellion which may be doomed, but which is courageous all the same. In "Mondaugen's Story," the brave futility is symbolized when Foppl sees a Hottentot in a chain gang strangle a fallen European with his own manacles (263). Consider the nature of a rebellion in the context of a communication system of control: in a circuit where commands flow downward, and only downward, through a strict hierarchy, a rebellion represents a *response from below*. It re-opens communication, switches a one-way system to a two-way system. This is the real reason, though they may not understand it, for the jubilant excitement felt by the Europeans at the prospect of the "Days of Von Trotha" returning. On some level, they *want* the rebellion, partially because it gives them the opportunity to exercise control all the more vigorously, but also because it breaks away from a totally inhuman system which makes cogs even of those in charge. It is in an effort to break from this that Foppl and the others attempt to "recreate the Deutch-Südwestafrika of nearly twenty years ago, in word and perhaps in deed" (240).

The Days of Von Trotha are characterized, in Foppl's stories, by a sense of human connection, togetherness not only with his fellow German soldiers but also with the natives they kill in droves. "When a man wants to appear politically moral he speaks of human brotherhood," says Foppl. "In the field you actually found it. You weren't ashamed [. . .] after twenty years, simply not to be ashamed. Before you disemboweled or whatever you did with her to be able to take a Herero girl before the eyes of your superior officer [. . .] And talk with them before you killed them without the sheep's eye, the shuffling, the prickly-heat of embarrassment" (257). This was Foppl's experience of

the Great Rebellion. He comes to feel what he calls an "operational sympathy" with the blacks he is killing (261), a connection not only between the oppressors and the oppressed, but with the universe at large. He feels it most potently at the time he kills the rebellious chain-gang Herero already mentioned, and this extended passage most clearly illustrates the nature of the connection:

> Things seemed all at once to fall into a pattern: a great cosmic fluttering in the blank, bright sky and each grain of sand [. . .] It finally meant something different [. . .] different from the official language of von Trotha's orders and directives, different from the sense of function and the delightful, powerless languor that are both part of following a military order that's filtered like spring rain down countless levels before reaching you; different from colonial policy, international finagling, hope of advancement within the army or enrichment out of it.
>
> It had only to do with the destroyer and the destroyed, and the act which united them, and it had never been that way before. (Pynchon, V. 264)

The so-called uniting act is slaughter, but that does not change the fact that it *is* a sort of immediate connection, an individualistic bond between destroyer and destroyed which comes through a system of communication rather than one of total control. Foppl will spend the rest of his life seeking to recover this sense of a mysterious connection. It is no accident that the *only* scenes in the chapter in which natives speak to Europeans come at times of rebellion: an old woman thanks Foppl for death in 1904 (264), Andreas begs him to stop the sjambok-beating in 1922 (240). The scenes are disturbing, horrible, but they are essentially *human* in a way that the peacetime power-ritual never can be. "The mechanization of every aspect of life has taken from us this relation," even the human

relation between oppressor and oppressed, and "we are living in an age of annihilation and mass-murder by remote-control, and we live by a press-the-button philosophy" (Berressem 13).

. . .

We are given a vision of this state of affairs in Foppl's musings on the post-war era, when he found himself re-assigned to a spit of barren land called Swakopmund. This place is described as one that "offered life nothing. [. . .] If you stayed there long enough you came to feel it was almost an affront for humans to be living there at all. [. . .] It was a brute coast" (Pynchon, V. 266). The entire landscape represents a sort of victory on behalf of inanimate, unfeeling powers; the so-called "assertion of the Inanimate" (V., 272). Foppl, in its presence, feels a distinct sense of dehumanization and nausea. There is an impotence and a sickness people feel when faced by the omniscience of the inanimate, the brute realities of things-as-they-are. In time this communicates itself to the native Hereros and Hottentots, who come to "welcome death, not because they seek escape from colonial oppression, but because they contract the Europeans' disease, 'the Inanimate'" (Kharpertian 80).

This is carried over to interpersonal relations. Gone are the orgiastic excesses of 1904-07, that "ripe, Southern indulgence," and gone too is the sense of universal connection Foppl felt in the "act which united" destroyer and destroyed. "The blacks mattered even less. You didn't recognize their being there in the same way you once had" (V., 267). Instead of communication, even a communication of death, there is a ritualized power-structure very much like the one Wiener described. This is "fatherly chastisement, [the] inalienable right" or colonial policy, which "forces" Foppl and the

other Europeans to "look at them [the natives] as a collection: knowing from statistics that twelve to fifteen of them died per day, but eventually unable even to wonder which twelve to fifteen: in the dark they differed only in size, and that made it easier not to care as you once had" (V., 268). Human beings who have rebelled, and are consequently being slaughtered, are *still human beings*. In the rigid peacetime austerity, they become statistics. Each native's death means only the need for "a fractional increase in the force required per carrier"—individuals are nothing more than part of an equation to calculate necessary force and workloads. They "are reduced to objects, automata, in the act of perceptions which conceives them only in terms of an ideologically inscribed function: the function of the victim" (Madsen 43). In the face of this, Foppl begins to feel "a kind of despondency" (V., 270).

It is certainly not my intention to exonerate Foppl, nor in any way to hold him up as a sympathetic character. He is sadistic, evil-minded, and brutal. But Pynchon is aware of this, and he would not choose to dwell so long on Foppl's experience of events if they were unimportant—or if they were simply a manifestation of the *malaise* that, possibly, comes after killing an untold number of people. The loss Foppl senses is a real one, though he could never understand its true nature. He is first and foremost an agent of colonial oppression, but on a level perhaps inaccessible even by Foppl himself he longs for a community of *some* sort, an interconnectedness between himself and his victims that goes beyond the pragmatic necessities of control. He felt it in the Days of von Trotha because a rebellion is an upward message, occasioning downward messages (read: massacre), and this is, in a twisted way, communication. Foppl cannot explain it, but this is what he misses. He fears that he will never again experience anything like the Great

Rebellion, that "personal, random array of picaresque acts he was to recall and celebrate in later years at best furious and nostalgic"—the "act which united" him with those he destroyed has been replaced with a "logic that chilled the comfortable perversity of the heart, that substituted capability for character, deliberate scheme for political epiphany" (V., 273).

The post-war power structure is characterized by bureaucracy, efficiency, and disconnection between ranks. In this setting, even violence is depersonalized and regimented. Foppl's world in this chapter was characterized, in 1904, by the Animate; in Swakopmund, it is defined by the Inanimate, extending necessarily even to his conceptualization of human beings. This is a prime example of moral ambivalence in Pynchon's work—he illustrates truth through the perspective of a vicious sadist, whose crimes against the colonized includes rape, torture, and mass murder—but it is an important truth nevertheless.

. . .

Chapter Nine, "Mondaugen's Story," is a perfect transition-point between the early "Entropy" and Pynchon's later *magnum opus*, Gravity's Rainbow. The later themes are evident, of course—the dehumanized, depersonalized, inanimate world which Swakopmund stands for will later find its ultimate realization in the shadowy "Firm" of Gravity's Rainbow. Furthermore, as critics have noted, there is a "historiographical overlay" to the ninth chapter of V., in its anticipation of the Holocaust, perhaps history's most complete and *most* dehumanized death-bureaucracy (M. Sanders 86). Perhaps this too comes from the story's "Stencilization," in that Stencil, telling the story, has the advantage of remembering World War II and the atrocities perpetuated during its course.

In any case, the chapter is an ideal springboard into a detailed consideration of <u>Gravity's</u>

<u>Rainbow</u>.[16]

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[16] <u>The Crying of Lot 49</u> was the next novel Pynchon published, but its themes are largely reiterations of those I have already discussed. Communication theory in this novel, moreover, has already been given a cursory examination by Anne Mangel in her essay "Maxwell's Demon, Entropy, Information: <u>The Crying of Lot 49</u>."

CHAPTER FIVE: THE MACHINE OF MANY PARTS, AND HOW TO RESIST IT

"When human atoms are knit into an organization in which they are used, not in their full right as responsible human beings, but as cogs and levers and rods, it matters little that their raw material is flesh and blood. *What is used as an element in a machine, is an element in the machine* [. . .] machines of flesh and blood which are bureaus and vast laboratories and armies and corporations [. . .] The hour is very late, and the choice of good and evil knocks at our door."

- Norbert Wiener, The Human Use of Human Beings (213)

In Gravity's Rainbow, as I have implied, the alienating control-structure becomes absolute: we are introduced in this novel to the concept of the War Eternal. It bears many names in the novel, which may be used more or less interchangeably: the War, the Firm, the Empire, the Operationl, the Machine, or the State. Above all, this structure is characterized in terms of death; it is "Death converted into more death. Perfecting its reign [. . .]" (Pynchon, GR 167). It is "designed, not too subtly, to draw [. . .] apart, to subvert love in favor of work, abstraction, required pain, bitter death" (41). It is a force of "sterility and death" (316). These are not necessarily references to a literal death, though certainly death *is* one of the most profitable and successful orchestrations of the system. Death can also mean a drive toward attainment of the same status as the inanimate—an inevitable process in control-systems, as we have seen. "Death" is equivalent to a surrender to cog-hood, so to speak. We are also told that "[t]he truth is that the War is keeping things alive. *Things*" (645). The italics are Pynchon's, and they

are important; the War *only* keeps "things" alive—that is, objects, not human beings. Human beings have no place in such a structure.

Furthermore, the massive control-system under discussion, though it may be called the War, need not be a literal war *per se*, not as we understand the word. To begin with, it has nothing to do with boundary disputes or squabbles over resources. The "They" who prosper are always the same, and they are Manichean entities; sides are meaningless to them. "[T]he history they have invented for themselves conditions us to *expect* 'postwar rivalries,' when in fact it may all be a giant cartel including winners and losers both, in an amiable agreement to share what is there to be shared" (326). A profit margin, not an ideology, is the important thing in these sorts of arrangements. There is only one side in the War machine. It is for the sake of the machine's efficiency that lives are sacrificed, property destroyed, relationships deadened, communication limited. Furthermore, we are made to understand that, while wars come and go, the War itself is perpetual, and "[t]he Germans-and-Japs story was only one, rather surrealistic version of the real War.

> The real War is always there. The dying tapers off every now and then, but the War is still killing lots and lots of people. Only right now it is killing them in more subtle ways. Often in ways that are too complicated, even for us, at this level, to trace. But the right people are dying, just as they do when armies fight. (645)

The "War," which is perpetual and self-perpetuating, is nothing more than another word for modern civilization, for the actions of all the cartels, governments, controllers, who make the decisions and orchestrate the consequences. To continue the analogy we have

been using, lives are nothing more than oil to the "machine's" workings; death is

deployed strategically, wherever it will most facilitate the continued operation of the

complex but orderly control-system. The murders demanded by the War are not crimes

of passion (though a sublimated kind of passion may be convenient to cultivate among

the machine's cogs). On the contrary, they are crimes of cold indifference.

In addition to death, as in <u>V.</u>, this control-system is interested in orchestrating

alienation, delineation, and separation. True communication is undesirable to the War,

for it implies a breakdown of barriers and a re-arrangement of information. The War

wants to keep information the same everywhere, to identify and pin it down in such a

way that it will resist change and adaptation. There are three key areas targeted by the

system of control: first, it must impose catalogued, and artificial, orders of cause and

effect; second, it must master and limit the possibilities of language; and, finally, it must

pervert relationships to alienate individuals from one another, preventing them from the

true communication and information-exchange with one another. In all cases, the control

system limits and inhibits any possibility of healing entropy, which by definition entails

change and recombination. Values must remain constant, lest they change too quickly to

be mastered and used as elements in the machine. The metaphors by which we conceive

of things must be officially-sanctioned and beyond question. This is how control is

maintained.

One of the most useful and fascinating approaches to <u>Gravity's Rainbow</u> comes in

Charles Russell's article "Pynchon's Language: Signs, Systems, and Subversion."[17] In

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[17] Russell chooses a good vector of approach—the use of language in the novel—but his analysis, though clear-headed, ultimately falls short. In his introduction he talks about the "petrification of meaning systems, whether they be linguistic, religious, piolitical, economic, scientific, or sexual" (252), but he only discusses the linguistic . . . Probably a better understanding of communication theory would have illustrated

this article, the author suggests that humanity is "haunted by a fear of all that exceeds comprehension,

> of all that is undefined, unordered, and uncontrolled: in short, the nonhuman
> world out of which we arise and to which we must ultimately submit. The dread
> of this world and the anguished refusal to submit to it are traced in all the Firm's
> actions and systems of 'control. [. . .] In *Gravity's Rainbow* all too many of the
> figures cling to the rigid, inanimate world of their own construction as a
> protection against overbearing life. (Russell 257-58)

In the interest of maintaining this self-constructed world, members of the Firm, according to Russell, repress all "anarchic and surreal impulses" (269) through confining systems of causality, definitive and reductive language, and processes of alienation.

. . .

First under consideration is the way in which the War—or the "Firm," as it is popularly called by Pynchon scholars—imposes an imagined system of cause and effect. There is no room in such a world for the possibility that events occur through random motion and chance (a fundamental tenet of communication theory—remember Willard Gibbs). If this untidy explanation is accepted, then it is impossible to explain, anticipate, and predict actions. The Firm must always be able to predict, for the alternative is to accept that chaos (or entropy) is the stronger force.

All the characters associated with control-systems manifest this deep and abiding reliance on causal systems to explain the world around them. Pointsman, the British

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to him how closely connected these fields are, and his article's scope could have been broader. He flirts with understanding a few times, as when he muses that "It is as if we were surrounded by barely disguised language systems needing—demanding—to be interpreted" (Russell 255). The word "language" is this sentence should, perhaps, be changed to "communication."

doctor whose experiments on Slothrop send him running all across Europe, is a Pavlovian. Pavlovian psychology, of course, depends on a causal progression: first stimulus, then response, each in their turn. Pointsman is disturbed by any implications that the world cannot be explained by cause and effect—he views Roger's diagrams of statistical improbability with suspicion, and Slothrop's inexplicable sexuality inspires fear in Pointsman as much as it does fascination. *"We must never lose control,"* Poinstman writes in his journal—"The thought of him [Slothrop] lost in the world of men, after the war, fills me with a deep dread I cannot extinguish . . ." In the same entry, he calls Slothrop a "monster" (Pynchon, GR 144). The phrasing seems strange; Slothrop is so hapless, and even if rockets *do* tend to fall in the areas of his sexual liaisons, no one could accuse him of firing or guiding them. To a man like Pointsman, though, a dedicated member of the causal-obsessed Firm, Slothrop's unfettered sexuality and (apparently) paranormal abilities can give rise to nothing but fear. He is an unknown quantity, buffeted more by the winds of chaos than compelled by a progression of cause-and-effect. He must be studied, explained, and controlled, or else rendered helpless in some way—for example castration, which Pointsman actually does try to inflict on Slothrop near the novel's end.

Blicero, the designer of the enigmatic rocket which Slothrop searches after,` is another devotee of cause-and-effect systems. As a crucial member of the German rocket-construction team, a man of science, these systems are integral to his worldview. He perceives the rocket as "an entire system *won*, away from the feminine darkness, held against the entropies of lovable but scatterbrained Mother Nature," the organic, chaotic, natural system in which artificial human modes of cause and effect have little meaning

(324). In the world of the Rocket, everything is simplifiable, describable in terms of equations, yaw control, constant pressures. Blicero, however, like Pointsman, is tormented by the possibility that there is *something more*, well beyond his convenient causal systems, and this is what torments him to his unreasonable desire for "the last explosion—the lifting and the scream that peaks past fear," a longing for an end which will not be "rationalized and meek," slave to rational systems (324). In this, Blicero is a very *human* creature, as individuals within the Firm might be—but the Firm as a whole has no need for such irrationalities. In fact, they can only impair its ability to function at full capacity.

Characters which participate enthusiastically in the causality-obsessed actions of the Firm, like Blicero and Pointsman, cannot help but feel that their explanations are not entirely sufficient. They might respond to this in different ways—with fear, in Pointsman's case, and in Blicero's case with a longing for the apocalypse which will finally eliminate the source of the confusion and give birth to a "clean" world of hard edges and brightness. Regardless, they are entirely correct in sensing that the world does not quite correspond to the fiction of causality which they have invented for it. In their rational power-ritual, they have "taken on a greater, and more harmful illusion" than God, as the dead Roland Feldspath phrases it during one of the novel's *séances*. This new illusion is the "illusion of control. That A could do B. But that was false. Completely. No one can *do*. Things only happen, A and B are unreal, are names for parts that ought to be inseparable" (30). Little anarchies and violations of the expected consistently slip in, as in the spectacle of the Jamaican singing Christmas songs in Latin and German in an English church during WWII—this odd scenario, and others like it, are described as "acts

of minor surrealism [. . .] which in its pathology, in its dreamless version of the real, the

Empire commits by the thousands every day, completely unaware of what it's doing"

(129). The "dreamless" reality of the Empire control-structure is one based on

rationalism, but surreal irrationalities constantly occur and propagate. The cause-and-

effect systems so beloved by these controlling entities are, Pynchon informs us, purely

fictional, but a very convenient fiction for those wishing to overcome the natural chaos of

entropy.

. . .

In addition to imposing unnatural and fictional systems of cause and effect, the

control-structures also have a vested interest in limiting the potentialities and mutability

of *language*. As Charles Russell describes it, the Firm is very interested in establishing

exclusion and *stasis* of interpretations (260). The reasoning behind this, and the

connections to communication theory, can be illustrated by the example of Newspeak

from George Orwell's <u>1984</u>. Orwell, like many others, instinctively sensed that it can

only benefit a government (or any system of control) to simplify communication.

Misunderstandings become less likely, but so too does any potential for true connection

or original thought. Take, for example, words like "shocking" or "outrageous." These

can carry a multitude of meanings and possible interpretations. They do not

automatically imply a specific judgment of quality or morality. Their potential for

entropy, in Shannon's terms, is thus very high. Likewise, their entropy would be high to

Wiener, in the fact that they lend themselves to different interpretations and

(consequently) misunderstandings and failures to communicate one hundred percent of

the desired information. In a system of communication like Newspeak, this word is

extremely undesirable. How much better if a citizenry only has two words to describe the quality of something, of anything: "good" and "ungood." Differences are only of degree: something which is perceived in extremely negative terms is not "reprehensible," nor "disgusting," nor "terrible," but simply "double-plus-ungood." There is almost no potential for entropy in such a term. No one could misunderstand what is meant by the phrase. Reductiveness and the establishment of strict definitions are, as always, emminently convenient, especially in a system of control, in which the primary goal is always efficiency.

Thus—for example—dictionaries might be considered the tool of the enemy. Seaman Bodine reacts violently to Säure's attempts to define and categorize American slang: "you're one of Them too, right? Come *on*" (687). Such efforts at rigid order in language are characteristic of "Them," that is, the invisible agents of the "Operation" which transcends all national boundaries and has only one goal: greater control. Tchitcherine is sent to Central Asia on behalf of his Soviet superiors with the intention of just this manner of categorization: "He had come to give the tribesmen out here, this far out, an alphabet: it was purely speech, gesture, touch among them, not even an Arabic script to replace" (338). This leads to subsequent action which is fairly hilarious, particularly the war which his department wages with another over which sort of "g" to use in the word "stenography," but the humor does not change the fact that Tchitcherine's responsibility is to impose a rigid mode of recording and communication, rather than a fluid one; he is occupied, on behalf of his superiors, with the task "of bringing the State to live in the muscles of your tongue, in the humid intimacy just inside your lips" (384). The warm spectacle, later in the chapter, of the natives engaging in their oral traditions

with jokes, songs, and teachings, makes it very apparent just what is sacrificed with an officially sanctioned alphabet, which is as resistant to change as those earlier in the section who kill Tchitcherine's opposite number, Igor Blobadjian, for supposedly tampering with the holy Koran (354).

For similar reasons, *paper*—the ultimate symbol of rigid (written) communication and of bureaucratic organization—is associated with control. Individuals, for example, who share some sort of love or affection, no matter how tentative, are prone to "vanishing from each other, into the paper cities and afternoons of this strange peace, and the coming Austerity [. . .]" (620). Pynchon scholars have identified paper's white color as one of the reasons for its association with the "enemy" structures (white standing as a symbol for death and self-denial in Gravity's Rainbow, color for life). In addition to this, one of the chief functions of paper is its power to record. In the cosmology of Gravity's Rainbow, this naturally translates to keeping records on the individuals under the State's control, the more detailed the better. These often pertain to sexual peculiarities and peccadilloes, insinuating both the totality of the control-structure's knowledge, and its bloodless impersonability. "A thorough knowledge of the addressee's psychosexual profile would seem of invaluable aid" (71), writes Lazlo Jamf, a character who pioneers the science of observation and categorization. Slothrop is perhaps the most obvious example of the process at work: his entire madcap, self-disintegrating quest begins in the course of his flight from Pointsman's conspiracy to unlock the secrets of his mysterious rocket-predictive penis. The situation is humorous and ridiculous enough, but it is also chilling in its way, especially from Slothrop's perspective. There are other examples, including the semen-activated "Kryptosam" letter Pirate Prentice receives from his

superiors at "Control" (71-72), the careful use of Stephen Dodson-Truck's impotence by his shadowy masters (215-16), and the attempted seduction of Herr Pökler by a girl who is ostensibly his daughter, incest being the "specific perversity that had been assigned him and dutifully stored" in "the State's oversized paper brain" (421).

This is a prime example, moreover, of the way in which the State limits entropy, and consequently the range of possibility. Records of this sort are *designed* to make surprises as unlikely as possible, to understand certain conditioned responses on the most basic level so it can predict the actions of its creatures. Remember that Shannon's equation for entropy was in part derived from the number of possible messages which the receiver expects from the transmitter. A system of control must be designed in such a way that it narrows this range of possibility as far as possible. The more information, in this case, that the receiver (the controller) has over the transmitter (the controlled), the more this range shrinks. The State, in its most "perfect" form, would be literally God-like, all-knowing and all-predicting. Entropy and unexpected outcomes would thereby be minimized. Records are a powerful tool in the construction of such a State; thus the significance of paper to the sort of control-systems under discussion. "It is not death that separates these incarnations," Pynchon writes, "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. The War does not appear to want a folk-consciousness, not even of the sort the Germans have engineered, ein Volk ein Führer—it wants a machine of many separate parts, not oneness, but a complexity. (130-31)

This is a description of the hierarchy, the rigid delineation, and the alienation at which control systems excel and work tirelessly to achieve. As in Foppl's story, there is no place for connection and union between those under the auspices of the War, even between killer and victim. Remember that the "complexity" which is the War's goal is nothing like the entropic areas of disorganization, vibrancy, and sensuality in which human interaction flourishes in the novel. The complexity which the War strives for still composes a *single* machine; the division is only between the working parts (which should, of course, be as close to inanimate as possible). Paradoxically, greater complexity here translates to *less* entropy, since the most desirable "machine" of this sort, from the perspective of the State, is engaged in perpetual motion.

. . .

We have explored the nature of the control-system or War, which, like "every true god," is "both organizer and destroyer" (99). It is passionless and based on the dead rigidity of paper and machinery. It knows only cold rationality and causality. Warfare, economies, business, governments—all these traditional structures of control are a part of the omnipresent Firm. But what of the possibility of connection between individuals, between the controlled? Already, in the discussion of control-systems' treatment of language, we have seen its constant attempts to establish greater rigidity and to limit Shannon's brand of entropy. Nevertheless, other forms of communication are open to individual human beings, and in any case complete sublimation of language by control-structures is likely impossible. But as Wiener informs us in Human Use of Human Beings, the type of system under discussion dehumanizes as far as possible and distorts communication between its members to further alienate them from one another, to bring

about the "complexity" we have seen that it desires. Exploration of this phenomenon is one important, and often moving, way in which Pynchon illustrates the consequences of the control system/War. Perhaps nowhere is this better exemplified than by the two young wartime lovers, Jessica and Roger Mexico.

In the end of Book One, "Beyond the Zero," Roger agonizes over his inability to establish full intercourse with Jessica, a communication that goes beyond the verbal and the sexual alike. He is tormented by the fact that "she stands apart, trembling. He wants to warm all of her, not just comic extremities, wants beyond reasonable hope. His heart shakes like the boiling kettle. [. . .] It has begun to reveal itself: how easily she might go" (176). Roger senses the inevitable alienation from Jessica—an alienation to which all relationships are subject—in terms of physical separation, of corporeal division, but this is in fact only the simplest way to perceive his desire. What Roger truly desires is what has always been beyond human ability: a transcendence of I-other barriers, a total union, absolute communication, an overlap of separate individuals. Their communication system verges, in Roger's mind, on the perfect, as sometimes "when face-to-face there has been no way to tell which of them is which," and they have "the feeling of actually being joined" (38). The channel of communication has almost ceased to exist, unnecessary as it is in a system where transmitter *is one with* the receiver: "Together they are a long skin interface, flowing sweat, close as muscles and bones can press, hardly a word beyond her name, or his" (121). But it is all too transitory. The world—or perhaps the War—will force them apart, after its custom. Roger gives words to the emotional ramifications of the concept in his unverbalized, mental cry of anguish, when he senses their relationship will soon end: "I'm no longer sure which of all the words, images,

dreams or ghosts are 'yours' and which are 'mine.' It's past sorting out" (177).

Nevertheless, he knows she will leave him, eventually, and the "sorting out" will begin.

The limitation he feels is the inevitable limitation of the circuit of communication, which

draws a sharp and eternal division between the transmitter and the receiver.

Moreover, the alienation Roger senses is directly tied, in his mind, to the re-

imposition of a system of control once the chaos of the war is over. This is represented

by "Beaver/Jeremy," Jessica's fiancé, who exemplifies the "rationalized power-ritual."

This is the force which is behind the assertions "that we are meant for work and

government, for austerity: and these shall take priority over love, dreams, the spirit, the

senses, and the other second-class trivia that are found among the idle and mindless hours

of the day" (177). This is, in a nutshell, the fundamental difference between the

commerce of true communication and the strict delineations of the power structure, the

controlled system of communication. Jessica is ultimately bound to be a "domestic

bureaucrat, a junior partner" in her marriage, as in the post-War world, which is a place

of hierarchy, division, structure. This is the meaning of the chilling prophecy which Leni

sees written on the walls of Berlin: "AN ARMY OF LOVERS CAN BE BEATEN"

(155). Love, the final realization of true communicative intercourse, can be (and perhaps

inevitably will be) overcome by the unyielding structure of control.

The Firm can overtake more than just lovers—it attempts to sublimate and deny

any forces in human relationships which might be perceived as redemptive, or at least

unifying between individuals. This includes romantic or sexual liaisons like Roger and

Jessica, but it also extends to family relationships. The fairy story of "Hansel and Gretel"

makes consistent appearances through the novel—in this charming little fable, of course,

the father is induced by the stepmother during a hungry time to abandon his children in the forest to starve. The witch they kill in the end is an obvious symbol of the stepmother. The few children who make appearances in <u>Gravity's Rainbow</u> are deeply conscious of their parents' "conspiracy" against them: "Mothers and fathers are conditioned into deliberately dying in certain preferred ways:"

> Giving themselves cancer and heart attacks, getting into motor accidents, going off to fight in the War—leaving their children alone in the forest. They'll always tell you fathers are 'taken,' but fathers only leave—that's what it really is. The fathers are all covering for each other, that's all. (176)

This observation of the children is astute, and implies an instinctive sense of the control-communication which characterizes the system in which their parents necessarily take part. The distrust and alienation of the power-structure divides children from fathers and mothers; furthermore, it can *use* the symbols and operations of parenthood to its own benefit, just as it does sexuality. Leni, when she is urged to re-integrate into society, rants that "They *want* a great swollen tit with some atrophied excuse for a human, bleating around somewhere in the shadows. How can I be *human* for her? Not her *mother*. 'Mother,' that's a civil service category. Mothers work for *Them!* They're the policemen of the soul . . ." (219).

Perhaps the most tragic example of the perversion of the family by the State comes in the episode in which "They" (the Operation's nameless, faceless agents) take advantage of and prey on Herr Pökler's relationship with his daughter, sending him a different "daughter," each time a little older, from the camps each year, trusting him to pretend not to notice anything. In the end, there is only "Their game, Their palpable evil

[. . .] he had no more reason to trust 'Ilse' than he trusted Them." They even tempt him with incest—symbolic incest, at least, even if the girl he calls Ilse is not really his daughter. Simultaneously, they alienate Pökler from any real affection for the girl he pretends is his daughter by making it *just* short of possible for him to ascertain her identity. In fact, his self-deception becomes his *reward*, which he receives each year for his tacit agreement to "behave a certain way—not just to play a role, but to live it. Any deviations into jealousy, metaphysics, vagueness would be picked up immediately: he would either be corrected back on course, or allowed to fall" (417).

The language—"corrected" in his "course," his potential to "fall"—is consciously similar to the language scientists use to discuss rockets. Pökler, like all those in the Operation, is little more than a highly specialized piece of equipment. He is allowed his comforting self-deceptions, even encouraged in them, for as long as he continues to be useful. Likewise, when Pökler does break down, giving himself up to his emotions, it is described in rocket-language: "He did, then, let everything go, every control. He veered into the wind of his long isolation, shuddering terribly. He cried" (430). This use of inanimate-object terms to describe the animate should be familiar by this time, indicative of a process of dehumanization which control systems entail. Pökler's story is easily one of the most tragic and moving of the entire novel, for it is a metaphor for most people's lives: he is a sensitive individual, but somewhat weak, who is taken completely into the power-structure and made a part of it—furthermore, he embraces his illusions of love and communication, holding to them tightly, despite the awareness, in the back of his head, that these too are an alienation, another way to keep him in line and functioning, in good working order.

. . .

I have explored the way in which the power-structure alienates lover from lover, and parent from child. Another source of human connection remains, the most omnipresent of all, and deserving of a section entirely to itself: sex. The most desirable thing, from the perspective of the Firm, would be to eliminate human relationships entirely—they are simply too unpredictable for a truly adequate system of Control. If this proves impossible, however, it is always possible to alienate individuals from one another, eliminating affection and trust. Sex is something else altogether. It is a drive experienced by all individuals, and a necessary part of the machine, since it is only through sex that reproduction can occur. Pynchon conceives of sex as a sort of point of least resistance in the power-structure—lust is one phenomenon to which everyone is susceptible, even high-ranking members of the power structure. It is one of the most basic drives, if not the basic drive, of all human beings, and it manifests itself in infinitely varied ways. As Leni puts it, "I know there's coming together" (155)—which may simply mean simultaneous orgasm, as the preceding passage seems to imply, or may signify something more. "Coming together," in the sense of establishing a unity, is the goal of so many desperately lonely individuals. It also echoes Roger's experience with Jessica. Sex is the easiest way to establish a human connection (though also the shallowest). This is what I mean when I call it the "point of least resistance": sex is irrevocably associated with nature, and therefore entropy, and it appears in the power structure on all levels. Impossible to abolish, it also represents a very real danger for the Firm. It is instinctive, mutable, and incredibly powerful. Since it cannot be gotten rid of (at least in the current dispensation), the power-structure responds to it by perverting it

wherever possible, by making it conform to tropes of domination, submission, and humiliation.

Sado-masochism (a device also used in <u>V.</u>) is one example of the Firm's perversion of the sexual act. The examples are myriad, of course: Margherita, herself a masochist who needs to be whipped during sex, spanks her younger daughter and thus sparks an orgy aboard the *Anubis* (465-66) . . . Her movie roles, which are based almost exclusively on images of sexual punishment, drive an excited Herr Pökler to father his child Ilse (397) . . . There are the play-acting games, based around punishment and submission, which Blicero plays with Katje and Gottfried (97-98) . . . And there is, of course, the deeply disturbing scene between Brigadier Pudding and Katje-as-Filth-Goddess, in which the old man voluntarily submits to a whipping after consuming the younger woman's feces and urine (234-35). These scenarios embody one of the most crucial ways in which sex is twisted to fit a pattern that corresponds with the Firm's goals—it turns the sex act from something dangerous into something useful.

Homosexuality presents another possibility for love and erotic connection which is deformed by the power-structure. Pynchon describes World War I as a time of honest and "decent" love between men in the trenches, "without shame or make-believe," a love that "may have helped redeem even mud, shit, the decaying pieces of human meat [. . .] despite knowing, some of them, of the betrayal, while Europe died meanly in its own wastes, men loved." But he says that "the life-cry of that love has long since hissed away [. . .] In this latest War, death was no enemy, but a collaborator. Homosexuality in high places is just a carnal afterthought now, and the real and only fucking is done on paper. . . ." This tirade lies behind his portrayal of Clive Mossmoon and Sir Marcus, two members

of England's upper class and organizers of the War, as exemplars of this distorted homosexuality, what Pynchon calls "idle and bitchy faggotry," as they primp, flirt, and giggle over trivialities while condemning individuals and groups to death (615-16). The stereotype at work behind the characters is an ugly one, but that is the point: Mossmoon and Sir Marcus represent a *perversion* of homosexual love, not the real thing.

This perversion is characterized, above all, by its bloodlessness and absence of love or connection. These sorts of "trivial frustrations" are utterly subsumed by "the Operation,"

> where all is firm underfoot, where the self is a petty indulgent animal that once cried in its mired darkness. [. . .] No joy, no real surrender. Only the demands of the Operation. Each of us has his place, and the tenants come and go, but the places remain. (616)

The Operation, in other words, is another way to describe the dehumanizing system of control under discussion, where there is a place for everyone, and everyone is in their place. Suffice it to say that this manner of system attempts to integrate and appropriate all forms of love or sexuality which formerly existed outside it, in a more wholesome state of affairs. Once it has done so, it perverts and twists them into yet another method of control. In the end, the answer to the question may be that sex, whatever form it takes, is an amorphous concept; sexuality in all its manifestations and exigencies, no matter how unorthodox, can be benign or malign in Pynchon's cosmology. It all depends on what it is used for, and the context in which it appears. If the act establishes a greater human connection, it is desirable. If used to alienate further, then sex becomes merely another form of control, part and parcel of the system which has appropriated it.

. . .

Sexuality is a powerful force, as I have insinuated, which accounts for its pervasiveness in Gravity's Rainbow—it can be twisted to suit the needs of the Firm, but because of its status as a point of least resistance, it can also serve as a mode of defiance and a forum for entropy to assert itself. This is true even of the form most conducive to the Firm's ends, sado-masochism, which is based on establishment of hierarchies, and revolves in its extreme forms around pain and humiliation. Interestingly, sado-masochism is not necessarily condemned as perverse by the author—or, if it is a perversion, it need not be an unhealthy one, and though it is useful as a symbol of tyranny, it serves sometimes as a manifestation, if not love, at least of community. The former film actress Margherita asks Slothrop to "[f]ind something to whip me with. Just a little. Just for the warmth" (396). There is something oddly tender about the scene that follows, worlds away from the scenario between Andreas and Foppl in V., though both involve a whip. Similarly, Katje's "masochism [. . .] is reassurance for her. That she can still be hurt, *that she is human* and can cry at pain" (662—italics mine). The passionless agents of Control, for their part, do not revel in pain, as Stephen Dodson-Truck points out: "They aren't even sadists . . . There's just *no passion at all*" (216).

As Thanatz points out in one of the fragmented scenes at the novel's end, sado-masochism can even serve as a means of *resistance* against the forces of control: "[W]hy," he asks, "are we taught to feel reflexive shame whenever the subject comes up?"

Why will the Structure allow every other kind of sexual behavior but *that* one?

Because submission and dominance are resources it needs for its very survival.

They cannot be wasted in private sex. In *any* kind of sex. It needs our

submission so that it may remain in power. It needs our lusts after dominance so

that it can co-opt us into its own power game. There is no joy in it, only power.

(737)

Even if Pynchon does not explicitly endorse practices labeled as "perverse" by society,

the "Structure," at least he does not condemn them; most of his sympathetic characters

enthusiastically and un-self consciously engage in any number of such activities. Leni

Pökler is a bisexual, as are many in her underground resistance group (156). Enzian is a

masochist, and also a homosexual (324). Herr Pökler has fantasies of pedophilia and

incest (420-21). Slothrop, the "main" character, is legendary in his promiscuity, and his

various more remarkable escapades involve ménage-a-trois (569), pedophilia (469-70),

and at least a casual consideration of beastiality (575)—not to mention, of course, his

own leanings toward sadism. The message of all this, if any, seems in part to be that a

certain sexual polymorphism seems necessary for true freedom, one which might go

beyond the confinements of a society—or perhaps even *should* do so. The characters

which are more repressive of their desires (like Herr Pökler or Teddy Bloat) are portrayed

as pawns of society, no matter how unwilling and resentful they may feel about this

status. The more free-spirited and less repressed characters, like Slothrop, Leni, or

Tchitcherine, are notable for their readiness to act on their basic libidinal impulses. Most

importantly, Pynchon seems to make the point that any form of liberated and community-

or love-oriented sexual activity is a *good* thing, no matter what form it takes; the

intercourse between Slothrop and the child-woman Bianca may be shocking, but it is

phrased in terms of tenderness and affection, and we find that by ignoring her requests to

stay together—to establish a community of some sort—Slothrop dooms her to death, and himself to grief (471-72). Their intercourse is deeply shocking from the standpoint of traditional morality; the confused daughterly/romantic emotions which Bianca feels toward Slothrop, the "most favored" of her father-figures, are odd to say the least. But they are also innocent in their way, and strangely touching despite the strange context. Like so many other characters in the novel, Bianca is searching for some kind of community and communication, and if the form it takes is warped it is, we sense, a consequence of a warped world.

. . .

A species of polymorphous perversity can serve as a mode of resistance, and it is one which Pynchon utilizes to its full degree. Another source of entropic resistance to the auspices of the Firm is humor, or irreverence, as briefly touched upon in the second chapter. Pynchon's parodies have represented, to some critics, the most "life-affirming dimension" of his novels (Mattesich 72). The purpose of irreverence is to "keep it bouncing," so to speak, to avoid settling into rigid modes. Comedy "saves us through [. . .] rituals of language and quick change; we pass off the horrors by distracting ourselves from them. It is fixation, after all, that stultifies; it is the devotion of time and attention to a thing that imbues it with intolerable significance" (Henckle 275).

In addition to sex, then, we see that humor can be used as a mode of resistance This is something for which Pynchon is rather famous, nor is it reserved solely for his enemies. He even applies this satire to major sources of his own: near the novel's end, the author even treats his own "governing metaphors" with skepticism. This is the remarkably transcendent moment that the nameless and cryptic "Kenosha Kid"

experiences in a café toward the very end of the novel, when for just a moment he finds himself exposed to the undiluted radiance which lies on the other side of control-systems and our own inadequacies. In this moment, which I consider one of the most beautiful of the novel, "the sound-shadow comes down on him," and from the "accidental bits of sound-degree" (note the link to communication), the Kid comes for a second out from under "the great Vacuum [. . .] they have taught you, and a sun whose silence you never get to hear" (696-97). In this scene, Pynchon questions the whole concept of entropy's decay, of life as "isolated enclaves" in a great encroaching abyss. "What if there is no Vaccuum?" he asks. "Or if there is—what if They're *using* it on you? 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?" (697). Here is a superb example of the way in which Pynchon directs suspicion even at the theories that influenced him the most. He understands that a metaphor, like entropy or communication theory, is only useful so long as it is dynamic. Once it begins to place constraints on our way of thinking it becomes a part of the control-system, part of "Their interest," and at this point it must be discarded. Interestingly, Gravity's Rainbow is the *last* Pynchon novel in which communication theory plays a crucial part; I cannot help but wonder if this scene is the author's farewell, so to speak, to the metaphor that governed so much of his thought. I believe that he recognized the danger of static thinking, and he identifies himself here with the dynamism so necessary to his literary philosophy.

Pynchon's rejuvenating skepticism, as I have indicated, extends even to his acceptance of a system of cause and effect. At times he takes this a step further, and

seems to question whether *any* kind of metaphor is appropriate or even useful. Our struggle to find and define "signal" and significance is as neverending as the War itself, and always under siege by systems of control wishing to establish their own, officially sanctioned form of signal-recognition as absolute. The task seems insurmountable, and occasionally even pointless. Pynchon is aware of this, as when he laments—as narrator, rather than as a character—the discouraging interminability of the task. The passage is so crucial that it is worth quoting at length: "The rest of us," he writes, "not chosen for enlightenment, left on the outside of the Earth [. . .]

> must go on blundering inside our front-brain faith in Kute Korrespondences,
> hoping that for each psi-synthetic taken from Earth's soul there is a molecule,
> secular, more or less ordinary and named, over here—kicking endlessly among
> the plastic trivia, finding in each Deeper Significance and trying to string them all
> together like terms of a power series hoping to zero in on the tremendous and
> secret function whose name, like the permuted names of God, cannot be spoken . .
> . plastic saxophone reed *sounds of unnatural timbre*, shampoo bottle *ego-image*,
> Cracker Jack prize *one-shot amusement*, home appliance casing *disguise of*
> *slaughter*, dry-cleaning bags *infant strangulation*, garden hoses *feeding endlessly*
> *the desert* . . . but to bring them together, in their slick persistence and our
> preterition . . . to make sense out of, to find the meanest sharp sliver of truth in so
> much replication, so much waste. . . . (Pynchon, GR 590)

There is a great deal to mine from this passage. The images Pynchon uses—plastic saxophones, shampoo bottles, Cracker Jack prizes, etc.—are all items characteristic of Western consumerism, all part of an endless system of "plastic trivia." The italic-

definitions which follow each item represent a manner of insight, their "Deeper Significance." What is more, all of these significances are occupied with delusion, death, and wastefulness. Pynchon gives voice here to the frustration felt by anyone attempting to see beyond the smiling plastic face of the world we live in (the only one we have known), the bloodless and spiritless grid of modern society, with which the novel is so concerned. But too, if the quest to see beyond, to consolidate information and use it to gain insight, is abandoned, then what is the purpose of literature, or of any kind of communication? Pynchon may be scornful and bitter toward the possibility of "Kute Korrespondances" in this passage, but is his point that they do not exist at all, or that the search for them is completely futile? Is it better to abandon such human pursuits, to strive for a world like the one Gottfried finds himself in when the rocket takes him high above the earth, where there are no metaphors or correspondences, where "at last the apple is apple-colored," nothing more, and "the knife cuts through the apple like a knife cutting an apple" (758)?

. . .

Despite such occasional pessimisms, I do not believe that Pynchon would endorse such a world, devoid of "Kute Korrespondances." These are, after all, crucial to any meaningful communication—without them, there can be no information which is meaningful to anyone but the isolated individual. In any case, the fact that he took the time to write the novel indicates that he believes, at least somewhat, in these possibilities. "Life does not live, but in a peculiar death-in-life and burning out," but nevertheless we might "rediscover, as a consequence of perceiving the immanence of power (and the

finitude of this perception), a possibility of desire and imaginative freedom" (Mattessich 208).

The answer is that Pynchon uses metaphors, symbols, and literary tropes in the same way he uses humor, to "keep it bouncing," as he phrases it in The Crying of Lot 49 (148). Pynchon's symbols, especially the major ones (like the Rocket) change and mutate constantly to maintain their freshness and meaning—he exults above all in the *possibilities* of language, rather than strict definitions (Mendelson 169). Pynchon refuses to ascribe a hard-and-fast, unchanging meaning to anything, knowing that this is a tool of domination. He applies Shannon's concept of entropy to his own literary creations in order to achieve a mutability and dynamism which would be impossible in a more traditional novel, and in so doing he resists the "intellectual parochialism that regulates the cultural machinery" (Newman 9). Where the modernists strove for some kind of concrete illustration of absolute truth in their work, and thereby exhibited a "complicity with established power structures," Pynchon is interested in "a postmodernist subversion of all claims to truth, all assertions of power" (Madsen 115).

Tchitcherine is described by the chemist Wimpe, at one point, as being like a sort of super-molecule with an infinite number of available connections (348). It is useful to view other aspects of Gravity's Rainbow in the same way. The Rocket, for example, means different things to different people: it can symbolize masculinity, civilization, sex, technology, domination, history, the inanimate. It defies simplistic identifications and associations. The Rocket is like Pynchon's other famous symbolic "supermolecule," V., who exhibits an "inability to come to rest anywhere inside plausible extremes," and finally makes sense "only as precisely the dynamic uncertainty she was" (Pynchon, V.

256). The novel as a whole is a similar "supermolecule," subject to all manner of

interpretation. Anyone who has flipped through a book of scholarly essays about

Pynchon will quickly notice that the writers often come to wildly different conclusions

about the same book, or even the same short story. Sometimes two separate theorists,

with very different points to prove, will take the same scene as the centerpiece of their

arguments. For that matter, the points I have hopefully illustrated in this thesis are

doubtless subject to disagreement or contradiction from other sources of Pynchon

scholarship, and their arguments might even be equally provable. In some ways these

limitations are discouraging. Papers like this one will never be able to entirely mine the

depths of Pynchon's complexity. In other ways, though, it is exhilarating, and certainly

this is how Pynchon intended his work to operate. The more simple the novel, the more

straightforward the communication, the less liberated its interpretation will be. Gravity's

Rainbow, as well as Pynchon's other novels, are triumphs in the opposite direction; they

are not interested (as many communication theorists are) in transmitting a message with

very little room for misinterpretation. They *exult* in the potential for misinterpretation, or

at least multiple interpretations—they maximize the available information, and resist the

imposition of a rigid structure on this information. This task is meant to be taken up by

the reader, and by leaving such interpretations to them, Pynchon achieves a higher level

of communication in the novel, and resists the methods of control which are compelled to

assign each object a single, fixed, inflexible meaning or value.

EPILOGUE: COMMUNICATING WITH THOMAS PYNCHON

No things, but an iridescence in the void. Meaning is a continuous

creation, out of nothing and returning to nothingness. If it is not

evanescent it is not alive. Everything is symbolic, is transitory; is

unstable. The consolidation of meaning makes idols; established

meanings have turned to stone. (247)

- Norman O. Brown, Love's Body

An author is, by definition, in a position of control over the readers from the

perspective of communication theory. The circuit only runs one way. Dialogue is a

fundamental feature of communication which constitutes a "human use of human

beings." When it is eliminated, human relationships become desensitized, and this leads

to the de-animating, so to speak, of individuals—a progressive tendency toward

identification with the inanimate occurs. This feature of modern society (characterized

by its leaning toward depersonalized control systems) was deeply troubling to Norbert

Wiener, as it is to Pynchon. Still, true dialogue is impossible in literature. The reader

relinquishes control for a period of time and surrenders to the author's vision (at least as

long as he or she chooses to read before putting aside the book). It is impossible to

respond in any way to the author's observations and conclusions—especially, one might

say, in the case of an author like Pynchon, who eschews all publicity and other public

interaction. Novels, like many creative works, are examples of controlled and one-way,

rather than free and mutual, communication.

The reader's participation in the circuit, then, is through his or her efforts at re-

ordering and interpreting the information which the author presents. Like Maxwell's

Demon, a reader must act as a "sorting consciousness," separating pertinent facts from non-, establishing connections, deciphering codes. Pynchon is conscious of the fact that, in these actions, the reader's very existence is emblematic of the process defined as "negentropy" by Leon Brillouin in his discussion of Maxwell's Demon. Novelists too, are engaged in a process of negentropy: they must choose which details to include and which to exclude, which portions to draw upon from life or imagination, what elements can be effectively re-combined, and in what order. But in even the most banal pieces of writing, all this becomes the responsibility of the *reader alone* once the writing has been done. The more banal the literature, the easier the process is, and the less negentropy occurs—a straightforward pamphlet or instructional brochure requires much less sorting and information-gathering on the part of the reader than, say, a highly complex novel like Gravity's Rainbow. Still, one can perceive writers and readers, no matter what the context, as being *united* in a mutual process of negentropy. The duties of Maxwell's Demon proliferate on all levels, and as the writer interprets and "decodes" the world, so the reader decodes the piece of writing—and then, perhaps, through the lens of that writing, he or she might decode the world again in turn.

Pynchon writes long, complex novels in which entropy (Shannon) is maximized through constantly-morphing symbol sets and values. His books flow freely, adapting easily to new parameters and admitting many multiple interpretations. In embracing ambiguity as he does, Pynchon draws the reader into the circuit as an integral part. In the language of communication theory, he makes it possible to decode his message in multiple ways, some of which might contradict one another—but which are not necessarily wrong for this reason. He resists the exclusion and stasis which characterize

control systems, maintaining an anarchic sense of wonder. The untidiness, even chaos, of

the plot and character development, the sprawling narrative, the refusal to conform to

traditional expectations of literature and "interlock in a reasonable way," represents the

author's firm identification with characters like Osbie Feel: "*They're* the rational ones,"

he tells Roger. "We piss on Their rational arrangements (639-39). <u>Gravity's Rainbow</u> is,

in its essence, a fierce resistance to "rational arrangements," to the dominating rigidity of

control-systems of communication. It is an unfettered and unfettering work, the creation

of a broad and fertile imagination. In it, Pynchon uses language as "the primary agent of

healthy creation and potential liberation from the reign of oppressive systems" (Russell

255) by leaving as many possibilities open as possible. In all of this, the novel is a

triumph of entropy and choice, and a Counterforce to stasis and Entropy.

. . .

Pynchon's characters almost invariably represent and elucidate some alternative

method of ordering the world and processing the information it presents to us. Among

the most unique of these is in <u>Gravity's Rainbow</u> is Mondaugen, the communication

scientist from <u>V.</u>, working in 1945 as one of Herr Pökler's fellow scientists on the rocket

project. He is described as having found enlightenment on the African veldt after fleeing

Foppl's siege party, "haunted by a profound disgust for everything European" (Pynchon,

<u>GR</u> 403). There he achieved a sort of Eastern-style enlightenment, framed (of course) in

terms of the same communication theory which influenced his earlier desperate search for

a message in the *sferics*. He is the base's "bodhisattva," and "[h]e thought of himself,

there and here, as a radio transmitter of some kind [. . .]

In his electro-mysticism, the triode was as basic as the cross in Christianity. Think of the ego, the self that suffers a personal history bound to time, as the grid. The deeper and true Self is the flow between cathode and plate. The constant, pure flow. Signals—sense-data, feelings, memories relocating—are put onto the grid, and modulate the flow. We live lives that are waveforms constantly changing with time, now positive, now negative. Only at moments of great serenity is it possible to find the pure, the informationless state of signal zero.

(Pynchon, <u>GR</u> 404)

Here we have a description of what might be classic Buddhist enlightenment from the mouth of a communication theorist. Mondaugen, once a receiver obsessed with the message (the "signal") which he believed himself to be receiving in the *sferics*, has come to place his faith in an "informationless state of signal zero." This is a fascinating passage for our study, because it phrases the old concept of "striving," of "worldliness," as the struggle for "signal"—in short, it is identical to the effort at communication which torments so many of Pynchon's characters. Mondaugen has left this striving beside. His only goal is to neither receive *nor* transmit, to come as close to zero-communication as possible.

There may be something to be said for this. Certainly Mondaugen is one of the novel's most peaceful, unaffected characters. Still, one must question whether or not Mondaugen has become prey to a species of "enervated fatalism" not unlike that which Callisto describes in "Entropy." Communication, be it verbal, sexual, literary, etc., is the key to human understanding and community, as we have seen, and attainment of the "zero signal" makes this impossible. It is no accident that Mondaugen works, apparently

contentedly, for the rocket-making "machine," and for the War. He is simultaneously a part of it and not a part of it, of course, enlightened as he is to the nature of his own choices, but the fact is that he aids and encourages control-systems by his own self- and zero-centric enlightenment.

If Mondaugen decides to seek refuge in a comfortable state of informationlessness, then characters like Pointsman and Blicero are engaged in a process of patterning-run-amuck. They strive to establish and impose systems of behavior, of cause and effect, of non-negotiable metaphors. To them, information is something which must be constructed into a coherent and unchanging pattern. This pattern must not admit variant interpretations, which are perceived as an undesirable intrusion of the chaos they are determined to stamp out. These characters are hothouse-artificers, like Stencil and Callisto, who have gone too far. Ultimately, as we have seen, their static paper systems of division and sub-division are heralds of austerity and death. Their resistance to entropy (Shannon) makes them unable to adapt and change, which opens them up to the encroachments of entropy (Wiener).

Finally, we have characters like Slothrop (or Benny Profane, or Meatball Mulligan—these individuals tend to conform to a certain archetype all Pynchon's own, which we might call the "street archetype"). These champions of entropy function as a Counterforce to the Firm, represented by Pointsman and Blicero and others like them. They embrace the various manifestations of chaos and move as the world does, rather than attempting to bring the world into step. This is clearly the attitude toward information which Pynchon finds most sympathetic—as I have already observed, it mirrors his own attitude, as well as being in step with his literary goals.

Pynchon's novels, though—V., and especially Gravity's Rainbow—are cautionary of taking this attitude too far. Pynchon is entirely conscious of the danger which is inherent in this treatment of information. For this reason, he causes the novel's fragmentation at the end to mirror Slothrop's own. Both go through a process of "being broken down [. . .], and scattered" (738), until no longer "any sort of integral creature any more." He is impossible to hold together, "even as a concept" (740). This is, of course, a plausible consequence of the attempt to take refuge in chaos or entropy.

I believe, furthermore, that Pynchon intended the novel to be taken as a cautionary tale for the era in which it was written. Aghast as he obviously was at the dehumanizing forces of power and control, the author perceptively sensed in his own contemporary "Counterforce"—the counterculture movement of the sixties and early seventies—the seeds of its own destruction. Any champion of entropy who stands up against the "organized power-ritual" must take care not to be consumed by this liberating, adaptive force. While a source of renewal, it can also become a source of fragmentation and a descent into meaninglessness. "A life that denies causality," Russell tells us, "that revels in the shifting and temporary alliances of chance events, threatens itself with its own ultimate dissolution" (270).

. . .

Gravity's Rainbow, like Pynchon's other novels, is at the end cautionary but not utterly bleak, for no system, we are encouragingly informed, is absolute, and once we leave our preconceived connections behind we might find newer, truer ones. Life may, in fact, exist island-like in a void, but it is always capable of burgeoning and impulsively re-

establishing itself. "And yet," Pynchon muses, "and yet: there is Murphy's Law to consider [. . .]—

> *when everything has been taken care of, when nothing can go wrong, or even*
>
> *surprise us . . . something will.* [. . .] So, when laws of heredity are laid down,
>
> mutants will be born. Even as determinist a piece of hardware as the A4 rocket
>
> will begin spontaneously generating items like the 'S-Gerät' Slothrop thinks he's
>
> chasing like a grail (275).

In other words, entropy worms its way in. Randomness and chaos will always appear to resist the static epistemologies which are communicated to us by our masters from on high. The world is like the "compost-garden," a hybrid image which appears at least seventeen times through the course of Gravity's Rainbow (Stark 53). Reality may seem to be composed solely of dead or dying elements, undifferentiated throughout, a collection of waste and filth—but from this compost, the garden grows. There is renewal. When everything has been taken care of, when nothing can go wrong, or even surprise us . . . something will. Surprise and change are elements of entropy, as Claude Shannon pointed out. But as Pynchon perceives it, and as his unbridled and constantly-changing novels illustrate, this sort of entropy is also life, and it is in these fragments that life endures and grows.

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