"A Biological Necessity at Work": Evolution in Selected Novels of Philip K. Dick

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A Thesis

in

The Department

of

English

Presented in Partial Fulfilment of the Requirements
for the Degree of Master of Arts in English at
Concordia University
Montreal, Quebec, Canada

May 2007

Your file Votre référence
ISBN: 978-0-494-34443-9
Our file Notre référence
ISBN: 978-0-494-34443-9

CONCORDIA UNIVERSITY

School of Graduate Studies

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By: Jason Katz

Entitled: "A Biological Necessity at Work": Evolution in Selected Novels of Philip K. Dick

and submitted in partial fulfillment of the requirements for the degree of

Master of Arts (English)

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Abstract

"A Biological Necessity at Work":
Evolution in Selected Novels of Philip K. Dick

Jason Katz

In selected novels of Philip K. Dick, fear of entropy is the primary catalyst for action, and one way the characters endeavour to escape entropy is through human evolution. Evolution is thought both to counteract entropy and to enable spiritual transcendence to a more permanent universe where entropy cannot follow. This thesis traces the two kinds of evolution found in these novels, the ineffective kind and the effective kind. The first is technological and left-brained; it tends to lead in Dick not to evolution and transcendence but to capitalist oppression, loss of agency, loss of identity, eugenics, and a totalitarian police state, all of which lead instead to devolution and an increase in the entropy of the universe. The second kind of evolution is biological and right-brained, and it stems from human empathy. Empathy, in Dick's novels, as it grows stronger, becomes telepathy and eventually forms the beginnings of a collective consciousness very much like Pierre Teilhard de Chardin's notion of a noosphere. This collectivity of mankind is brought about by love and empathy and will enable the transcendence and escape from entropy that Dick's characters seek. This thesis uses historical, philosophical, and scientific contexts to clarify this binary in Dick's work between left-brained technological devolution and right-brained empathic evolution. At their most ambitious, these novels supply a model for how Dick believes the human race ought to proceed if it intends to survive: not through advanced technological posthumanism, but through the simple advancement and dissemination of love and empathy.

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Acknowledgments

I would like, first of all, to thank my parents for always encouraging me to pursue whatever path I chose. If I wanted to do theatre, they encouraged me to do theatre; if I wanted to do English Literature, they encouraged me to do English Literature. I would never have come to this point without their unwavering support. I would like to thank Kevin Pask and Andre Furlani for volunteering to read through this bulky thing and to offer feedback. I would also like to thank Kevin Pask for keeping me in steady employment for the duration of the process; I may quite literally have not survived if not for his kindness. And last of all, I would like to extend my deepest thanks to Anthony Sisti. I could never have asked for a more ideal thesis advisor; his breadth of knowledge is astounding; his feedback was always encouraging and insightful; and his level of excitement for the work was, at times, all that kept me going. I could never have written this thesis without his help.

Introduction

Philip K. Dick is an American science fiction phenomenon who only began to get his fair critical and popular due after his death in 1982. Until that point, he had been forced to write sometimes as many as five novels a year to survive, and it was only in France that Dick received any popular respect at all. He lived in poverty all his life and died just before the film adaptation of *Do Androids Dream of Electric Sheep?* appeared as Ridley Scott's *Blade Runner*. The film brought widespread awareness of Dick's name to the world, and his popularity increased. Today, 25 years after his death, the *Encyclopedia of Science Fiction* calls Philip K. Dick "one of the two or three most important figures in 20th-century US sf and an author of general significance" (Clute and Nichols 328), and this tends to be the current consensus in science fiction circles.

Despite this almost unanimous praise, however, critical attention to his work has been limited. Philip K. Dick may be the American science fiction writer with the most criticism devoted to him (certainly more than Isaac Asimov or Robert Heinlein, the other two writers to which the *Encyclopedia* probably refers), but that says more about the scant attention science fiction receives in the literary community than about any mainstream acceptance of Dick's fiction. There was some criticism of his work during his lifetime, most notably in *Science Fiction Studies,*[1] but it tended to be scattershot and a little defensive – it would proclaim Dick to be one of the best writers of the 20th century on the one hand, while making silly excuses for his sloppy prose on the other. Contrarily, Thomas M. Disch had the audacity to claim Dick was unpopular precisely because he was too good a writer (15). Over the years, as the merit of Dick's writing finally came to

be accepted as a given, the defensiveness tended to diminish, and critics began to concentrate on more sustained readings of his individual novels.

These readings were a move in the right direction. Samuel J. Umland states he edited *Philip K. Dick: Contemporary Critical Interpretations* in an attempt to show Dick's relevance to contemporary culture (5); Patricia Warrick published *Mind in Motion*, a useful book of essays dedicated to Dick's more "strange" science fiction novels, those "haunted by the yearning to be another kind of fiction" (xiv); and most recently, Christopher Palmer's excellent *Exhilaration and Terror of the Postmodern* positions Dick as a writer in constant conflict between his modernist and postmodernist sensibilities. Some of the recent criticism has been enlightening, particularly Palmer's, but running through most of it is a generally accepted view of Dick that has been, I believe, embraced far too easily. It is this general view that I wish to describe and then question.

Dick's plots are, admittedly, disorienting. Kim Stanley Robinson coined the term "broken-backed novel" to describe a Philip K. Dick book that launches a particular plot in the first half only to drop it in favour of a new and evidently more interesting plot in the second half (84). Details that seem to have nothing to do with the storyline overcome the narrative, at which point the previous narrative is abandoned, leaving the impression that Dick simply lost interest. Dick's novels are stuffed to the brim with secondary characters, forgotten story-threads, bizarre tangents, and sudden seemingly arbitrary turns of plot. Ten wild ideas are introduced in passing on a single page, each sufficient to fill an entire novel, only to be left undeveloped and often never mentioned again. It is this apparently haphazard plotting that gave early critics of Dick such cause for

defensiveness, even while they recognized that beneath the slapdash writing lay something unique, even brilliant. In the introduction to *Mind in Motion*, Patricia Warrick describes how she believes Dick's mind works:

> It wrestled an idea to its conclusion, stated that conclusion, and just when he could settle back in contentment, another idea - always a bizarre one - sprang up and he galloped off to chase this new one to its conclusion, only to discard it once he had caught it. (xiii)

Warrick's perception of Dick is a common one. In most critics' eyes, Dick's randomness of plotting reflects a randomness of thinking. Thomas Disch notes Dick's "evasiveness," pointing out "the way his worlds refuse, iridescently, to stay in any kind of unequivocal moral focus" (16). Echoing Disch, Fredric Jameson claims Dick's ethical positions are "systematically varied" in a way that puts Dick "beyond good and evil" and makes his writing "non-ideological" (*Archaeologies* 371). Douglas Mackey comes close to calling Dick a solipsist (128) and avoids making any overarching statement about Dick's ethical worldview, claiming instead that "[Dick's] answers were mostly questions" (131). Christopher Palmer emphasizes his resistance to the temptation to "smooth out" Dick's fictions for the sake of a neat argument (viii). Critics of Dick pride him on his inability to be pinned down. It is Dick's moral evasiveness, they argue, that makes him such a fascinating writer.

I, for one, possess no such qualms at making overarching claims about Dick's work. Dick certainly doesn't need another critic to point out how quirky, unpredictable, and far-out his books are - a reading of any one of his novels will make that clear enough - but what has been neglected, I believe, in much of the criticism is that beneath all the

wild turns of plot lies a worldview that is surprisingly coherent. Dick himself admitted that, from the corpus of his work, he can be "absolutely and precisely inferred" ("'Introduction' to *The Golden Man*" 90), and no amount of seemingly random or contradictory plot turns can hide what Dick thinks of the world. What is surprising to me is not how contradictory his ethical positions are, but how consistent. Dick's plots may seem to alter chaotically, but his worldview does not, and these "arbitrary" story turns often serve to highlight his moral viewpoint rather than to forward any single plot. They are not, in other words, necessarily random. They are often pertinent, if not structurally, then certainly thematically. In many of Dick's novels, his story is, above all, a worldview, a vision of mankind, and his priority there is to explore that vision in whatever direction he deems necessary rather than to maintain one consistent narrative arc.

It has become almost a cliché to claim that all of Dick's fiction poses the same two questions - 1) What is reality? and 2) What is human? - but the cliché is more or less true. In his essay "How to Build a Universe that Doesn't Fall Apart Two Days Later," Dick attempts to answer both these questions:

> The kosmos is not as it appears to be, and what it probably is, at its deepest level, is exactly that which the human being is at his deepest level - call it mind or soul, it is something unitary that lives and thinks, and only appears to be plural and material. (277)

For Dick, the kosmos that we see is an illusion - a universe that seems material but isn't. He has several theories about what may lie beyond the illusion, including a strange intuition that beyond our universe lies the literal world of the Bible (278), but about one

thing he is always certain: reality is "not this." Whatever the truth may be, Dick believes our immediate reality is fraudulent, and that on occasion, through "revelation," we may see through the veil to the unchanging, genuine reality beyond.

About his second question, Dick is more confident. For Dick, a genuine human being is one who is not corrupted by fake realities. "Deliberately manufactured fakes," Dick explains, "never penetrate to the heart of true human beings" (279). He is referring in this context to such things as advertisements and political cover-ups, but his theory applies equally well, if not more so, to the manufactured fake that is our physical universe. Dick believes that an unchanging reality underlies our physical world of change, and that the only individual who can break through to that reality is a genuine human being.

The need to transcend our physical universe is not, in Dick's work, a case of mere spiritual curiosity or of hubris - the need is both valid and urgent. In Dick, the physical universe is rapidly decaying as a result of entropy. The only way to escape this entropy is to access the true, permanent universe, where entropy, decay, and death cannot exist. Throughout Dick's novels, it is this fear of universal entropy that feeds the characters' intense desire to escape into that other, more genuine realm.

In his work, Dick often employs the trope of Darwinian evolution, a fact as yet unexplored by most critics. The reason evolution is so present in these novels is that the characters hope to use it as a method of escaping entropy and achieving transcendence. In a letter near the end of his life, Dick insists that knowledge - not just faith but actual knowledge - of the "hyper-structure" of the universe is possible because humans may be evolving into "a new species with a higher level of awareness" (Sutin, *Divine Invasions*

283). Evolution in Dick's novels can be defined as any change in the human body or mind that brings individuals closer to that higher awareness with which they will be able to escape the entropic universe and achieve immortality. Much of his fiction portrays a desperate search to find the key to that evolution.

The way Dick valorizes these various attempts to evolve is consistent. There is no need to avoid smoothing out this argument, for there is a very clear ethical binary in Dick's work between the effective way to evolve and the ineffective. The ineffective way is invariably linked with the left hemisphere of the brain, the hemisphere of logic, mathematics, intellect, science, and technology. These attempts at so-called evolution are conscious, controlled, and teleological. The characters involved choose the direction for themselves and decide who deserves the right to evolve and who does not. They fail, however, at every instance, to reach their destination. They move the human race, ironically, in the precise opposite direction, that of devolution. Devolution in Dick's work is a change in the human body or mind that actively increases entropy. It leads the human race towards less complexity, less differentiation, and less potential access to a spiritual realm. It leads ultimately to the stagnation and eventual death of the human race. In Dick's novels, all forms of technological "evolution" are forms of devolution. As a result of devolution, humanity and the universe come that much closer to collapse.

The only possible hope in Dick's novels for genuine evolution lies in the right hemisphere of the brain, the hemisphere associated with metaphor, art, and emotion. To evolve properly, to escape entropy and transcend the fake physical universe, is to develop empathy, which is, for Dick, the key to humanity, the very element that makes a genuine human being immune to the power of fake realities. This form of evolution is

unconscious, undirected by mankind. It stems from living compassionately and empathically. Despite his dystopic futures, then, his nightmare landscapes, and his disorienting and paranoid view of the world, Philip K. Dick is, at heart, a humanist, and quite an endearingly sentimental one. This fact is absolutely unwavering throughout his decades-long career. Dick is, at all times, technophobic. He has no faith in advanced technologies to help mankind. He believes instead in the human powers of kindness, compassion, and understanding to save humanity from the ravages of entropy. This thesis will explore how fear of entropy leads Dick's characters to evolution and then will chart both the left-brained failures and the right-brained successes. At its most ambitious, Dick's canon offers a model, by presenting us with both negative and positive exemplars, for how he believes the human race as a whole ought to proceed if it intends to survive.

All critics of Dick face an imposing problem, and that is the immense quantity of fiction the man wrote in his lifetime. With over 40 novels, many scrambled together from bits and pieces of earlier novels or short stories, one does not know quite where to begin. Robinson and Mackey dealt with the problem by supplying general surveys of Dick's work, and despite the lack of depth this approach may invite, there is something intuitive about it. Reading a Dick novel in a vacuum seems, indeed, not to make much sense. As one reads more of Dick's fiction, one begins to sense that a familiarity with his whole canon may be necessary to enable a close reading of any one novel. Each novel (with a few exceptions) does present a different fictional universe - Dick does not, like Asimov or Heinlein, attempt to connect all his stories into a vast coherent future history - and yet, there are considerable similarities among them, even down to the kinds of technologies used. The same robotaxis, the same advertising, the same squibs and skins and quibbles

and flapples keep appearing in so many of his novels that we are invited to read the canon as a single mega-text that uses different imagined futures to tell the same, intertextual, overarching story. This is why critics of Dick, and I will to a certain extent follow suit, tend to use a broad canvas when analysing his fiction.

I will concentrate on a specific few of Dick's novels where I believe the themes of evolution are most pertinent, and a majority of these novels fall into what Fredric Jameson has called Dick's "Science Fiction period," as opposed to his later more religious period (*Archaeologies* 363). This Science Fiction period covers the decade of the 1960's. The only novels covered in this thesis not to be written in the 1960's are *Our Friends From Frolix 8* (1970), which is in many ways a throwback to his earlier novels, and the two major 70's novels *Flow My Tears, the Policeman Said* (1974) and *A Scanner Darkly* (1977). I have grouped these three novels into my discussion of Dick's 60's period because I feel that, thematically, they belong there, rather than with the other religious novels of the 70's. In addition to the latter three, primary texts that I will examine include *The Three Stigmata of Palmer Eldritch*, *Ubik*, and *Do Androids Dream of Electric Sheep?,* but, in most cases, I will make reference to other novels to clarify my argument. My method may be called historical and philosophical. I use philosophical, scientific, and historical contexts that Dick may have been either directly aware of or indirectly exposed to by virtue of the time and place in which he lived, and apply them to his novels in order to infer their meaning.

Chapter 1 of the thesis will explore why Dick's characters are so concerned with evolution. It describes Dick's conception of entropy and explains why both evolution and technology are seen as methods to combat it and achieve transcendence. This chapter,

rather than concentrating extensively on individual novels, serves as an overview of the themes of entropy, evolution, and transcendence in Dick's 60's period as a whole. Chapter 2 narrows in on left-brained attempts at evolution in selected Dick novels and explains in detail why these technological attempts to evolve are doomed to failure. The primary Dick texts in this chapter are *The Three Stigmata of Palmer Eldritch* and *Ubik*, but again, I will refer to other texts where needed. By the end of the chapter, I hope to have established that attempts in Dick's novels to evolve technologically increase entropy and cause devolution. At the beginning of chapter 3, I set out the binary between left- and right-brained thinking, and then, after another series of examples of left-brained failures, proceed into a full discussion of the proper right-brained instances of evolution in selected Dick novels. Primary texts in this chapter include *Do Androids Dream of Electric Sheep?* and *Flow My Tears, the Policeman Said*, but once again, I will refer to a number of other Dick novels where necessary.

Dick's novels, however chaotic they may seem, form a coherent intertextual canvas and advance a consistent worldview. Evolution is necessary to outrun entropy. Technological, scientific, or even intellectual attempts to evolve add to entropy, thereby leading to the decay and destruction of the human race. The only effective method of evolving, of outrunning entropy and transcending to the permanent spiritual realm, is through empathy. As we will see, according to Dick, only with the development and dissemination of empathy throughout the human race do we have any chance of surviving the entropic decay of the universe.

Chapter 1: Entropy and Transcendence

All throughout Dick's novels, we find characters at various stages of evolution, and this chapter will explore the reason that evolution is such a central concern. Put simply, the impetus to evolve stems in Dick's work from an intense fear of entropy. The characters believe that, in order to escape entropy, they must evolve, and evolution will help them do this in two ways: first, evolution, in its tendency to increase the complexity and differentiation of organisms, moves in direct opposition to the flow of entropy; and second, evolution is believed to lead to spiritual transcendence, escape into a non-physical realm where entropy will cease to exist. Evolution, then, is believed to combat entropy on two fronts: it reverses the flow here in our universe, and it leads the evolved individual in the long term to a greater spiritual plane, a transcendental realm where entropy cannot follow.

Because this fear of entropy is so severe, the characters are impatient to evolve, and this is where the use of technology comes in. Many of Dick's characters, rather than wait for the process to take place naturally, use advanced technologies to initiate and direct their own evolution. Technology, like evolution, is believed to be negentropic and potentially transcendent, and so technological evolution ostensibly combines the negentropic powers of evolution and technology. About evolution's ability to counteract entropy, the characters are characterized as correct. About technology's ability to do the same, they are shown to be incorrect, and about technological forms of evolution, they are not only incorrect but fatally so, as we will see in the second chapter. The first chapter, however, explores the basis for the belief that technological evolution is the solution to their entropic problem.

First, I will define entropy in both the thermodynamic and informational sense and then explain how it came to be used as a metaphor in American literature of the 1960's, specifically in Dick. Next, I will explore the responses to entropy in Dick and why these responses seem to the characters to be reasonable. Dick's theories on entropy are read mainly through Norbert Wiener, while his theories on evolution are read through Darwin and later 20th-century evolutionary science. I also make use of the historical and contemporary connection between technology and spiritual transcendence. In general, this chapter explores the motivation behind evolution - why Dick's characters believe advanced technologies can direct human evolution, and why such technological evolution is mistakenly believed to be a tool for staving off entropy and gaining spiritual transcendence.

The Second Law of Thermodynamics states that during any transformation of energy in a closed system, a certain amount of energy is not available to do work, and that energy is "irretrievably lost to us" (Zencey 188). The energy does not disappear, as stated in the First Law of Thermodynamics (matter and energy never disappear, they only transform), but changes from "free" energy (as in useful, available for work) into "bound" energy (energy that is useless for work.) The quantity of energy unavailable for work, or lost, within a closed system is called "entropy" (188). To illustrate, if one places a glass of hot water beside a glass of cold water, the heat from the hot glass will transfer to the cold glass until both glasses of water arrive at the same temperature, at which point an equilibrium has been reached. Without energy from an outside source, the two now lukewarm glasses can never "unmix themselves into hot and cold again in order to repeat the process" (Freese 337). Entropy, therefore, becomes "a measure of the degree to which

the heat of a closed system approaches a homogeneous distribution" (Zencey 189). Because this process of homogeneity is irreversible, the entropy in a closed system will never decrease; it can only increase. This law applies to any closed system, including the one system, which we assume to be closed, in which everyone seems to be trapped - the universe itself. The entropy in the universe as a whole is also increasing, and as it continues over time to lose heat, it moves inexorably towards a state of homogeneity. Systems within the universe are becoming less complex and more uniform, less ordered and more disordered. The entropic process will, in the end, leave the universe "in a state of inert uniformity of component elements: absence of form, pattern, hierarchy, or differentiation" ("Entropy"). Wilhelm von Helmholtz, in 1854, was the first to announce the inevitable heat-death of the universe:

> [I]f the universe be delivered over to the undisturbed action of its physical processes, all force will finally pass into the form of heat, and all heat come into a state of equilibrium. Then all possibility of a further change would be at an end, and the complete cessation of all natural processes must set in. . . . In short, the universe from that time forward would be condemned to a state of eternal rest. (74)

The cyberneticist Norbert Wiener describes the fate of the universe in his own terms:

> 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. (12)

The law of entropy is a physical law. The terms "order" and "disorder" are "value-free descriptions of molecular aggregates" (Freese 345) - there are no aesthetic or ethical implications. The law, however, did not remain a purely physical one for long. The first American to introduce the Second Law of Thermodynamics into cultural discourse was probably Henry Adams, who argued that the laws that "govern thermodynamic systems also apply to social configurations." Adams applied the concept of entropy to his theory of historical development, in which "human history does not proceed in terms of progress and ascent, but of degradation and descent" (Freese 339). In making such an argument, Adams transformed a scientific law into an extended metaphor. Once this was done, the metaphor was available for application to other branches of knowledge, ranging from biology to psychology to economics to literature. In all cases, the basic thrust of the metaphor was that things have a tendency to decay, that they "never fix themselves without inputs of energy, that things are easier to break than to fix, [and] that order is more difficult to achieve than disorder" (Zencey 190). Of course, as a cultural metaphor, the scientific applicability of the law was reduced - as a metaphor, it actually has very little to do with thermodynamics - but that was hardly the point. What the metaphor lacked in scientific precision and accuracy, it gained in imaginative power and resonance. A new worldview had been popularized, of a universe of "incipient chaos," and of us human beings as helpless victims of a "natural disorder . . . as near at hand as the closest rusty tool, [or] the nearest dilapidated building" (193).

The notion of human beings at the mercy of entropic forces became especially prominent in American fiction of the 1960's. Tony Tanner supplies a list of American writers who refer directly to entropy in their stories, and that list includes Thomas

Pynchon, Norman Mailer, Saul Bellow, John Updike, John Barth, Walker Percy, Stanley Elkin, and Donald Barthelme (141). Philip K. Dick is not on that list, but he should be. Why this theme should become so popular among American writers in the 60's is a debatable question, but it almost certainly has to do with the particular society in which these American writers found themselves. The law of entropy warns us that the world is going to be reduced to a "vast equilibrium in which nothing happens because all has been reduced to a drab uniformity," and American culture and urbanization in the 1960's may have been seen as a serious threat to all forms of "variety, diversity, distinction, [and] individuality" (147). People feared, in other words, the power of cultural entropy, the end result being an utterly conformist homogeneity. Philip K. Dick certainly had this fear; he claims to have inherited from the University of California at Berkeley the "social consciousness" of the 60's that helped end Nixon's term and the Vietnam war ("'Introduction' to *The Golden Man*" 86). He vigorously and angrily fought against the Communist party and what they represented. He saw America as a police state that controlled and oppressed its people. Dick feared all sorts of tyranny, including American culture and the Communist party alike, because they represented for him control, loss of freedom, and loss of individuality; they represented forced conformity, a primary characteristic of entropy. Dick used entropy in his novels as a metaphor for exploring his very serious fears about where he believed the world was heading, towards a loss of all human identity and freedom.

In the American literature of the 1960's, entropy was characterized as an evil force or conspiracy, spanning the entire universe, which causes decay, deterioration, and death. Dick deals with entropy directly in over fifteen novels, and, as Patricia Warrick

points out, Dick's futures are often dying worlds, "shrouded in smog and dust, decaying into rusty bits and useless debris" ("Labyrinthian Process" 189). Entropy in Dick's imagined worlds is omnipresent. His novels "stage all the horrors of . . . stagnation, senescence, decay, [and] collapse" (Palmer 51). In *Do Androids Dream of Electric Sheep?*, for example, the people who remain on Earth live in "deteriorating, blind building[s] of a thousand uninhabited apartments" which fall, "day by day, into greater entropic ruin." John Isidore fears that "[e]ventually everything within the building would merge, would be faceless and identical, mere pudding-like kipple piled to the ceiling of each apartment" (17). Inside the "empty" and "decaying" buildings (12), all had "rotted away . . . sagg[ing] in mutual ruin, victims of the despotic forces of time" (56). The name for entropy in this novel is "kipple," which, like entropy, "reproduces itself. . . . It always gets more and more" (57). In *Our Friends from Frolix 8*, the most brilliant scientists in the world are working on the "subject of entropy" (116). They fear that "a growing progression away from individuality and complexity [is] already under way," and they work together now to fight the decay of the universe (116). In Dick's two Martian novels, *The Three Stigmata of Palmer Eldritch* and *Martian Time-Slip*, entropic forces have overrun the Martian colonies. The colonies in *Three Stigmata* consist of "abandoned equipment" and "great heaps of rotting supplies" (142), and the colonists who live there are in a constant struggle to prevent the "decay" of their world (47). On the colonies in *Martian Time-Slip*, the "buildings deteriorate year after year" (213), and the autistic child Manfred can perceive that beneath the surface of the everyday world lies the unending and dreadful process of entropy, in this novel known as "gubble" or "gubbish." Manfred sees "down through the sieve of wood to the soil beneath, the cavity, dark, cold, full of

wood so rotten that it [lies] in damp powder, destroyed by gubbish-rot" (129). Gubbish is described by the protagonist as the force of "decay, deterioration, destruction, and, at last, death" (145).

In *Ubik*, Dick's most sustained treatment of the subject of entropy, the characters find the everyday world around them decaying at an alarming rate. Minutes after an explosion seems to have killed his employer, Glen Runciter, Joe Chip lights a cigarette, and it breaks apart in his hand, "dry and stale" (69). Soon thereafter, he orders a cup of coffee, and the cream is sour, the "fluid plaster[ing] the sides in dense clots" (76) and "a scummy mold" covering the surface. When he tastes the coffee, he finds it "cold, inert and ancient." At this point, Joe begins to feel a "weird, nebulous panic" (77). Through the novel, Joe Chip feels "an insidious, seeping cooling-off" inside him (109) and sees the world around him as "a desert of ice" (110). The problem soon grows much worse: Joe Chip finds one of his co-workers, Wendy Wright, in his hotel closet as a "huddled heap" on the floor, "dehydrated . . . mummified" and covered in "decaying shreds" of what used to be cloth. She has the appearance of having been there "for centuries" (93). The characters also find bits of cloth in the corridor on the way to Joe's room, which means that Wendy was already decaying as she stumbled through the hallway. Upon finding Wendy in this state, the characters begin to panic that they too will end up as "ten pounds of skin and hair in a plastic bag" (101). Their concerns are justified. The next to decay is Al and then Edie; they drop off one by one like victims in an Agatha Christie novel. The entropy in *Ubik* is like a nightmarish form of leprosy, a process that can strike an individual at any time, without warning, and kill him or her within a matter of minutes.

If entropy is such an ever-present and destructive force in these novels, it is the fight against entropy that forms the underlying catalyst for action. Dick's characters, beneath all other considerations, act in order to stave off entropy. It is likely that Dick arrived at many of his notions of entropy through Norbert Wiener, whom he discusses in his essay "The Android and the Human." In his landmark book *The Human Use of Human Beings*, Wiener deals at great length with possible solutions to the entropic problem:

> [W]hile the universe as a whole, if indeed there is a whole universe, tends to run down, there are 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. (12)

Wiener refers to "life" as an anti-entropic process. Human beings, he explains, have "sensory receptors" for "collecting information from the outer world at low energy levels, and for making it available in the operation of the individual . . . the information is then turned into a new form available for the further stages of performance" (26). In other words, human beings can perceive and remember their environment and then choose or alter their behaviour based on what they have perceived or remembered. This is known as "feedback." Feedback, in a sense, counteracts the Second Law of Thermodynamics. Available energy increases. Complexity increases. Life can create new forms and add to the order of the universe, at least locally. Organisms are "opposed to chaos [and] disintegration," and some, like human beings, "tend for a time to maintain and often even

to increase the level of their organization, as a local enclave in the general stream of increasing entropy" (95).

Norbert Wiener is a particularly notable name in the history of the idea of entropy because he was the first to apply the Second Law of Thermodynamics to the theory of information (Lewicki 73). One way, Wiener argued, that human beings fight entropy is in the creation of information, which is seen as a force of negentropy. Messages themselves are "a form of pattern and organization." If a message takes on an extremely probable form (for example, a cliché), it contains very little information, and since, according to Wiener, the amount of information in a message is "the negative of its entropy" (21), a cliché with little information would contain much entropy. As a message becomes less probable, it contains more information, more order, and less entropy. In *Martian Time-Slip*, we witness entropy overtaking all communication: "He held the newspaper closer. . . . Gubble gubble, it said. The article became meaningless, nothing but the gubble gubble words one after another. . . . Glancing through the paper he saw that almost all the articles devolved into nonsense" (239-240). The articles in the newspaper have moved from their least probable state (informative messages) to their most probable state (chaos and repetitive nonsense). To stop this process, human life must create meaningful communication, and the more ordered and complex that information is, the better it will fare in its fight against entropy.

It is not only life that has feedback, however, or that can create meaningful messages. This is where technology joins the fight. Wiener's book is largely about the similarities between human brains and machines and how "the physical functioning of the living individual and the operation of some of the newer communication machines are

precisely parallel in their analogous attempts to control entropy through feedback" (26). Machines are products of information - they both require and create it. Wiener argues that they are therefore, like humans, pockets of negentropy in a decaying universe.

Dick's characters, in seeking methods to fight entropy, stagger through these novels desperately trying to gain control of the entropic process any way they can. In *Do Androids Dream*, the presence of people can fight the kipple (57), but Rick Deckard supposes the existence of the androids may also fight the kipple (86), a reflection of the two solutions offered by Norbert Wiener. In *Three Stigmata*, Fran believes the technology of Can-D can create a world that does not decay (47), and in this novel, the failure of a machine is seen as a sign of the advance of entropy (Palmer 186). In all cases, whether the solution be human or mechanical, action of whatever kind is made necessary by the fear of encroaching decay. There is a fascinating and, I believe, central moment in Dick's *We Can Build You* where the narrator witnesses the birth of the Abraham Lincoln simulacrum. At that moment, the narrator muses about the purpose of life itself:

> And, as I watched the Lincoln come by degrees to a relationship with what it saw, I understood something: the basis of life is not a greed to exist, not a desire of any kind. It's fear, the fear which I saw here. And not even fear; much worse. Absolute *dread*. Paralyzing dread so great as to produce apathy. Yet the Lincoln stirred, rose out of this. Why? Because it had to. Movement, action, were implied by the extensiveness of the dread. That state, by its own nature, could not be endured. All the activity of life was an effort to relieve this one state. Attempts to mitigate the condition which we saw before us now. (73)

The narrator never specifies the cause of Lincoln's fear - it is simply "fear as absolute existence" (73). If movement is the solution, however, it seems clear that the fear is of not moving. It is a fear of stillness, of inertness, and these are the things that enable entropy to flourish. This moment is especially pertinent because the scene (and the entire novel, in fact) is ambivalent about whether this birth, this movement, is the movement of life or of machinery. The arrival of this hybrid creature of life and hardware is the perfect encapsulation in Dick's fiction for the two suggested methods of fighting entropy. To Wiener, the living status of the Lincoln would be irrelevant in terms of its negentropic effects - who, after all, cares if it is living or not, so long as it moves. In *Now Wait for Last Year*, Dick ruminates on life's absolute need for motion:

> The restless, roving bands of males who sought God knew what - they themselves didn't know: their striving was the genuine primal-urge of protoplasmic material itself. This irritable ceaseless motion had once carried life right out of the sea and onto land; creatures of the land now, they still roamed on, up one street and down another. (215)

Life roams, not knowing what it seeks, and that may be because it seeks nothing in particular but, like the Lincoln simulacrum, only escapes, escapes from the dread of stillness. It is not what lies ahead that motivates action, but what lies behind. The problem confronted by the fictional American hero of the 1960's is to decide "which way to move, where to aim his personal energy" (Tanner 150), but whatever way is decided upon, order, complexity, and progress must be increased if the penalty for "not moving, [and] not progressing" is decay (Palmer 51). In Dick's fiction, "the mind . . . must always be in

motion, building and evolving new forms. To cease to move is to fall into the entropic powers that destroy them" (Warrick, *Mind in Motion* 31).

The reason evolution is such a recurring theme in Dick's work, it should now be clear, is that it is a potential source of negentropy. It stands "in direct opposition to the Second Law of Thermodynamics" (Lewicki 75). As species evolve, they grow in organization, complexity, and differentiation. The question then arises, how best to instigate the evolution of the human race? With entropy at their doorstep, the characters feel the need to evolve urgently, and they are unwilling to wait the millions of years it would generally take. That is why technology becomes, for them, such an important factor: with technology, a supposed negentropic force in its own right, the human race may be able to evolve instantaneously.

This is the tragic flaw in the thinking of Dick's characters. There is generally no distinction in their minds between biological and technological evolution; they perceive these two processes to be exactly the same. A passing description of the drapes in a hotel room in *Ubik* highlights this confusion most powerfully: the drapes are of "a neo-silkscreen sort that depict[s] man's ascent from the unicellular organisms of the Cambrian Period to the first heavier-than-air flight at the beginning of the twentieth century" (87). The drapes are implied to represent various stages in human evolution, and the grave mistake they make is to portray the growth of a unicellular organism and the invention of an airplane as qualitatively the same. The airplane, in this depiction, is simply another stage in the biological evolution of our species. This inextricable link between biological evolution and technological development is found all throughout Dick's novels and is characterized, in almost every case, as extremely problematic.

The myriad attempts on the part of Dick's characters to direct and control their evolution technologically are based on a misunderstanding about how evolution actually works, and a look at the writings of Charles Darwin will help us ascertain what that misunderstanding is and where it may have originated. It is not ignorance of Darwin, certainly, that allows these technological attempts to persist. It is, in fact, possible to have read *Origin of Species* and *The Descent of Man* from cover to cover and still mistakenly believe in the possibility of human-directed technological evolution, and that is because Darwin himself is at times maddeningly vague or ambivalent about his theories. Indeed, given Darwin's rhetoric, it should come as no surprise that some aspects of the science of evolution have been misconstrued.

The most significant source of ambiguity in the *Origin* is whether or not natural selection is necessarily directed towards perfection. The common view of Darwin seems to be that he destroyed the idea of God and replaced it with mindless, mechanical, materialistic science. This common view, however, is not sustained by a reading of the *Origin*. Darwin states at one point that he believes in "no law of necessary development" (313), but the rest of the book strongly suggests otherwise. In his introduction, Darwin speaks of the "perfection of coadaptation and structure" (96) that we see in evolved species, and he continues to use the term "perfection" all through the book, explaining how evolving species reach higher stages of "perfection" (330) and that species "evolve towards perfection" (397). Darwin does qualify his use of the term by explaining that "natural selection tends only to make each organic being as perfect as, or slightly more perfect than the other inhabitants of the same country," and he does emphasize that this, and only this, "is the degree of perfection attained under nature" (221), but the expression

"more perfect" is, of course, nonsensical, and there can by definition be no "degrees" of perfection, so Darwin's qualification does not serve to clarify. To confuse matters more, Darwin, in speaking of the many imperfections in animal species (for example, the fact that the bee's sting kills the bee), asserts a very curious thing: "The wonder indeed is, on the theory of natural selection, that more cases of the want of absolute perfection have not been observed" (387). If we unpack this confusing sentence, we find that Darwin is claiming there are, in fact, many instances of *absolute* perfection in nature, not *more* or *less* but *absolute*, and that there should, by his theory, be fewer instances of such perfection. If Darwin believes there to be instances of absolute perfection in nature, we as readers are forced to question again what he means by the term "perfection." One may reasonably ask, is mankind one of these instances of absolute perfection? Can he be?

Darwin adds to the ambiguity surrounding his notion of perfection when he speaks of the Creator. He compares the human eye to a telescope and asks how we can be presumptuous enough to assume the Creator builds eyes the way we build telescopes (213). He also refers to nature as "a careful gardener" who deliberately and consciously moves seeds from one bed to another (336). Here, he creates an image of Nature as a sentient being of "care and industry" who possesses a "moral spine" (Richards 100). If Darwin intends to maintain that natural selection is merely accidental, he makes his most grievous error when he compares nature to a "mechanical invention" in which we can perceive the "summing up of the labour, the experience, the reason, and even the blunders of numerous workmen" (*Origin* 395). In making such a comparison, Darwin evokes William Paley's famous analogy between the universe and a watch, in which Paley argues that the universe, like a watch, must have a Creator (Paley 1-8). For Darwin

to compare nature to a mechanical invention the way that Paley compared it to a watch is to necessarily imply the existence of God. And yet, Darwin keeps insisting, in later editions of the book, that by natural selection he does not mean an active power or deity, but simply the product of natural laws (*Origin,* 6th ed. 95). It is no wonder the Victorians were confused.

To help establish that there is indeed ambivalence in the *Origin* regarding the teleological dimension of evolution, we need only look at signs of that ambivalence within the man himself. At the end of *The Voyage of the Beagle*, early in his career, Darwin writes, "There is more in man than the mere breath of his body" (436). Darwin's experience with nature at this time of his life was "intimately connected with a belief in God" (Sloan 33). In an early essay, he muses about a superior being with "forethought extending over future centuries" that, "with unerring care," does the natural selecting (*Foundations* 85). In his autobiography, however, written near the end of his life, he asserts that natural selection is without purpose (*Autobiography* 87), and he even renounces his use of the term "perfection" to describe natural selection: natural selection, he now writes, is "not perfect in its action, but tends only to render each species as successful as possible in the battle for life with other species" (90). He admits, in the same pages, that he was once a very religious man but has since converted to agnosticism. I do not mean to oversimplify here - there was no strict linear progression through Darwin's life from Christianity to agnosticism. The truth is, he wavered in his belief all his life, and that lack of certainty is reflected in his writing. Knowing the source of the uncertainty, however, does not help us know what to do with it. It is simply unclear, in the *Origin*, whether we are meant to interpret evolution as accidental or

teleological. If evolution were, in fact, teleological, and if the inevitable end of human evolution were absolute perfection, then it would be natural for humanity to think they could help the Creator along in his directing of evolution towards "perfection." Dick's characters, in trying to speed up the attainment of that perfection, are only acting on a tradition laid out, perhaps inadvertently, by Darwin himself.

In the case of Dick's characters, "perfection" means survival against entropy. That is their ultimate evolutionary goal. And while fighting entropy through increasing organization and complexity may be enough for now, the only method of escaping entropy in the long run, and permanently, is through spiritual transcendence, which is also thought to be made possible by the evolutionary process. Transcendence, in Dick, is an abandonment of the flesh and a union with some form of ultimate reality. It means the attainment of a divine knowledge that would allay our fears of decay, would ensure us of another, more authentic reality that is permanent and unchanging. In "How to Build a Universe That Doesn't Fall Apart Two Days Later," Dick speaks of this other reality, "an unchanging one, exactly as Parmenides and Plato suspected" that "underlies the visible phenomenal world of change, and somehow, in some way, perhaps to our surprise, we can cut through to it" (270). The binary here is between change and permanence. The material world represents change and entropy. The transcendental world represents permanence, and one of the most popular methods in Dick's novels of attempting to access that unchanging reality is through the process of human evolution.

The principle that evolution can lead to spiritual awareness also finds its source in Darwin. In *The Descent of Man*, Darwin argues explicitly that knowledge of the Christian God is only available to the most highly evolved races. It is merely "savages" who have

"no idea of one or more gods, and who have no words in their language to express such an idea" (116). Whether a society believes in God may be, as he carefully qualifies, "wholly distinct from . . . whether there exists a Creator and Ruler of the universe," but Darwin feels it necessary to remind us that this question "has been answered in the affirmative by some of the highest intellects that have ever existed." Feelings of religious devotion are "highly complex" and rely on "high mental faculties" (117). Darwin even draws us a helpful linear graph of evolution from savage to intellectual that starts at belief in "unseen spiritual agencies," moves through fetishism and polytheism, and ends up, "ultimately, in monotheism" (119). To move from savage belief in spirits to the civilized monotheistic system found in England requires "reason, . . . science, and . . . accumulated knowledge" (119). He calls "the grand idea of God hating sin and loving righteousness" the "highest form of religion." Darwin, in characteristically ambiguous fashion, refuses to state outright whether he believes in God, but his bias here is absolutely clear: polytheism and tribal belief in spirits are examples of "false religious beliefs" while Christian monotheism is a "grand idea," the highest form of religion, and a sign of evolved sensibilities (171). If the monotheistic Christian view of God is more evolved, the implication is undeniable that it is also more correct. To believe in the Christian God, according to Darwin, is to be closer to that perfection to which evolution inevitably draws us. Again, if Dick's characters believe that evolution can lead directly to perfection and that such perfection would entail access to the spiritual truth, this belief does indeed have a precedent in Darwin's writings on evolution.

Research after Darwin continued to explore how evolution may lead naturally to spiritual awareness. According to research in evolutionary biology, spiritual awareness

would never have evolved "if it were not useful in the preservation of the human species." There were, it has been argued, "utilitarian reasons" for us to have gained a spiritual life, and religion may have been a crucial survival trait (Hay and Socha 600). Believing in a deity, and fearing retribution from it, would be of great help in bringing harmony to a community (Hardy 71). Those who developed a spiritual life "thrived and bequeathed that trait to their offspring," while those who did not develop it "risked dying in chaos and killing" (Kluger 63). Furthermore, spirituality may have enabled the individual "to cope with reality" (Hay and Socha 592). In any sort of crisis, a spiritual belief "can bring about a sometimes unconsciously expected insight, the discovery of a new reality or a new understanding of one's place in it" (602), thereby bringing the individual a peace of mind that may have translated into a higher chance for survival. Hence, "subsequent mutations that enhanced this kind of [spiritual] awareness would be selected for because they gave an advantage in the process of natural selection" (592). It must be emphasized here that the fact that spirituality was a method of adapting to the environment does not in any way disprove the existence of a genuine spiritual realm. It may only be that our ability to perceive that spiritual realm is dependent on evolved human consciousness, enabled through the process of natural selection.

We must now remember the function technology plays in these evolutionary attempts at transcendence: in the association between transcendence and technological evolution, Dick is also drawing on the historical connection between religious belief and technology. For Dick, this connection is highly problematic, but it does have a long history. As far back as the Middle Ages, technology was associated with "the possibility of renewed perfection" (Noble 12). In the Renaissance, Francis Bacon maintained that

technological development was the "greatest evidence" and "best means" of "millenarian advance" (49). In the 17th century, Joseph Glanville of the Royal Society suggested that "when engag'd in more refin'd and intellectual entertainments, we are somewhat more, then [sic] this narrow circumference of flesh speaks us" (62), and the direct link between "intellectual entertainments" and an escape from the "narrow circumference" of the flesh is particularly applicable to Dick since it is precisely the flesh, which decays, that these characters hope to use technology to escape.

In Dick's 20th-century America, the connection between technology and transcendence was still very much present. Cold War-era scientists preached that artificial intelligence "might surpass human intelligence, transcend the human body, and be a link to God" (Dinello 89). Bible-study groups populated the Johnson Space Center near Houston, and there was a popular belief at the time that space exploration signalled that the "end times" were at hand (Noble 131). Hugh Dryden, the first operational chief of NASA and an active member of the Cavalry Methodist Church, would deliver sermons regarding man's "greatest expedition," the search "to find God." He preached that mankind had the "ability to rise above life on a purely physical plane to the realm of the mind" and that "the more we understand nature, the more we comprehend the intellectual state of its Creator" (133). Even for astronauts contemporary to Dick, technological progress was a means of achieving the kingdom of heaven.

Transcendence has historically been understood to arise from both evolution and technology, and Dick's fiction draws on both traditions, while at the same time amalgamating them. Both processes have been associated with the inevitability of perfection, and in this line of thinking, technological development is, like human

evolution, inherently positive. This idealistic attitude towards technological progress, always problematic in Dick, can best be seen in *Ubik*. The characters, believing they have lost their employer, eventually discover the truth: Glen Runciter was the only survivor of the explosion, and they are the ones who are dead. In the world of *Ubik*, the recently deceased are brought to a moratorium and plugged into "half-life," a sort of temporary electronically controlled virtual reality afterlife from which dead people can still communicate, for a while, with the living. The characters discover that they are lying dead in a moratorium, plugged into an afterlife machine. It is therefore within the half-life world that the characters suffer the accelerated process of entropy described earlier. In this afterlife, biological matter is devolving into mush, but technologies, curiously, are devolving into previous forms. Television sets, for example, become radios. Joe ponders why the technologies do not devolve into their constituent parts, "formless metals and plastics," and he concludes that this regression into older technologies proves the reality of Plato's ideal forms (122). Joe's conclusion, however, does not take into account the source of the half-life world: the minds of the half-lifers. Nowhere is an AM radio an earlier manifestation of a television set except in the mind of a human being. We eventually discover that the half-lifer Jory is responsible for much of their surroundings, but even he is not responsible for the technological regressions; he claims he cannot stop them (185). Entropy, it turns out, is a natural outgrowth of half-life experienced by all half-lifers, but the precise form the entropy takes, this reversion of all machines into older technologies, comes from the minds of the half-lifers. In their minds, technological decline means, by definition, regression into the past. Past technologies are inferior merely by virtue of being past. It should therefore come as no surprise that Joe Chip's

reaction to these older technologies is almost always negative. An older kitchen smells "faintly of burned grease" because his stove had reverted to an "ancient" model "with clogged burners and [an] encrusted oven door which did not close entirely." He perceives an old toaster as "a rubbishy, quaint, nonautomatic model" (121). He perceives an old elevator as "an old iron cage . . . operated by a senile borderline moron" (126). At the sight of the old AM radio with an antenna and ground wires, he is "appalled" (122). Even an old golf bag "with assorted clubs" seems to depress him: "Jeez," he says. "What a relic" (124). Technological development is, in Joe's mind, inherently positive. It is also inextricably fused with biological and cultural evolution - the reversion of the technologies into previous forms is a type of atavism generally and historically associated with cultural devolution. To these characters, a television becoming a radio is equivalent to, say, a corporate CEO becoming a tribal chieftain. Because the technological entropy takes this atavistic form, technological devolution is shown to be equivalent, in their minds, to biological or cultural devolution. This bias becomes especially clear when Joe Chip addresses the devolved can of Ubik. He needs the most modern version, so he orders the can to "evolve forward" (196). In ordering a piece of machinery to "evolve," and directing it to go "forward," he betrays at the same time his confusion between technological development and biological evolution and his faith that both evolution and technology lead inevitably, as they move forward in time, toward perfection.

Many Dick characters have a misguided faith that technology will evolve them toward transcendence, and often the technology of choice is drugs. In *Now Wait for Last Year*, the drug JJ-180 is designed to "raise them all above the flesh" and "break [them] through to absolute reality" (40) where they will no longer be at the mercy of the

corruption of the flesh. *In Our Friends from Frolix 8*, Nick uses pills to "dream of many and far off stars" (6), and in *A Scanner Darkly*, the drug Substance D is said to bring an individual a "transcendent vision" (274), a "vision of God" (234). In *We Can Build You*, the narrator seeks a drug that will bring him closer to "the Heavenly Father" who resides "above the realm of stars" (53). These represent only a small sample. Drugs designed to bring transcendence are ubiquitous in Dick's fiction, appearing in at least a dozen novels.

Nowhere is the hope of drug-induced transcendence more central to the plot, however, than in *The Three Stigmata of Palmer Eldritch*. In the midst of their entropic, decaying colony, the colonists sit around their hovels and chew the drug Can-D, which transports their minds to another realm. This realm, they believe, is a world "outside of time and space" where they "lose [their] fleshly bodies" and "corporeality" and put on "imperishable bodies instead" (41), thereby achieving "immortality." They believe this other, transcendental world is unlike their Martian colony in that it will never decay (47). The drug is described variously as "near-sacred," a "miracle" (37), a "purifying experience" (41), and similar to "Christian rebirth" (146).

These fictional discussions surrounding transcendental drug-induced worlds are prophetic of discussions regarding virtual reality that were to come only a few years later. Terrance McKenna made this connection explicitly clear when he said, "People have been doing VR for 125, 000 years. They just called it taking psychedelic drugs" (qtd. in Dinello 151). In the 1960's, LSD guru Timothy Leary espoused a "utopian, transcendent vision" for the technology, and in 1991, he called virtual reality "a legal method to achieve expanded awareness" (qtd. in Dinello 151). In the 1970's, cyberspace researcher Tom Furness explained that cyberspace "will feel like Paradise . . . a space for collective

restoration [of the] habit of perfection" (qtd. in Noble 159). The hopes of Dick's Martian colonists and the future attestations of real-world virtual reality enthusiasts are remarkably similar. In *Three Stigmata*, one is able, under Can-D, to "commit incest, murder, anything, and it remained from a juridical standpoint a mere fantasy" (42), while Michael Benedikt, president of Mental Tech, Inc., explains that, in virtual reality, one is able to "enjoy triumphs without risks and eat of the Tree and not be punished" (qtd. in Noble 159-160). In *Three Stigmata*, when the title character enters the market with a new drug, Chew-Z, the slogan of that new drug is, "GOD PROMISES ETERNAL LIFE. WE CAN DELIVER IT" (150), while the actual designers of one of the first civilian computer-communication networks opened their advertising literature with the announcement, "We are as gods and might as well get good at it" (qtd. in Noble 159), a proclamation almost comically similar to Palmer Eldritch's ad for Chew-Z.

In novels where the virtual reality world is created not by drugs but by some other technology, the transcendent aspirations are the same. In *Do Androids Dream of Electric Sheep?*, the supposedly transcendental world is created by a mechanical box to which people attach themselves in order to join with Mercer, a Jesus figure. Mercer climbs a hill while unseen villains launch rocks at him. This spiritual identification with Mercer allows a participant to climb with him to the top of the hill where exists, one assumes, some form of transcendence, an escape from the entropic decay of their planet. In *Ubik*, Herbert Schoenheit von Vogelsang owns the Beloved Brethren Moratorium where the recently deceased individuals are electronically connected to "half-life," this novel's version of the transcendental virtual reality world. In order to access the afterlife, Vogelsang must press a "portable protophason amplifier" to the casket, tune it, and listen

"at the proper frequency for indication of cephalic activity" (3), reminding us with its deliberately jargon-laden techno-babble that it is certainly a technology that is enabling this supposed transcendence to the afterlife. In all these examples, the characters hope to evolve away from the flesh in a way that is consistent with the desires of real-world virtual reality engineers.

Technologies other than variations on virtual reality are used throughout Dick's fiction for the same purpose, and one of the most interesting, and funny, examples is in *Three Stigmata*. Richard Hnatt and his wife visit Dr. Denkmal for what is called "E Therapy," the "E" standing for evolution. They pay the doctor, and the doctor straps them down to a machine that instigates "an acceleration of the natural evolutionary process" (66). Before the operation, Dr. Denkmal describes to Richard some of the consequences of the therapy:

> "[I]t may shock - in the figurative sense - at first. As you experience a growth of your cortex area. You'll have many new and exciting concepts occur to you, especially of a religious nature. Oh, if only Luther and Erasmus were alive today; their controversies could be solved so easily now, by means of E Therapy. Both would see the truth, as zum Beizspiel [sic] regard transubstantiation - you know, the Blut und. . . . In English, blood and wafer; you know, in the Mass. Is very much like the takers of Can-D; have you noticed that affinity? But come on; we begin." (68)

Dr. Denkmal rightly points out that the clients of E Therapy are the same as the Martian colonists in their quest for religious transcendence through the use of technological evolution, in this case what seems to be a form of genetic manipulation. We find, once

again, real-life counterparts to this endeavour. V. Elving Anderson, professor of genetics at the University of Minnesota, writes, "The earth does not need more humans, but perhaps it needs better humans," humans that are, among other things, more "spiritual," (qtd. in Noble 197), emphasizing the link between genetic engineering and spirituality. Genetic engineering is, according to Anderson, a fulfillment of God's "divine mandate" as prescribed originally to Adam: "fulfilling, subduing, and caring" for creation (196). We should not be surprised, at this point, to discover that the director of the Human Genome project, Francis Collins, is a born-again Christian (194), and we may be only mildly surprised to discover that a genetics company in Cambridge, Massachusetts, called itself Millennium, to highlight its perfectionist, millenarian ambitions (200). Real-world genetic engineers aspire to make the human more spiritual, just as Dr. Denkmal promises.

The most fascinating anti-entropic and potentially transcendent technology in all of Dick's novels may be the spray can of Ubik. In *Ubik*, the spray can is designed specifically to stop the half-life entropy and decay and allow its users to (re)evolve. We will explore the ramifications of the Ubik product more fully in the second chapter, but for now, let it suffice to point out that, at the end of the novel, Ubik is characterized in no uncertain terms as a deity:

> I am Ubik. Before the universe was, I am. I made the suns. I made the worlds. I created the lives and the places they inhabit; I move them here, I put them there. They go as I say, they do as I tell them. I am the word, and my name is never spoken, the name which no one knows. I am called Ubik, but that is not my name. I am. I shall always be. (201)

The spray can of Ubik, like the half-life machines, the E Therapy, the Mercer box, and all the various forms of drugs used by the characters in Dick's novels, is a technological development characterized in religious terms intended to evolve the human race to spiritual transcendence.

For two thousand years, the world feared the apocalypse. In the last century, the apocalypse was replaced by entropy, a move from a religious fear to a scientific one. Peter Freese argues that this new scientific problem steers people toward more scientific solutions (341), and this may be partially true - but the scientific solutions are obviously not divorced from religious notions of transcendence. To transcend the body is to live forever, never to decay or die. Dick's characters believe that evolution, sped up by technology, may enable them to transcend to a higher state of being, a greater truth, and once there, they will have achieved ultimate perfection and be immune to the powers of entropy, which can act only on the material world.

The problem with all of this, as we will see, is that technological evolution, in Dick, serves to *increase* entropy. Dick does not share Norbert Wiener's faith in technology to counteract entropy. While natural, genuine evolution is negentropic, technological "evolution" tends to lead, in Dick, not to evolution at all but to its exact opposite, devolution, a process in which biological systems become less complex and more disordered. Much of Dick's fiction highlights the link between entropy and devolution, and this is done perhaps most powerfully in *Ubik*. Joe Chip, in his last stand against the forces of entropy, looks down at his hands and sees "bristly skin, not like human skin," as if he had "devolved back millions of years to something that flies and coasts, using its skin as a sail" (168). Throughout Dick's fiction, individuals who

mistakenly believe themselves to have technologically evolved have in fact devolved, and in so doing, have become products and enablers of entropy. What they seek is transcendence. What they get is capitalist oppression, loss of freedom, loss of individuality, totalitarianism, and eugenics, all of which, as we will see, are symptoms of human devolution.

Chapter 2: Technology and Devolution

Technological evolution does not happen in a vacuum - in Dick's fiction, it is linked inextricably with what Fredric Jameson refers to as "late capitalism," and the negative repercussions of such evolution are often equivalent to those that arise from late capitalism. Late capitalism is defined by Jameson as the capitalism which emerged in the 1950's and 60's, whose characteristics include multinational corporations, new forms of media interrelationships, computers, and automation (*Postmodernism* xix), all of which is dependent on the advancement of technology. Jameson points out that, in Dick's political imagination, the theme of the technological "evolves . . . into that of the great corporations" and their "social power" (*Archaeologies* 374). For Dick, Jameson further explains, technology is linked to the concept of the "organization man" and all "related impersonal and anonymous business structures" that, in 1950's American culture, inspired such apprehension. Under capitalism, "equality, civil rights, humanitarianism, free speech, and open media" are sacrificed (*Postmodernism* 58-9), and technological evolution, which in Dick's work is always a product of capitalism, will have the same dangerous effects. Far from serving as a means to escape entropy and achieve transcendence, technological evolution tends to lead in Dick, first of all, to class divisions and capitalist oppression; it leads, second, to a loss of human agency; third, it leads to a loss of individuality and authenticity on the part of all objects, processes, and people - in fact, everything touched by a society that depends upon technological evolution; and finally, it leads to eugenics and a totalitarian police state. When these things happen, as we will see, the human race devolves, and entropy actively increases. This chapter will elaborate on the latter four negative repercussions, concentrating primarily on *The Three*

Stigmata of Palmer Eldritch and *Ubik*, and then show how each of them stems from attempts on the part of Dick's characters to direct and control evolution through technology.

Technological evolution in Dick's fiction, due to its dependency on the capitalist system, reinforces class divisions and capitalist oppression (Dinello 57). It permits the socially, economically, and politically privileged to maintain control over the unprivileged, creating vast disparities of wealth and power. We can find the roots of this problem partially in evolutionary theory, and so we must turn once again to the words of Charles Darwin.

The Voyage of the Beagle contains several famous entries from December 1832 to January 1833, in which Darwin encounters the natives of Tierra del Fuego, and the way Darwin describes these natives is particularly relevant. According to these entries, the inhabitants wore nothing but "tattered cloaks" (182), and their skin was of a "dirty" color (183). Six Fuegians in a canoe were "the most abject and miserable creatures" he had ever beheld (189). The "poor wretches" were "stunted in their growth, their hideous faces bedaubed with white paint, their skins filthy and greasy, their hair entangled, their voices discordant, and their gestures violent." These "barbarians," he notes, slept "on the wet ground, coiled up like animals" (190). Upon further inspection, he found that they lacked "domestic affection," and that they had a tendency, on occasion, to "devour their old women." On sight of these hideous people, Darwin could hardly believe they were "fellow-creatures, and inhabitants of the same world." This encounter with the Fuegians was to have a profound influence on Darwin's ideas about evolution. He could not believe "how wide was the difference between savage and civilized man: it is greater than

between a wild and domesticated animal, inasmuch as in man there is a greater power of improvement" (176). Darwin's insight into how much more improved he was than the inhabitants of this land helped him to better understand the various levels of improvement in the animal kingdom. These entries from Tierra Del Fuego are known for their historical value, as seminal moments in Darwin's development as a scientist, and so they are. They are also dangerous pieces of Victorian propaganda that betray the deeply ingrained prejudices underlying every word Darwin ever wrote about the evolution of the human race. In 1836, Darwin made his way to Australia, where he met the aboriginal tribes, his descriptions of which are marginally more sympathetic. Their "countenances were good-humoured and pleasant," and they could even speak a little English. He considered them expert trackers and good artists, and a handful of their remarks "manifested considerable acuteness." They failed, however, to cultivate their land or to build houses, and they stubbornly refused to tend sheep. "On the whole," Darwin decided, "they appear . . . to stand some few degrees higher in the scale of civilization than the Fuegians" (387).

I am, of course, not arguing that Darwin invented cultural prejudice - he was, in fact, an abolitionist - I am only arguing that, because Darwin is considered the foremost authority on early notions of evolution, his (very common) political views and biases would inevitably become intertwined with the science. The precedent he sets here is that there are objective, scientifically quantifiable hierarchies of ethics, morals, and aesthetics within the human race, and this principle was to anchor itself to his theories all the way through the 20th century. This is the foundation of Social Darwinism, in which the different levels of civilization in mankind are so unequal as to amount essentially to

different species, and even though Darwin was not himself a Social Darwinist, the rhetoric used throughout *The Descent of Man* no doubt helped fuel the tradition. He states that the sense of smell is "much more highly developed" in the "dark coloured races of men" than in the "white and civilised races" (35). He points out that the hands and jaws of the gentry are smaller than those of the labouring classes (51). He reports that microcephalous idiots "often ascend stairs on all fours" and are "curiously fond of climbing up furniture or trees" (54). From Darwin's tour of the human race, we can make out the various sub-races, including Fuegians, Australians, white people, coloured people, gentry, labourers, and idiots. These sub-races fall on different levels of the ladder of civilization, but the white English gentry clearly take the top spot. Darwin's prognosis for the future of the various inferior races of mankind is grim: "At some future period, not very distant as measured by centuries, the civilised races of man will almost certainly exterminate, and replace, the savage races throughout the world" (183), and we see this extermination play out in various ways throughout the novels of Philip K. Dick.

In the sub-dividing of humanity into civilized and savage, wealth and class play a vital role. Dick's concern over unequal distributions of wealth is manifest in his non-fiction writing. In his essay "Strange Memories of Death," Dick calls money the "official seal of sanity" (38). Divisions of wealth dismay him. "A fiscal entry in the computer at Mutual savings divides us," he writes, "and it is a mythical division . . . nothing more than a social convention, like wearing matching socks" (42). He unequivocally states that "money rules" (39), calling the search for wealth "one of the great corrupting drives" ("Who Is an SF Writer?" 70). Most aptly, he points out the "very poor [who] live to the East . . . the Mexicans in their barrio" ("Strange Memories" 39), and by specifying their

nationality, he hints at the common representation of a division of wealth as a division of race.

In *Descent*, Darwin discusses the link between wealth and natural selection and acknowledges that the wealthy have an unfair advantage "independently of bodily or mental superiority" (160). The rich have better opportunities to succeed in life and improve their stock by, for example, getting their pick of the most beautiful women (161). Darwin claims that, despite these unfair advantages, the most intellectual, patriotic, and benevolent will still tend to procreate the most (168), but this optimism is undermined by his disquieting conclusion, in which he advises that "all ought to refrain from marriage who cannot avoid abject poverty for their children" (688). This recommendation, while perhaps reasonable on the surface, carries with it vast repercussions. To discourage the poor from procreating would effectively prevent them from partaking in the evolutionary process. Darwin echoes Thomas Malthus' *Essay on Population*, in which Malthus gives reasons why the poor should procreate less. If the poor were to stop having children they can't afford, natural selection would begin to act only on the rich. The poor would stagnate, fall behind, and eventually die off while the rich, who could afford as many children as they like, would continue to evolve until they constituted a different species, a "more perfect" species "a few degrees higher" on the scale of civilization and evolution. It has even been argued that Darwin's theory of natural selection was an anti-revolutionary stance intended to naturalize and legitimize hierarchies of power in Victorian Britain (Radick 154). The science of evolution dictates, after all, that competition is the way of biological life, and thus is the aristocracy, with their competitive advantage, protected by Darwinian science. In *Descent*, Darwin

declares that the wealthy class must be protected for the sake of humanity. He believes vehemently in the inheritance of property, for "the presence of a body of well-instructed men, who have not to labour for their daily bread, is important to a degree that cannot be over-estimated" (160). Darwin's theory of evolution can thereby be read as an argument for laissez-faire capitalism. Other 19th-century thinkers who helped further the divide between the classes include Herbert Spencer, who coined the phrase "survival of the fittest," and Francis Galton, who coined the term "eugenics" (Black 12-14), the project of ensuring the continuation of only the most desirable human stock. The thrust of their argument was that the poor, who were genetically subhuman, should remain poor, and responsibility for the evolution of mankind should be left to the rich.

It is not only evolutionary theory that, in Dick's fiction, allows these unfair class divisions to persist. We must also take into account the factor of technology, which offers a means for the wealthier classes to put these evolutionary theories into practice. Technology, as described in Jacques Ellul's *The Technological Society*, has since the 19th century been a function of bourgeois money (54). Profit was the primary means of and the primary motive for technological development - wealth allows for the creation of new technologies, and new technologies create more wealth. Technological evolution is then "a matter of . . . sufficient funds, rather than a reward for living a morally good life" (Dinello 24). A fusion arises between "corporate control and high technology," the combined power of which "perpetuates and enhances their dominance" (51). Social equality "becomes a myth" (Ellul 198), and technological development becomes a means for corporations and other possessors of wealth to increase their profits while exploiting the "unfit" below them.

Throughout Dick's work, we find hierarchies of power enabled and sustained by technological evolution. In *Our Friends from Frolix 8*, for example, the ruling class consists of New Men, the rich and powerful elite of evolved human beings.[2] The New Men rule over the Old Men, who are considered "subpar" (9). Those who have not evolved receive food rations, live in squalor, and do the manual labour (14). Nick, the unevolved protagonist, is a tire regroover, and, in an echo of Darwin's sub-dividing of humanity, he refers to the tire regroovers as a "race" (34). In *Now Wait for Last Year*, people dying of various ailments may prolong their lives with the purchase of artificial organs that can only be afforded by the rich (24); and thus is created an upper class race of cyborgs, technologically evolved humans who have purchased the right to live longer. In *Flow My Tears, the Policeman Said*, there is a technologically evolved class of Sixes, who generally think of the unevolved masses as "ordinaries" and "morons" (5). The Sixes are "an elite group, bred out of aristocratic prior circles to set and maintain the mores of the world" (132).

The hierarchies of power exacerbated by technological evolution are perhaps most compellingly represented in *The Three Stigmata of Palmer Eldritch*. We have already met Dr. Denkmal, kind supplier of E Therapy, but E Therapy is, of course, very expensive, and only the "well-to-do" (67) and the "rich" (141) can afford it. One such individual is Leo Bulero, an "evolved" corporate president who spends all his free time on the resort beaches of Antarctica (7). As a proud member of the privileged class, he looks condescendingly at the unevolved in a way reminiscent of Darwin's attitude towards the Fuegians and Australians. In one impressive swoop of classism and racism, he calls a political enemy a "dark-skinned sneaky little unevolved politician" (19). Later

in the book, Bulero gets a taste of his own attitude from the opposite end – he meets two humans from the future, decades advanced in their own E Therapy, who look down on Bulero as a "freak," an unevolved "near man" (101). Such is the reality of class divisions in a capitalist society: because positions of power are based on material wealth and social advantage rather than inherent worth, those who are privileged now may eventually become victims of the very system that fed their success, if they do not find new and faster ways to exploit those around them. Meeting these two evolved future humans should serve as a reminder to Leo Bulero of how superficial, precarious, and potentially fleeting is his own economic and "evolutionary" success.

Richard Hnatt, meanwhile, is an unsuccessful businessman. The moment he makes a big sale and finds himself wealthy, he naturally decides to buy E Therapy (34). "Look at the doors it'll open to us," he proclaims to his wife. By evolving, he hopes for him and his wife to become "personae gratae everywhere" or "society people" (35). Hnatt believes that evolving will be of "economic value" (35), and as Dr. Denkmal plugs him into the machine, he prays to God that his evolution will "increase sales" (70). Earlier, Hnatt needed money to evolve, and now, he hopes evolution will in turn make him more money, and here we see how technological evolution creates and enhances the divide that excludes the poor and makes the rich richer.

The Can-D experience of the Martian colonists is a form of technological evolution in the novel that illustrates how subservient such evolution is to capitalist systems and corporate control. Bulero, in addition to being a recipient of E Therapy, runs an interplanetary corporation that sells his own variety of evolution to the colonists, in the form of the drug Can-D. When the colonists chew the drug, their minds are transported

out of their fleshly bodies into the world of Perky Pat, a dollhouse Barbie-and-Ken replica of Earth in which women get to be Pat and men Walt. No one really knows how it works, exactly - there are numerous theories bandied about among the characters regarding the true nature of the experience - but whatever the truth may be, the effect is of a detailed virtual reality outdoor funhouse. Walt owns a "Jaguar XXB sports ship . . . his shirt [comes] from Italy, and his shoes [are] made in England" (43). Pat owns a brand new "Ford hardtop convert" (40), an "enormous wardrobe" (42), and a new swimsuit from Sweden (44). They both live in "modern" apartments in San Francisco and spend their Saturdays sunbathing on the beach (45). This is their transcendental fantasy world, a world of material wealth and ostentation, but it doesn't come cheaply. The colonists must first purchase all these material goods in doll-size versions called "layouts," which they place in the middle of a circle they sit around when they chew the drug. Every new car or swimsuit owned by Walt or Pat in the fantasy world has been purchased by the colonists in advance, and so, the spiritual world the corporation promises is only as good as the material goods with which the customer has filled it. The colonists, believing they are evolving into a transcendental state, are merely being assimilated into a capitalist system of never-ending exchanges in which corporations continue to use the promise of religious escape to make themselves more money. Jacques Ellul speaks of how, in a technological society, religion is permitted, even encouraged, so long as it stays within and helps maintain the technological and capitalist framework. "Nothing belongs any longer to the realm of the gods or the supernatural," Ellul writes (143), and the Can-D experience in *Three Stigmata* plays this theory out. The company that sells the drug also sells the layouts, and thus is the company ensured that, as their customers' transcendental

experiences improve by virtue of more and greater material goods, so too do their own profits.

The Perky Pay layout world in *Three Stigmata* is similar in some ways to the half-life world in *Ubik*. Both are corporate-controlled technologies that use the promise of religious transcendence to make the corporation more money. Half-life, a technologically mediated communication with the afterlife, is another technology only available to the rich (4), and, much like E Therapy, it seems designed to keep them rich. Indeed, the only people we see investing in half-life are those who need financial advice from their dead business associates. Glen Runciter is in the moratorium consulting with his wife at the beginning of the novel; Ella wants to tell him about her experiences in the afterlife, about a "smoky red light" (11) and magical transformations into various people, but Runciter, apparently bored with the subject, insists on talking about his business competition (11). When something goes wrong, and they lose contact with each other, he panics that "not only [had he] lost Ella; he had also lost her advice" (15). Clearly, the main reason Runciter has any use for the afterlife is so Ella can keep helping him run the company. When Runciter's employees later believe him to have been killed, they fight to get him to the moratorium on time, but the urgency, again, seems to revolve around their immediate need for his business leadership: "We may have to run Runciter Associates without him," Joe Chip warns. "We may have to depend on what's left of Ella" (69). In the world of *Ubik*, the afterlife, this world's chosen form of technological evolution, has become just another commodity (Freedman 14), merely a tool to help wealthy capitalists better run their businesses.

Glen Runciter's employees eventually discover they are trapped in the half-life world themselves, and when that world begins to decay, they turn for help to another technology, the spray can of Ubik. It is notable that, when one technology fails to bring transcendence, the characters can only conceive of being saved by yet another technology. Like half-life, Ubik is a technological form of evolution that claims to guarantee immortality, and no better than half-life, it is deeply imbedded in the capitalist system. At the beginning of each chapter, Ubik is advertised as a different product, from beer to coffee to salad dressing to stomach medication. It may promise salvation, but it is most certainly a commodity. As Joe Chip scrambles about the half-life world trying to acquire a can of Ubik, his biggest obstacle is that he lacks the funds. He attempts to buy Ubik from the druggist, but he has no cash, and the druggist won't accept a check, nor does the druggist know what a credit card is (154). Joe Chip would love to be able to fight entropy with this technological marvel, but for a while, he simply cannot afford it.

The other problem for Joe Chip is that Ubik keeps devolving into inferior forms of technology that no longer function. So, for Joe Chip to be able to use Ubik the way it is intended, it needs to be constantly subjected to technological progress. In the half-life world, this progress amounts essentially to concentrating really hard, but the half-life world is largely a figment of their collective imaginations, and if taken as a metaphor for the outside world, Ubik's technological advancement, like any real-world technological advancement, would require more funding. Engineers would require money to develop it, supplied by corporations or governments who no doubt intend to profit from it, and potential consumers would require money to buy it. Just like the half-life world, then, the Can-D fantasies, and E Therapy, this promised transcendence is allied to and limited by

material wealth. To attempt technological evolution in a Philip K. Dick novel is to enter the world of capitalist exchange and to transform oneself primarily into a consumer.

Many of Dick's novels emphasize this transformation from technologically evolved superhuman into mere consumer, and it is highlighted perhaps most effectively in a funny bit of dialogue from *Flow My Tears, the Policeman Said.* In this novel, Jason Taverner, the evolved Six, wakes up after a nasty bump on the head to find himself in a world where he does not exist. He immediately calls up Heather Hart, another Six who is currently his lover, and tries to get her to remember him. He uses the tactic anyone in such a situation would use: he tells her things only a lover could possibly know. His attempt, however, is bizarre, to say the least:

> When you're with one of your lovers you glue [your imitation tooth] into place in your mouth with a special epoxy cement that you buy at Harney's. But with me you sometimes take it out, put it in a glass with Dr. Sloom's denture foam. That's the denture cleanser you prefer. (57)

Heather Hart is about to hang up on him. At this moment, Taverner has only seconds to convince her that they know each other, that they are in fact lovers, and the most important and convincing memories he can think to evoke involve name brands of products and advertising slogans. This ridiculous and revealing interchange demonstrates the extent to which the Sixes have any kind of relationship with each other - those who evolve technologically relate to one another, and essentially exist, primarily as consumers.

As a consumer, one is vulnerable to oppression from those who are better consumers, or those who have more money or power with which to consume. In *Three*

Stigmata, Palmer Eldritch arrives from outer space as a competitor for Leo Bulero, promising the Martian colonists a truer immortality. Palmer Eldritch is perhaps the best embodiment in all of Dick's novels of a technologically evolved human. He is the wealthy leader of what he hopes will become a massive, interplanetary corporation. He has an artificial arm that provides "a specialized variety of interchangeable hands." He has "enormous steel teeth . . . welded to his jaws" (161). He has replacement eyes "fitted into the bone sockets" which allow a wide-angle, panoramic view (162). Patricia Warrick believes that, once Eldritch enters the picture, the theme of economic exploitation is dropped from the novel in favour of more religious concerns (*Mind in Motion* 108), but that judgment is too hasty. Palmer Eldritch may be evil incarnate, he may be a God or the devil, he may be a cyborg, but he is, above all else, a consumer. Eldritch's mechanical parts are very expensive (162), and his status as a technological mutant is therefore dependent upon earlier successful business ventures. Eldritch represents a corporation not only in the factual sense but also in the metaphorical one: his actions throughout the novel stand in for Dick's conception of how multinational corporations function. Eldritch intends to sell Chew-Z to the colonists and put Leo Bulero, and all his employees, out of a job. He intends, like Bulero, to take advantage of his customers' religious beliefs in order to spin a profit. He is, in the words of Darko Suvin, a "mad capitalist" (83), very much a purveyor of economic exploitation. And, in Eldritch, as we will see, Dick has taken this notion of capitalists-as-consumers to its most extreme and horrifying end.

In a technological society, happiness and a meaningful life are related to consumption (Ellul 221). Human beings in such a society possess a "mad desire" to buy, to consume, and to chase after and acquire anything they can. Ellul calls this mad form of

consumption "gorging" (221), and Dick, in characters like Eldritch, literalizes the metaphor by portraying technologically evolved capitalists as people-eating and world-eating cannibals. Eldritch is perhaps Dick's most potent capitalist-cannibal, and his steel teeth and jaws no doubt give him a distinct advantage in his mad rush to ingest everything in his path. The first thing Eldritch ingests, evidently, is his own face: "It had a ravaged quality, eaten away; as if . . . the fat layer had been consumed, as if Eldritch at some point or other had fed off himself, devoured perhaps with gusto the superfluous portions of his own body" (*Three Stigmata* 161). Later in the book, as Eldritch's economic reach continues to spread, Barney Mayerson disappears, and Leo Bulero concludes, "Eldritch probably ate Barney Mayerson" (182). Bulero characterizes Eldritch as "a great mouth" (186), and he comes to understand, by the end of the novel, that Eldritch, as he strives to monopolize the economy, has to "ingest and grow . . . spread[ing] out farther and farther" (227). Palmer Eldritch's technological evolution is a product of capitalist wealth, and to continue to evolve, and ensure his economic supremacy, he must continue to consume.

Ubik has its own version of a technologically evolved capitalist-cannibal, in the form of the dead child Jory. Jory is preserved in half-life, which means he comes from a wealthy family. Moreover, in order to prolong his existence in the half-life world, and give himself technological immortality, he "feeds" off other half-lifers (180), thereby speeding up their entropic decay and delaying his own. Jory explains that, in order for him to continue to "live" and fight the entropy, he literally eats people. "I ate Denny a long time ago," he says. "I eat their life. . . . I ate [Pat] out in the hall by the elevator, and then I ate the others" (184). We are told, significantly, that there are beings like Jory in

every moratorium, beings that feed off the other half-lifers (195), just as there are, in every capitalist system, those that consume and those who are consumed. In Jory's case, as in Eldritch's, technological evolution leads to a necessity for constant consumption, and it is always those with less power and standing in the economic system who are the victims of that consumption. Whenever a society in these novels allows for technological evolution, the results are class divisions, capitalist oppression, corporate exploitation, and a cannibalistic frenzy of gorging.

The second major repercussion of technological evolution in Dick's work is that, within the capitalist system, technological evolution removes from the human being the power of agency. We have already seen how agency and a certain kind of freedom are removed through capitalist oppression, but in this section, I will focus specifically on the nature and details of this loss of agency, which is due not only to capitalist oppression but to the very nature of technology itself. According to Jacques Ellul, technology relies on efficiency, order, predictability, and exactness. To function, it must be absolutely autonomous and not subject to the changing desires and whims of free individuals. It requires complete predictability, and nothing within it or surrounding it must be left to chance (138). It was Karl Marx who, in the 19th century, formulated the first coherent theory of autonomous technology (Winner 37). In *Capital*, Marx describes a factory as "a huge automaton . . . driven by a self-acting prime mover . . . [which] executes, without man's help, all the movements requisite to elaborate raw material" (416). Human agency to control the machine is absent. "Inside the factory," Marx notes, "we have a lifeless mechanism independent of the workman, who becomes its mere living appendage" (461-2). Jacques Ellul elaborates on this theory:

> Human life . . . has room for activities that are not rationally or systematically ordered. But the collision between [technology] and spontaneous activities is catastrophic for the spontaneous activities. Technical activity automatically eliminates all nontechnical activity or transforms it into technical activity. (82-3)

Technological systems cannot function spontaneously. People working under these powerful, technologically run corporations must be made to adapt themselves to the technological environment, and in the process of interacting with these technologies, the individuals are themselves transformed into objects, or mere appendages, whose sole purpose becomes to serve the predictable and ordered needs of the machine. The power to choose and direct one's life creatively and spontaneously is eliminated, and every human being becomes a mechanical slave to the technological system in which he or she is embedded.

At times, Dick portrays the technological elite's attempts to remove agency from the individual as light-hearted satire. In *Three Stigmata*, Barney Mayerson carries around a portable computer psychiatrist that measures neurosis in "Freuds of stress" (6). The existence of such a system of measurement, and indeed of an electronic psychiatrist, is predicated on the assumption that human behaviour is quantifiable and predictable, but presuming that a human being is controllable does not make him so. These psychiatrists are shown to be useless in terms of accurate diagnosis, for an individual can use one of them to be diagnosed with anything he pleases. Mayerson, in this case, is using the psychiatrist to prove himself neurotic and therefore ineligible for the draft to the Martian colonies (21).

There are instances, however, where this loss of agency is seen as a very serious threat, and the Can-D experience dramatizes this threat particularly well. When the colonists chew Can-D and frolic on the beach as Pat and Walt, their bodies lie limp on the floor while "a thin trickle of shiny brown syrup emerge[s] from each of their slack, will-less mouths" (48). This loss of bodily will, a deliberately unsettling image, follows them into the Perky Pat world and transforms there into a more wide-ranging and disguised lack of agency. The colonists imagine themselves to be free while "translated," but their choices are in every way determined by outside, not necessarily benevolent, entities. As Palmer Eldritch points out, "The structure of their fantasy environment is limited to the artifacts actually installed in their layout; they can't operate the automatic dishwasher in the kitchen unless a min of one was installed in advance" (89). This may not even be true - one character claims it has been established that "the props were no longer necessary as foci" (142) - but if the colonists believe it to be true, as evidenced by their continual purchase of the miniature layouts, it amounts to the same thing: in their transcendental realm, the colonists are limited to whatever products they have purchased and installed. Their choice of purchases, moreover, is dictated by the whims of the corporation. Furthermore, the colonists continue to purchase products they most likely don't even need. And aside from all that, they are still stuck on Mars, and the availability of Can-D doesn't seem to make them any happier. Sam Regan realizes that "in no way were they free" (50).

Palmer Eldritch tries to sell Chew-Z to the colonists, insisting that his drug-induced transcendental realms supply a much greater freedom to the customer than Can-D, but this too turns out not to be true; Eldritch, we are told, is being controlled by the

Proxers, and so the distribution of the drug throughout the solar system amounts to an alien invasion (80). Eldritch himself, furthermore, controls these worlds. He is the God of the Chew-Z realm, and whether he is under Proxer control or not, he entraps all those who chew the drug, and eventually even those who do not. People who believe they have escaped from that realm find to their terror that they are still trapped inside it. As the user keeps waking up from what he believes to be the final hallucination, the nested realities form an infinitely expanding prison, and not even by the end of the novel can we be certain that any of the characters have succeeded in escaping Palmer Eldritch's universe. To chew Eldritch's drug is "not to become the liberal autonomous subject capable of free thought and action, but . . . the subject or pawn in a capitalist's game, imprisoned for aeons in a universe that a terrifying and menacing alien has created to increase his profits" (Hayles 170).

We find the same kind of nested realities in the half-life world of *Ubik*. Just as we are never certain if anyone has escaped from the Chew-Z world, we are never certain who is inside half-life. At the end of *Ubik*, just when we think all has been explained, Glen Runciter removes a coin from his pocket and finds Joe Chip's face on it. This would seem to indicate that Runciter, too, is in half-life, which, rather than illuminating the rest of the novel, makes a complete explanation impossible. As Darko Suvin asks, "After the explosion of the moon, is Chip, or Runciter, or neither, or both in the state" of half-life? One can never know. The half-life world, like the Chew-Z realm, represents "a loss of sovereignty over one's microcosm" (91). Individuals who have attempted technological evolution, and who now believe themselves to be in the free world, find that they are

trapped in a technologically constructed prison, the walls of which they can't even perceive.

A human being without agency is often, in Dick, characterized as a thing or an insect, and he discusses this phenomenon in his non-fiction writing. For Dick, it is always the villain who "looks on other creatures in terms of sheer utility." People are merely "objects" to him ("'Headnote'" 107), and this villain who turns people into objects often, in Dick's fiction, takes the form of a technologically run corporation. Baudrillard, in *Simulacra and Simulation*, argues that technological capitalist society makes masses of people equivalent to masses of products (67). "Stockpiles of objects," he argues, lead to "the construction of stockpiles of people . . . the production *of the masses*. The masses as the final product" (68). People in such a society, rather than actively directing their fate, are bought and sold as things.

For Dick, the most terrifying thing a human become can become is a "reflex machine." In "The Android and the Human," Dick discusses this outcome in a technological society:

> [W]e may find that we - the so-called humans - are becoming, and may to a great extent always have been, inanimate in the sense that *we* are led, directed by built-in tropisms, rather than leading. . . . And what is it that, at least up to now, we can consign as merely machine behaviour, or, by extension, insect behaviour, or reflex behaviour? And I would include in this the kind of pseudohuman behaviour exhibited by what were once living men - creatures who have . . . become instruments, means, rather than ends, and hence to me analogues of machines in the *bad*

> sense. . . . The reduction of humans to mere use - men made into machines, serving a purpose that . . . employed what I regard as the greatest evil imaginable: the placing on what was a free man who laughed and cried and made mistakes and wandered off into foolishness and play a restriction that limits him, despite what he may imagine or think, to the fulfilling of an aim outside of his own personal - however puny - destiny. (187)

For Dick, a loss of freedom can be a physical, actual loss of the ability to choose or alter one's direction, a loss of what Wiener has called feedback. This constitutes the transformation of a human being into an insect or a reflex machine. Norbert Wiener, in *The Human Use of Human Beings*, extrapolates on the notion of an insect as a being without feedback. "The very physical development of the insect," Wiener explains, "conditions it to be an essentially stupid and unlearning individual, cast in a mold which cannot be modified to any great extent" (51). Because the behaviour of an insect in its adult stage "must be substantially perfect from the beginning . . . the insect is rather like the kind of computing machine whose instructions are all set forth in advance on the 'tapes,' and which has next to no feedback mechanism to see it through the uncertain future" (57). To help illustrate how an insect acts without spontaneous decision-making power, here is a description by Daniel Dennett of a wasp bringing food to its nest:

> The wasp's routine is to bring the paralyzed cricket to the burrow, leave it on the threshold, go inside to see that all is well, emerge, and then drag the cricket in. If the cricket is moved a few inches away while the wasp is inside making her preliminary inspection, the wasp, on emerging from the

> burrow, will bring the cricket back to the threshold, but not inside, and will then repeat the preparatory procedure of entering the burrow to see that everything is all right. (11)

Because the wasp has no feedback mechanism, this process can go on indefinitely. In Dick's fiction, technological evolution can transform a human being into a creature very much like the wasp, who cannot make his own decisions, alter his own patterns, or control his own destiny.

One may find Palmer Eldritch's treatment of Barney Mayerson under Chew-Z confusing - Eldritch is, after all, allowing Mayerson the chance to fix his past mistakes, to get back together with his ex-wife. He even allows Mayerson the chance to try as many times as he likes until he succeeds. This may appear to be a kind of freedom, but what Eldritch has done to Mayerson is insidious - in giving him the opportunity to try his luck an endless number of times, he has removed Mayerson's power to choose and transformed him essentially into Daniel Dennett's wasp. In the Chew-Z world, Barney's first attempt to regain his ex-wife is a failure. But once Barney wakes up from the drug, he instantly wants to try again, "again and again" (188), until he succeeds. The experience seems to Mayerson like Hell, "recurrent and unyielding" (176), the "condition of slavery." He knows it is the end of his humanity, that he cannot defeat the temptation to try "hundreds of times" (187). He knows he has no agency to break the pattern. Given the opportunity, Mayerson would keep attempting to get his wife back indefinitely. The freedom felt in the Perky Pat world to run around on the beach like eternal teenagers is equivalent to the freedom felt in the Chew-Z realm by Mayerson to alter his own past - it is an illusion of freedom that disguises inescapable entrapment.

The bleakest and most widespread loss of freedom and feedback that takes place due to technological attempts at evolution in Dick's fiction may be in *A Scanner Darkly*. In this novel, countless human beings have been deprived of agency by an addiction to Substance D and transformed into creatures like the wasp. Charles Freck tells of a man with damaged receptor sites who tried for over a month to wax the same floor without ever figuring it out (17). Similarly, Bob Arctor believes that the junkie Jerry Fabin, if forced to take apart a simple machine, would "still be there now, screwing and unscrewing the same screw" (65). Bob Arctor, throughout the novel, characterizes junkies as machines without feedback. He describes the junkie as "a reflex machine. Like some insect. Repeating doomed patterns, a single pattern, over and over" (65).

Bob Arctor is himself destroyed by the drug at the end of the novel. Now called Bruce, he has "become a bug . . . an insect that clacks and vibrates about in a closed circle forever. A reflex machine, like an ant. Repeating his last instruction" (265). As the junkies sit around chatting, they joke about a method of smuggling dope across the border; they imagine a pile of hash carved into the shape of a man, with a tape recorder inside it, that is programmed, when asked if it has anything to declare, to answer, "No, I don't." Then, they imagine the hash-man walking for thousands of miles, repeating over and over again, "No, I don't," unable to break the pattern (193). The image of the hash-man is an effective metaphor for the body of the junkie, transformed into the drug itself, the product, with no ability to make free decisions or break endless patterns. For Katherine Hayles, "junk" is the "ideal product" in a capitalist society. The junk is not sold to the consumer; the consumer is sold to the junk, and hence the human body becomes an inanimate thing, a commodity, to be bought and sold. Hayles calls the

junkie's body a "harbinger of the postmodern mutant" (42). It epitomizes how completely technological forms of evolution have destroyed the junkie's power of agency. Arctor imagines the junkie waking up in the morning:

> [A] machine cranked from position A to position B. "It - must - be - day," the junkie says, or anyhow the tape in his head says. Plays him his instructions, the mind of a junkie being like the music you hear on a clock radio . . . it sometimes sounds pretty, but it is only there to make you do something . . . the music from the junkie is to get you to become a means for him to obtain more junk, in whatever way you can serve. He, a machine, will turn you into his machine. Every junkie . . . is a recording. (*Scanner Darkly* 159)

We see here a metaphorical form of what Ellul calls "automatism" (80), technological evolution that directs its own development. Basically, a new technological invention, if it is more efficient than an old one, will choose itself. Mankind may appear to be choosing, but the less efficient technology is not a true option, but only the illusion of an option, because humanity will never *not*-choose the most efficient technology. Human choice, then, to direct technological development becomes minimal. The literal end of automatism would be a machine that can build and develop new machines without the intervention of human choice. We see this phenomenon in *We Can Build You*, when a simulacrum of Stanton, newly appointed Chairman of the Board of a company that constructs simulacra, makes the suggestion to "produce . . . workers who can themselves produce more simulacra" (142). In that novel, it is only a passing suggestion. In *A Scanner Darkly*, we see the automatism as a sort of plague - junkies everywhere turning

into machines and spreading across the land, transforming all who come into contact with them into more machines. The landscape of the novel evokes a post-apocalyptic zombie epidemic, except that instead of zombies, they have become creatures without feedback, mere machines and recordings. The junkies, through their attempts to evolve using Substance D, have turned themselves and one another into beings no better than insects. In Dick's novels, then, as we have seen, technological attempts to evolve tend to limit individual choice and the ability to possess any control over one's environment, as it does the chewers of Can-D and the people in half-life; at worst, it transforms free-thinking individuals like Barney Mayerson and the *Scanner Darkly* junkies into circular, mindless, predictable insect-creatures, creatures with no power to alter their destiny based on information from the outside world.

The third catastrophic result of technological evolution in Dick's work is that it obliterates in a society all individual identity in things, processes, and people. We may think of this identity as authenticity or uniqueness or "the real." Fredric Jameson describes a late capitalist technological society as flat and depthless (*Postmodernism* 9), depth having been replaced by "surface," mere images (12). Technology allows for the mass production and simulation of material objects, and Jean Baudrillard and Fredric Jameson both argue that the existence of a simulation destroys the existence of the real. For Jameson, all "essential content" deteriorates and disintegrates at the hands of simulation (*Postmodernism* 33). Baudrillard describes objects under mass production:

> The problem of their uniqueness, or their origin, is no longer a matter of concern; their origin is technique, and the only sense they possess is in the dimension of the industrial simulacra. . . . The relation between them is no

> longer that of an original to its counterfeit . . . but equivalence, indifference. In a series, objects become undefined simulacra one of the other. . . . Only the obliteration of the original reference allows for a generalized law of equivalence, that is to say *the very possibility of production.* (*Simulations* 97)

The duplication of an object, then, by definition, obliterates the notion of an original and renders both artificial. Baudrillard (*Simulacra* 65) and Jameson were both greatly influenced by the novels of Philip K. Dick, and one can easily see the source of many of their ideas. *The Man in the High Castle* is Dick's famous depiction of a world in which the Nazis have won the Second World War. In this alternate reality, there is an entire industry of fake pre-war American artifacts sold under false pretences primarily to the Japanese. Frank Frink, on contemplating the fake-artifact industry, helps to explain what are essentially Baudrillard and Jameson's theses:

> In fact, as far as he knew, it had never occurred to [the Japanese customers] to ask themselves if the so-called historic art objects for sale in West Coast shops were genuine. Perhaps someday they would . . . and then the bubble would burst, the market would collapse even for the authentic pieces. A Gresham's law: the fakes would undermine the value of the real. (48)

Dick was fascinated by the notion of a society consisting of nothing but the artificial. His novels are a catalogue of artificial objects, from imitation canvas and leather (*Ubik* 22) to synthetic cement (*Three Stigmata* 10) to fake teeth (*Friends from Frolix 8* 26) to melted imitation cheese and fake ground beef (*Scanner Darkly* 30), to fake taxi drivers, waiters,

presidents, and psychiatrists. To emphasize a simulation's obliteration of the real, there are even "authentic simulated-leather loafers" (*Ubik* 96). Nothing in these technological societies seems to be real.

In the process of the simulation of these objects, they are made more "perfect" than the originals, and it is this perfection that, for Baudrillard, is most problematic. Americans, for example, pride themselves on having brought the Native Indian population back to pre-Conquest levels, and these simulations of Native Indian communities have actually produced more Indians than the Indians originally did (*Simulacra* 11). Baudrillard argues that this obsessive perfection of our simulations is a product of our need to remove all stakes, all danger of change and disruption, which is, in our present context, a product of our fear of entropy. A simulation, it is believed, can last indefinitely because, distinct from anything "true," it is nothing but "the object of a social demand" (26). Frank Frink, in *The Man in the High Castle*, is well aware of the direct link between simulations and social demands. He understands why the Japanese do not question the authenticity of their pre-war artifacts:

> [A]fter all, everyone was happy. The factories, here and there in the various cities, which turned out the pieces, they made their profits. The wholesalers passed them on, and the dealers displayed and advertised them. The collectors shelled out their money and carried their purchases happily home, to impress their associates, friends, and mistresses. (48)

A simulation, as the object of the law of supply and demand, is "no longer subject to violence and death" (Baudrillard, *Simulacra* 26). It is now entirely dependent upon "mass production and consumption" and is conceived of "from the beginning as a function of

[its] unlimited reproduction" (99). A single, unique, "real" object can die, or be lost, or change in some unpredictable way. The creation of the simulation is thus thought to bring to the object complete predictability, indestructibility, and immortality. In a technological society of mass production, "nothing [is] left to chance." The system endeavours to create a perfect world "without flaws." The result, however, according to Baudrillard, is "a universe purged of all threat of meaning . . . in a state of asepsis and weightlessness" (34), what Jameson has referred to as depthlessness. The "real" is entirely eliminated. What mass production and perfection seek to save, they destroy.

In *Ubik*, the spray can technology that promises evolution is a simulation that destroys the real. Norbert Wiener believes the ambition of our technological society of mass production is to "invent the universal solvent which will dissolve any solid substance" and "the universal container which will hold any liquid" (129). Similarly, Baudrillard argues that technological mass production attempts to create "an ideal counterfeit of the world, expressed in the invention of a universal substance and of a universal amalgam of substances." The goal of these amalgamations is to "reunify the scattered world . . . under the aegis of a homogeneous doctrine, [and] universalize the world under a single word" (*Simulations* 89) in order to make it "more intelligible" (91). Mass production of simulacra possesses "the ambition to take up the creation of the world where God had left it, in its natural phase, so as to eliminate its organic spontaneity and substitute for it a single, unique and polymorphous matter" (90). These are methods on the part of capitalist society of ensuring the deathless perfection and predictability of the world. In *Ubik*, the solution to all of mankind's suffering is the one comprehensible and universal product of Ubik. Every product produced is the same product, Ubik. For

Jameson, capitalist technological society signals the end of "the unique and personal, the end of the distinctive individual brush stroke" (*Postmodernism* 15), and Ubik is the result. It is the universal solvent and the universal container. In *Ubik*, all products are now made of the same homogenous, polymorphous material - a magic, mass-produced solution to all of mankind's problems.

Ubik's nature as a single polymorphous matter can even be seen in the structure of its advertising. Advertising, for Baudrillard, is a universal language; it is a "simplified operational mode" in which all particular contents "can be transcribed into each other." Regardless of the form of product it takes, Ubik is always advertised in the same clichéd advertising jingles, a "strategy of the universalization of differences" (*Simulations* 87). Michael Bishop perceives Ubik in a strangely idealistic way; he argues that its source of power is inner spiritual strength, and that it "embodies an awesome hope for us all" (147), but Bishop is missing the irony of the product. Ubik is characterized as God in order to highlight how it has replaced Him, how materialism and accumulation of products has replaced Him. Ubik may be what "helps John Doe or Joan Foe make it through the Dark Night of the Soul" (Bishop 147), but what helps them is exclusively capitalist. It is the law of supply and demand and therefore under mankind's control. It is the exact same as every other product, in a world devoid of individual brush strokes. It is the "universal equivalent" which can represent or replace any commodity (Freese 154) and is the essence of social need fulfilled. Ubik is advertised as a tool for technological evolution, and because of it, all individual differences among material substances in this world are lost. This effect can also be seen in the novel by the transformation of all

money into "Runciter" money (98). In the technological and capitalist half-life world, even the money is subject to the mass homogenization and simulation of all substances.

It is not only material objects that suffer this obliteration at the hands of mass production. Even processes that have been mass-produced are affected. Most relevant to our discussion is the notion of simulated evolution. In *Three Stigmata*, human evolution, in the guise of E Therapy, has been simulated and turned into an object of supply and demand. Darwinian evolution is unpredictable, the result of countless accidental mutations, and Dr. Denkmal, in simulating it, has made it more "perfect." It can now be reproduced at will, and the end result is almost always the same. The process has been purged of all danger, all violence, and all chance. If one wishes to evolve, one need not wait millions of years and hope for luck - all one need do is buy it, and one is almost guaranteed to evolve in the precise fashion every other customer has evolved, the precise fashion in which the process has been advertised. I say "almost" because, as the Hnatts are informed before the operation, there is a risk - every now and then, the process backfires, and instead of "evolving," the individual regresses. Baudrillard helps illuminate why E Therapy would require such a risk of regression in order to sell: Disneyland is presented as imaginary in order to make us believe that the rest is real. Prisons are presented as carceral in order to make us believe that the rest is free (*Simulacra* 12). Watergate is presented as a scandal in order to make us believe that the rest is honourable and just (14). The truth is, Disneyland exists to hide the fact that the entire world is as artificial as Disneyland, and Watergate exists to hide the fact that all of capitalism is scandalous. The risk of regression in Denkmal's E Therapy serves the same purpose - the risk is there in order to make us believe that the rest is genuine. If there is a

risk of devolution, then that strengthens the illusion that when the E Therapy succeeds, the evolution is real. With the existence of this "perfect" simulation of evolution, however, the value of authentic, unpredictable, naturally earned evolution is destroyed.

The falsity of simulated evolution is especially emphasized in *Flow my Tears*. Jason Taverner has purchased evolution, and charisma has been inscribed on his chromosomes (7). But when he smiles, he "glow[s] in some sort of phony way" (31); Ruth Rae, who drinks "fake frosty slime drinks" and loves "pop ballads and . . . sickeningly sweet" music, considers Taverner one of her favourite musicians (90), suggesting that Taverner's music is equally phony. Most significantly, we find that an "ordinary" pretending to have undergone evolution has the same social advantages as an individual who actually purchased it. Felix Buckman, the police chief, in interrogating Jason Taverner, claims to be a "Seven," a more highly technologically evolved category than the Sixes. Buckman invents this lie to gain a tactical advantage in his interrogation of Taverner. Taverner falls for the ploy, and Buckman enjoys the fact that "the actual psychological superiority over him which a Six possessed was abolished by an unreal fact" (128). Taverner even observes and acknowledges Buckman's apparent "Seven" characteristics, the ability to make "strong, vital, instant decisions," and to "ask questions, listen . . . and then make up [his] mind absolutely." After the interrogation, Taverner asks humbly, "Do all you Sevens think this way?" (137). If a simulation of evolution can function just as well as "genuine" evolution, then it betrays the fact that Buckman's ploy about being a Seven is in fact a simulation of a simulation - Taverner's evolution into a Six is not genuine at all, any more than Buckman's evolution into a Seven.

To continue, it is not only objects and processes that are made into depthless simulations and replicas of one another - so are "the men that produce them" (Baudrillard, *Simulacra* 97). A society under mass production "produces a new type of man always and everywhere like his duplicate" (Ellul 132), what Ellul calls a "mass man" (207). Not only do individuals lose their power of agency, as previously discussed, but they also become exact copies of one another. In *Three Stigmata*, there seem to be no unique individuals left. Mr. Icholtz, a representative from Eldritch's corporation, is "a peculiar round specimen mounted on spindly legs" who "bob[s] toylike" as he sits down (32). Leo Bulero is "an evolved human variety" (56) that uses "next-stage-in-the-Homo-Sapiens-type-evolved-knowledge powers" (61), the reference to a "type" serving to highlight its reproducible nature. The women around him are in "infinite supply," and he considers lending to Barney Mayerson "one of his discarded - but still serviceable - former mistresses" (21). Dr. Denkmal is a "small, round style of middle-class German with white hair and an Albert Schweitzer mustache" (67). Each person is characterized as one in a long string of duplicates, made up of various reproducible parts. Furthermore, any man who chews Can-D becomes Walt, and any woman becomes Perky Pat. "I used to be Fran," Fran says in the Can-D world, "but that doesn't matter now. I could have been anyone before, Fran or Helen or Mary, and it wouldn't matter now" (46). Sam Regan tries to convince Fran that they are still their unique selves "in essence," but the argument seems weak. As consumers of the transcendent drug, all individuals become literally the same individual. All the men and women who have chewed the Can-D co-inhabit the two dolls simultaneously (47), and they argue over how to move the dolls, as a mass of consumers, all alike, would compete over the exact same products. Mayerson is

dismayed at the "disintegration" of Anne's "identity" under Can-D, a disintegration of identity that Jameson calls "the end of the autonomous bourgeois monad or ego or identity" (*Postmodernism* 15).

The effects of Chew-Z are even worse. Throughout the book, everyone who has come into contact with Eldritch's drug develops the same three stigmata - the mechanical jaws, eyes, and arm. Eldritch desires to "be all the colonists . . . [to] be their civilization" (204). The effect of the spreading of Chew-Z throughout the population is to transform the entire human race into the same mechanical, steel-jawed, robot-armed mass man, represented by the mechanical, technologically evolved body of Palmer Eldritch. Late in the novel, when Mayerson enters an elevator, everyone inside is Palmer Eldritch, and they speak in unison (192). Eldritch himself is a perfect example of the posthuman mutant who has lost all individual identity; in the novel, we never see Eldritch in the flesh. We see him as a hologram, a hallucination, and a recorded voice, and we see him as manifestations overlapping other people, but we never see him as an individual human being. He has become a simulacrum of himself, and as Baudrillard would argue, the simulacrum has destroyed the real, and that is why we never see Eldritch; he is gone, having mass-produced and simulated himself into oblivion. So, as we can now see, Dick's conception of technological evolution, in its reproducible and simulated nature, destroys everything in a society that is individual, distinct, and real.

If we take the technological capitalist system, with its inherent class divisions, corporate oppression, loss of agency, and loss of individuality, to its logical end, we arrive inevitably at totalitarianism (Ellul 284), the fourth and darkest result in Dick's work of technological evolution. According to Ellul, when a system becomes exact and

technical, it "cannot tolerate the intervention of working man's desires" (210), and so a technological society is by definition anti-democratic. To maintain order, so the technological system may continue to function, the police force becomes "the essence of the state" (286). Justice gets replaced by order and security. Technological evolution, then, "intrinsically fuses with totalitarian principles of social control, manipulation, and surveillance" (Dinello 95). Dick's fiction is replete with technologically evolving groups whose very existence is dependent upon a totalitarian police state, from the New Men in *Our Friends From Frolix 8*, to the Sixes in *Flow My Tears, the Policeman Said,* to the Nazis in *The Man in the High Castle.*

In fact, *The Man in the High Castle* makes explicit the direct link between capitalism and totalitarianism. The Nazis, essentially a technologically run corporation on a quest to evolve, are associated a number of times with Ellul's notion of gorging. Frank Frink imagines them as technicians who eat the raw brains of their enemies right out of their skulls (12). Juliana Frink, at the end of the novel, hopes that, in the future, the Nazis will "eat one another at last" (247). In this way, the Nazis evoke the other mad gorging capitalists Palmer Eldritch and Jory. The implication is that, if creatures like Eldritch or Jory continue to spread through their capitalist systems consuming everything in their path, the ultimate result will be something akin to the Third Reich. In the world of the novel, the Germans are characterized as wealthy industrialists. After the war, due to German expansion and investment, it "didn't take long for them to build the U.S. back up" (34). The Germans have "a world monopoly in plastics" (20), and because of this, "Reich trade had kept an edge over Pacific Trade, and in technology the Reich was at least ten years ahead" (21). Indeed, never does the novel let us forget that the "formidable

technological achievements of German science and industry" are all that have allowed them to rule (97), and we see many examples throughout the novel of their technological prowess. The Mediterranean Sea has been "bottled up, drained, [and] made into tillable farmland, through the use of atomic power" (25). The Nazis have instigated space flights to the Moon, Mars (25), and Venus (96). They are in the process of placing "enormous robot construction systems across space" (11). They have also used their technology for the purposes of eugenics.

The forms of evolution delineated in this chapter so far have constituted versions of positive eugenics, the encouragement of breeding among the worthiest (or richest) individuals. In a totalitarian state like the Third Reich, however, or even in a late capitalist system that is beginning inevitably to lean in that direction, these class divisions and corporate oppressions are more likely to take the form of negative eugenics, the prevention of breeding among individuals with undesirable traits, either through sterilization or extermination.

The sort of totalitarian eugenics in Dick's novels first took place not in Nazi Germany, but in the United States, including Dick's own state of California. The 19th-century ideas of Spencer and Galton developed into a 20th-century American science (Black 32) dependent upon the belief that the various races of man were biologically distinct and that the non-Nordic races were quantifiably inferior (35). The existence of the eugenics movement depended upon continual support from wealthy investors, including the Carnegie Institution, Alexander Graham Bell, John D. Rockefeller, and Mary Harriman, widow of railroad magnate E. H. Harriman (46). This was, at its core, a war between the rich and the poor, and just as in Dick's work, the lower classes were the

primary targets. Charles Davenport, leader of the movement in the first decades of the century, viewed pauperism as a genetic trait, for "the man of strong stock" would never permit himself to remain poor, or to suffer from potentially debilitating illnesses (74). Margaret Sanger, staunch eugenicist who pushed for birth control and abortions, thought of the lower classes as "human waste" (127). It was of fundamental importance, the eugenicists believed, that the poor, who were by definition "feebleminded," not be permitted to procreate. At one point, Davenport even considered securing data from banks about how much money was in each individual's account and cross-referencing that with eugenic standards (290), a particularly chilling prospect, no doubt, for Dick, who considered the significance of bank account amounts a social convention ("Strange Memories" 42). This also illustrates how dependent the eugenics movement was on advanced technologies. During World War II, IBM, with its high-speed data-processing technology, helped label and hunt down the unfit (290). To a large extent, it was computer technology that permitted the persecution and destruction of the Jews. In California alone, tens of thousands of people were forcibly sterilized in the first half of the 20th century, and it was still going on at the time of Dick's writing (398).

While Dick never dramatizes this form of eugenics in any extensive way, many of his futures refer to a wealthy, technologically developed upper class actively exterminating the poor to ensure the best possible evolution for the human race. In *Flow My Tears, the Policeman Said*, most of the blacks have been wiped out, and those that remain are permitted only one child for every two adults. Significantly, Jason Taverner, the wealthy and technologically evolved Six, agrees with the eugenics program, exclaiming that "something had to be done" about the "race problem" (24). The

technologically advanced future world in *Dr. Futurity* is constructed entirely on the basis of eugenics, allowing the sick, injured, and old to die off (34) and actively preventing the continuation of genes deemed to be "substandard" (46). Arnie Kott in *Martian Time-Slip* favours a proposal to eliminate all autistic, schizophrenic, or otherwise "anomalous" children to prevent the devolution of the species. In *Dr. Bloodmoney*, Hoppy Harrington, a mutant with no arms or legs, has to register with the U.S. Eugenics Service as a "sport" (193) to ensure that he does not procreate. The androids in *Do Androids Dream* were originally developed as free servants to entice human beings off the planet Earth, which had become radioactive. Those who remained on Earth were "abruptly classed as biologically unacceptable, a menace to the pristine heredity of the race," and generally sterilized (13). In *Our Friends from Frolix 8*, the New Man government is planning to sterilize all unevolved Old Men males (18). The most well known case of eugenics in Dick's work is no doubt in *The Man in the High Castle*. The novel takes place in Japanese-ruled territory, so we only hear of the Nazi atrocities through the recollections of the characters, but what we hear is enough. Before the time of the novel, the Nazis successfully massacred all the Jews, Gypsies, and Bible students (24). They have reduced the populations of Europe and Northern Asia to the status of slaves and murdered all "intellectuals, bourgeois elements, [and] patriotic youth" (97). Somehow most terrifyingly, they have, in only fifteen years, almost completely eliminated the indigenous African population (25). Clearly, extensively dramatized or not, eugenics represents a central concern in Dick's work.

Historically, in order to separate the desirables from the undesirables, intelligence tests were administered. The IQ and SAT tests were invented for eugenics purposes. In

1913, the tests concluded that 40% of American immigrants were feebleminded (Black 78). Pure blacks scored 60% lower than whites, and as the amount of white blood in their ancestry increased, so did their test scores (79). The tests were largely made up of questions about the latest consumer products, popular art, and entertainment (81) and were specifically designed for cultural exclusion. "Poor-scoring southern Italian immigrants," for example, "would not have known who the latest Broadway stars were or which brands of flour were popular" (83). Only rich, white Americans could do well on these tests, because the tests consisted of questions to which no one else could possibly know the answers.

In *Our Friends from Frolix 8*, tests are administered to children by the New Men to separate the fit from the unfit. When Nick Appleton receives the results from his son's test, he realizes "they had managed to test him on the basis of questions he could never possibly know or understand" and that "Bobby never had a chance" (106). This particular test had questioned Nick's son on Black's formula, a mathematical concept known only to New Men scientists. It is significant that, in this instance, the government wanted Appleton's son specifically to fail, just as American white supremacists wanted low class immigrants specifically to fail. Those that fail are not permitted to join the New Men aristocracy and are therefore likely to be exterminated if and when the New Men eugenicists put their plans into effect. In *Dr. Futurity*, tests are administered between tribes, and these tests "cover all phases of ability, physical fitness, mental faculties, and intuitive functioning at every level and of every description and orientation" (46). The more tests a particular tribe wins, the more zygotes they contribute to the gene pool. If they do badly on the tests, their zygotes are destroyed. In these tests, those who are

maimed or disfigured lose points for their tribe, thus lessening their chances of propagating their genes (46); this is notable because injuries are, of course, not inheritable and should have no effect on the results of a test for superior stock. This ridiculous gaffe in logic serves to highlight the incompetence of the "science" in all aspects of IQ testing for the purposes of eugenics. Regardless of how bad the science is, however, the loss of freedom is just as great. In Dick's future worlds, technological evolution, brought from capitalism to its most extreme end, leads to a totalitarian police state in which the unevolved are forced to undergo a process of sterilization and extermination.

If technological evolution exists in order to stave off entropy, we should now be able to see why, in Dick's work, this is precisely the wrong tactic. In an entropic universe, we must recall, all things decay towards sameness, inertness, and predictability. Complexity and order are destroyed. Norbert Wiener associates entropy with "oppression, rigidity, and death" (Hayles 103). In terms of information, entropy would be repetitive sound that contains no meaning. To fight entropy, therefore, one requires differentiation, creativity, spontaneity, and unpredictability. Katherine Hayles offers a lucid elaboration of what we need to survive in an entropic universe:

> The organism - human or mechanical - [must be] responding flexibly to changing situations, learning from the past, freely adapting its behaviour to meet new circumstances, and succeeding in preserving homeostatic stability in the midst of even radically altered environments. Nimbleness is an essential weapon in this struggle, for to repeat mindlessly and mechanically is inevitably to let noise win. Noise has the best chance

> against rote repetition, where it goes to work at once to introduce randomness. But a system that *already behaves unpredictably* cannot be so easily subverted . . . the best shot for success lies in flexible and probabilistic behaviour. (104)

For Katherine Hayles, as for Norbert Wiener, the ideal human or machine is " light on its feet" and "sensitive to change," a being that creates its own destiny and can react mindfully and spontaneously to changing circumstances (104). All technological forms of evolution in Dick, as we have seen, actively destroy such a human being. Class divisions lead to corporate and governmental oppression, which for the numerous reasons delineated above removes the individual's ability to act freely or spontaneously. People under a capitalist-technological system are made into objects with no agency or feedback, and movement in such a system becomes circular and utterly predictable. All objects, processes, and people become simulations of one another; individual differences are lost, and the world turns into a homogenous mass of uniformity. In a totalitarian state, the freedom to live without the threat of extermination is eliminated. According to the entropy metaphor, homogeneity, rigidity, and lack of freedom are the primary characteristics of entropic decay. This is why technological "evolution" in Dick's novels is not only inefficient in terms of its goals - it is absolutely fatal. It is nothing less than devolution, changes in the human body and mind that very rapidly add to the entropy of the world.

We find in Dick's novels ample associations between technological forms of evolution and classic notions of devolution. One such association involves Leo Bulero. In *Three Stigmata*, Leo Bulero, inside a Chew-Z fantasy, witnesses Roni Fugate turn into a

"puddle" of "thick, oozing material," and Leo refers to this transformation as a "horrific" aspect of "evolution" (96). This is a particularly interesting choice of words coming from someone who has purchased evolution with the belief that it necessarily promises superiority. How can Bulero, purchaser of E Therapy, conceive of evolution having a horrific aspect? We immediately begin to question Bulero's slippery use of the term "evolution," and when he later meets a manifestation of Eldritch, his confusion between evolution and devolution becomes apparent. To Bulero, Eldritch's stainless steel molars look like "Neanderthal teeth," and he refers to Eldritch's technologically evolved body as a "reversion, two hundred thousand years back" that he finds "revolting" (187). Bulero's perception of Eldritch's evolution as a form of reversion brings light to his own situation. His E Therapy is equally technological; and "bubbleheads," as the evolved are called, have an "enlargement above the browline" (67) and a "horny rind" that Emily Hnatt believes looks like hair (35). The truth is, Leo Bulero's appearance is exactly that of a Neanderthal, and his "evolution" is just as much a reversion as that of Palmer Eldritch's. This is one of the more powerful ironies in the novel: the two technologically evolved capitalists Palmer Eldritch and Leo Bulero, though they treat each other as enemies, are very much the same, both products of technological evolution who are characterized in some fashion as cavemen. Dick links the technologically evolved to prehistoric man in other novels as well. The Nazis in *The Man in the High Castle,* technologically advanced eugenicists, are imagined to be "ogres out of a palaeontology exhibit . . . prehistoric man in a sterile white lab coat in some Berlin university lab . . . the gigantic cannibal near-man flourishing now, ruling the world once more" (11-12). In *Do Androids Dream of Electric Sheep?*, the android Rachael Rosen has arms that hang "bent at the joint: the stance . . . of

a wary hunter of perhaps the Cro-Magnon persuasion" (164). Human beings who have "evolved" technologically are shown to have actually regressed, to have brought the human race backward in time.

Spreading out from these technologically regressed individuals is entropy, invading their environments. The first time we are introduced to Palmer Eldritch, the mad capitalist and posthuman mutant, we see his schemes adding to the disorder of the universe:

> He had accomplished miracles in getting autofac production started on the colony planets, but - as always he had gone too far, schemed too much. Consumer goods had piled up in unlikely places where no colonists existed to make use of them. Mountains of debris, they had become, as the weather corroded them bit by bit, inexorably. Snowstorms, if one could believe that such still existed somewhere . . . there were places which were actually cold. Too cold, in actual fact. (13)

Palmer Eldritch's mass production and dissemination of corporate products has increased the entropy on the colonies; under the inundation of simulated material goods, the colonies have grown colder, and they are now moving inexorably towards heat death.

The junkie household in *A Scanner Darkly,* where the characters ingest their "transcendent" drug, is described in similar terms, as a "run-down rubble-filled house with its weed-patch backyard and catbox that never gets emptied and animals walking on the kitchen table and garbage spilling over that no one ever takes out" (183). The entire junkie life is "an endless nothing . . . in the murk, the murk of the mind and the murk outside as well; murk everywhere" (201), this "murk" serving as this novel's version of

kipple or gubble. The homogenization of substances under entropy has grown so far in this world that, to a junkie, zits and sex possess "identical qualities" (158).

The half-life world in *Ubik* is a world particularly susceptible to entropy. The term "half-life" itself means "the rate of decay of radioactive materials" (Bishop 141), and we are told that decay is a natural by-product of the half-life world. Of course it is - it is an attempt to achieve transcendence by electrical means. In this technological afterlife, instead of achieving immortality, people rot. We see an interesting precursor to this phenomenon in *Three Stigmata,* when Leo Bulero's cigar, for no apparent reason, crumbles in his hands; Bulero is a technologically evolved corporate manager, and Eldritch's Chew-Z is at the same time spreading wildly, and the crumbling of the cigar is a warning that entropy, because of all this technological evolution, is increasing. In *Ubik,* even the spray can, designed specifically to fight entropy, adds to it in its homogenization of all substances and the clichéd and repetitive structure of its advertising. Recall that, as Norbert Wiener has explained, messages that contain very probable forms contain much entropy (21). Even Baudrillard calls advertising "degree zero of meaning, triumph of entropy over all possible tropes" (*Simulations* 87). Technological evolution is, in Dick, a misnomer. It is devolution and an aid to entropy.

This chapter has explored the four main repercussions of technological evolution in Dick's work: capitalist oppression, loss of agency, loss of identity, and totalitarianism. These results are entropic, but they are also, as we will see, anti-evolutionary. The net effect of these four conditions is to destroy the possibility of human relationships. In a late capitalist society, consensual reality is destroyed, and compassion and empathy are made impossible. Unfortunately for these technologically "evolved" individuals, empathy

and human relationships are vital components in Dick's conception of true, right-brained human evolution. For Dick, evolution has nothing to do with science or technology, and the third chapter will outline in detail how Dick's novels enact the proper, indeed the only possible, method of genuine human evolution.

Chapter 3: Empathy and the Noosphere

The previous chapter detailed how Dick's novels suggest the human race should not evolve; this chapter details the one way the novels insist the human race must evolve, through genuine, non-technological human evolution. The most fundamental error the technologically "evolved" characters in Dick's fiction make is that evolution must stem not from the left hemisphere of the brain, but from the right. Dick's novels are highly sceptical and suspicious of left-brain thinking, and domination by the left hemisphere, manifested by advanced technological development, will offer no assistance in the evolution of mankind, leading generally only to an increase in entropy. Human beings must instead turn to their right hemispheres, for it is in this hemisphere that hope for human evolution is to be found. Unfortunately, left-brain dominance also prevents the proper functioning of certain right-brain skills, and hence technological "evolution" is not only entropic but also anti-evolutionary. Genuine evolution in Dick, as we will see, is not a consciously directed process at all, and certainly not an intellectual process, but a product of empathy. The development of empathy, furthermore, is dependent upon the formation of human relationships, and the net effect of all the negative repercussions of left-brained evolution we examined in the second chapter is to destroy human relationships, thereby preventing the development of empathy. In Dick, we must recall, evolution of any kind has as its primary goal a transcendence of the flesh, and if we focus on some of Dick's most empathic characters, we find that a number of them are so empathic that they have gained the power of telepathy, or even access to a sort of transcendent truth. It is only by virtue of the right hemisphere of the brain that this transcendent journey is ever made possible.

The first section of this chapter will describe the differences between the two hemispheres and show how Dick's novels tend to criticize left-brain thinking. The second section will explain the function empathy serves in evolution and show how technological "evolution" makes empathy impossible. In the third section, I outline two major theories from evolutionary psychology, kin selection and reciprocal altruism, which help explain how empathy develops through natural selection, and then apply the two theories to a number of Dick's genuinely evolving characters in order to illuminate their evolutionary process. To help clarify the process, this section compares several right-brained, empathic, evolving characters with corresponding left-brained, unempathic, and unevolved characters from their respective novels. The fourth and final section of the chapter will explain how right-brained, genuine evolution founded on empathy leads in Dick's novels to telepathy, to the beginnings of a collective consciousness based on love, and to the very transcendence Dick's characters seek. Instances of such evolution can be found sprinkled throughout Dick's novels, but they tend not to play central roles in the plots, and so this chapter will necessarily be looking at a greater number of novels than the previous chapter. Primary texts include *A Scanner Darkly*, *Do Androids Dream of Electric Sheep?*, *Flow My Tears, the Policeman Said*, and *Dr. Bloodmoney*, but I will, again, refer to other novels where necessary. The overall purpose of this chapter is to trace the path of true evolution in Dick's characters, from empathy to telepathy to convergence to transcendence, a hint at a true and permanent escape from the ravages of entropy.

All throughout his career, Dick expressed an interest in split-brain research. In *A Scanner Darkly*, he cites Joseph E. Bogen's "The Other Side of the Brain: An

Appositional Mind" (110) and references split-brain research by Michael S. Gazzaniga; the entire plot of the novel, in fact, hinges on his understanding of the differences between the two hemispheres. Gazzaniga argues in *The Social Brain* that the popular dichotomy between left- and right-brain skills is an over-simplification of how the brain actually functions (48), but he nevertheless understands its popularity and force as a metaphor in the American consciousness of the 1960's.

The simplification, as it were, that drives Dick's conception of the human organism involves a left and right hemisphere responsible for opposing aspects of the personality. R. W. Sperry, the first major figure in split-brain research, concluded that the left hemisphere is the dominant one. The speech centres are located there, and that hemisphere is therefore responsible for speaking, reading, and writing. This language-dominant hemisphere is also "the more aggressive, executive, leading hemisphere in the control of the motor system," and this is the hemisphere, consequently, that "we mainly see in action and the one with which we regularly communicate" (11). The left hemisphere also controls all general cognitive functions. It is logical, analytical, and mathematical (Gazzaniga 51). Jan Ehrenwald, an important figure for Dick to whom we will return, believes the left hemisphere possesses more will and initiative, and a greater sense of self (*Anatomy* 16). Because of its analytical, rational, mathematical, aggressive, and self-directed nature, it is generally associated with an intellectual and scientific orientation (206), and technological development tends to be a product of left-brain thinking.

The right brain, on the other hand, is for non-linguistic and non-mathematical functions. Sperry considered it the minor hemisphere, because it is "carried along much

as a passive, silent passenger who leaves the driving of behaviour mainly to the left hemisphere" (11). In terms of language, it ranges from low functioning to completely incapable. It can, for example, occasionally respond to concrete nouns, but it is generally unable to pluralize them or to comprehend verbs (Gazzaniga, "Split Brain" 27-28). Instead, the right hemisphere controls aesthetics, intuition, inspiration, and imagination (Ehrenwald, *Anatomy* 242). Its form of reasoning is "holistic and unitary rather than analytic and fragmentary" (Sperry 11), which, for Ehrenwald, means that the left hemisphere sees the trees while the right hemisphere sees the forest (*Anatomy* 16). It is responsible for face-recognition, spatial awareness, and all other visual acuity tasks including, for example, the arrangement of a set of blocks by colour, a task for which the left hemisphere is generally unequipped (Gazzaniga, "Split Brain" 28). Notions of poetry, metaphor, and beauty are said to stem from the right hemisphere, and the right hemisphere is also the seat of emotion (Ehrenwald, *Anatomy* 9).

Dick uses this left-brain/right-brain binary to depict how he believes the human race must endeavour to evolve: through a greater concentration on the right hemisphere of the brain. Virtual reality worlds, drugs, and genetic manipulation, in fact all technologies, all the disastrous projects we examined in the second chapter, result from left-brain thinking. The characters who believe technology to be the solution are dominated by their left hemispheres. Sperry found that in human beings there is a "tendency for language to develop at the expense of the competing nonverbal functions" (10), and that, even though "the spatial-perceptual-performance functions appear to have primacy in terms of evolution," there seems to be "something about the growth and maturational processes in the human brain that tends to favour the elaboration of

language." In other words, as a human being matures and develops more complex language skills, his left hemisphere tends to repress the functions of the right hemisphere (10-11). Children, as they get older, tend to become less creative and more rational (Ehrenwald, *Anatomy* 10). A mathematical outlook becomes primary, while emotion and intuition are repressed. To choose technological development as a means for evolution is to continue to allow the domination of the left hemisphere, and Dick clearly has little faith in left-brain thinking.

In *Clans of the Alphane Moon*, logic is satirized in a fashion reminiscent of Samuel Beckett's *Molloy* or *Watt*. In the climax of the novel, a chaotic battle has broken out among most of the characters, and Chuck Rittersdorf attempts to apply logical analysis to the situation:

> The Manses, he thought, are fighting Terra; Mageboom, representing the CIA, is busy shooting it out with Hentman. My ex-wife Mary is fighting me. And Hentman is my enemy. . . . If the Manses are fighting Terra, then the Manses and Hentman are allies. Hentman is fighting me, so I am his enemy and hence the ally of Terra. Mary is fighting me and I am fighting Hentman, so Mary is the ally of Hentman, hence the enemy of Terra. However, Mary leads the Terran task-force . . . she came as a rep of Terra. So, logically, Mary is both the enemy and ally of Terra. (209)

Logic, for Dick, is incapable of solving the simplest of problems and is certainly incapable of solving the larger ones. Dick's low opinion of intellectual rhetoric is also apparent in the description of the product Ubik in that novel:

> [Ubik] is a portable negative ionizer, with a self-contained, high-voltage, low-amp unit powered by a peak-gain helium battery of 25kv. The negative ions are given a counterclockwise spin by a radically biased acceleration chamber, which creates a centripetal tendency to them so that they cohere rather than dissipate. (199)

The description goes on for another half-page or so, but by now we already recognize the explanation as nonsense. As Peter Fitting points out, scientists, and indeed science fiction writers, often use such jargon not to convey information but to conceal ignorance (157).

Logical and scientific thinking is attacked perhaps most directly and harshly in *A Scanner Darkly*. The junkies tend to approach their problems from a strictly, even obsessively, scientific position, and their attempts are shown in every instance to be grimly futile. Jerry Fabin begins the novel with a systematic scientific analysis of the aphids that torment him, studying their life cycle, bodily structure, and migration patterns, but the aphids do not exist, and he is studying a drug-induced hallucination (5), which, by definition, has no reliable patterns. Jim Barris, another of the junkies, loves science and has a "precise, educated" way of talking (41). He goes on at length about his scientific education and training, always speaking in a pseudo-intellectual scientific patois reminiscent of *On the Road*'s Dean Moriarty, and he seems to have a scientific solution for every problem; Donna Hawthorne, he claims, will "spread her legs" for anyone who "give[s] her a gram of coke . . . especially if certain rare chemicals were added in strictly scientific fashion" that he'd done "painstaking research on" (41). Barris then goes into a detailed scientific demonstration of how to extract a gram of coke from

an everyday spray can of Solorcaine (42). Barris outlines the secret modifications done to his automobile in the form of a systematic, logical, itemized list:

a) suspension

b) engine

c) transmission

d) rear end

e) drive train

f) electrical system

g) front end and steering

h) as well as clock, cigar lighter, ashtray, glove compartment. In particular the glove compartment. (125)

One of the modifications includes his radio, which he has tuned to a particular frequency that transmits

a) to the authorities.

b) to a private paramilitary political organization.

c) to the Syndicate.

d) to extraterrestrials of higher intelligence. (136)

This itemization is to secure the illusion that all possibilities have been scientifically and objectively accounted for. Despite his apparently broad knowledge of science, however, and his impeccably ordered and logical mind, he is incapable of understanding that a bicycle with 6 gears in front and 2 in back is a 12-speed bike. Instead of multiplying the two numbers of gears, he adds them, concludes he has only an 8-speed bike, and decides he has been ripped off. He argues that the kids who sold him the bike "must have been

working on it, taking it apart with improper tools and no technical knowledge" (116). None of the junkies in this conversation catch the error. Later, after an automobile accident that nearly kills them, the junkies discuss the repairs the car will need, and the conversation takes on such a highly specialized automobile jargon, among characters who usually can't string two coherent sentences together, that it becomes almost surreal in its lucidness. "You've got a bent choke shaft," Barris tells Arctor. "The whole carb should be rebuilt. . . . And possibly in addition that raw gas washing down the cylinder walls - if it goes on long enough - will wash the lubrication away, so your cylinders will be scored and permanently damaged. And then you'll need them rebored." Barris, as always, has the solution:

> The idling jets could be replaced with smaller jets . . . that would compensate. And with a tach he can watch his rpms, so it didn't over-rev. He'd know by the tach when it wasn't upshifting. Usually just backing off on the gas pedal causes it to upshift if the automatic linkage of the transmission doesn't do it. (125)

The ability of the junkies to spontaneously engage in what seems to be an involved and knowledgeable dialogue about complex engine repairs is jarring to the reader, but soon enough, we begin to see through the illusion - in order to determine if his solution will work, Barris decides to calculate how much inertial mass the car would possess, going uphill at eighty miles an hour, if it weighed 1000 pounds. As Barris pulls out a pen and paper, the other junkies begin to feed him false and ridiculous premises, including a big carton of bricks in the trunk and eleven passengers in the back seat, that he mindlessly and automatically jots down in his equations (126). As Arctor and Luckman continue to

feed this nonsense to Barris, Barris continues to calculate, never perceiving the absurdity of the premises. Most cases in the novel of scientific analysis entail a disconnection between initial premises and objective reality. Logical thinking in this novel is a closed, circular system that refers to nothing outside of itself, feeds only on itself, and never touches base with any form of consensual reality. Premises may lead logically to conclusions, but they in no way facilitate the acquisition of meaning, and both the premises and the conclusions in these cases are nonsense. Reliance on the drug technology has heightened these junkies' reliance on their left hemispheres at the expense of their right hemispheres, and as a result, they have hit an evolutionary dead end. These examples from *Scanner Darkly* represent only a small sample - through most of Philip K. Dick's more than 40 novels runs a distinct strain of anti-science and anti-intellectuality.

Next to the junkies, and all other left-brained technologically "evolving" (devolving) individuals in Dick's novels, there are characters undergoing a different evolutionary process, without the aid of advanced technologies, and these individuals are undergoing genuine human evolution. They are held in stark contrast to the technological posthumans, often structured into the plot as mirror images, and they represent, in Dick, the best and only hope for the future of the human race. In order to understand this alternative, non-technological, right-brained process, we must turn to evolutionary theory, and we begin with Darwin's *Descent of Man.*

Despite the ambivalent (and potentially eugenic-inspiring) rhetoric in Darwin's writing, there is one coherent theme, valuable for Dick, to which Darwin continually returns, and this is the notion of "sympathy." Mankind, Darwin argues, owes his immense superiority largely to his "social habits, which lead him to aid and defend his

fellows" (67-8). He calls these social habits "sympathy" and "love" (84). A century earlier, David Hume had discussed sympathy in terms that we would probably call empathy - the ability to enter the sentiments and passions of another (Peart and Levy 454) - and Darwin's description in *Descent*, like Hume's, implies something akin to empathy: "The mere sight of suffering . . . would suffice to call up in us vivid recollections and associations" (130), suggesting these recollections invoke emotions in the witness similar to those currently felt by the sufferer. Feelings of sympathy tend to lead to altruistic behaviour, actions that save another at the expense of the safety, or even the life, of the individual, and so one may assume natural selection to be incapable of acting upon sympathetic feelings; the individual, after all, who gave his life to save his neighbour will have fewer children to which he may pass his sympathetic tendencies. Natural selection, however, according to Darwin, acts not on the individual but on the community. Communities in the past, Darwin argues, which "included the greatest number of the most sympathetic individuals would flourish best, and rear the greatest number of offspring" (130). Darwin elaborates:

> When two tribes of primeval man, living in the same country, came into competition, if (other circumstances being equal) the one tribe included a greater number of courageous, sympathetic and faithful members, who were always ready to warn each other of danger, to aid and defend each other, this tribe would succeed better and conquer the other. (155)

Thus, the sympathetic tribe would survive longer and, as a whole, leave more offspring. Darwin acknowledges that sympathy tends to extend only to members of the same tribe or community and not to all members of the same species (130), but he believes that, over

time, as "man advances in civilization, and small tribes are united into larger communities, the simplest reason would tell each individual that he ought to extend his social instincts and sympathies to all the members of the same nation, though personally unknown to him," thereby improving the chances of survival for all. As we evolve, in other words, these sympathies should begin to extend "to the men of all nations and races" (147), eventually becoming universal and instinctual. Mankind's inherited tendency to aid his fellows should become so instinctual that, when an individual acts for his own self-interest at the expense of the community, he is likely, by instinct, to feel "remorse, repentance, regret, or shame" (137), as, for example, Barney Mayerson feels for not coming to the aid of his employer Leo Bulero in *Three Stigmata*. Sympathy is therefore, in Darwin, both a product and a necessary cause of human evolution

For Dick, the thing that separates a true human being from an android or a reflex machine is empathy, which he defines as "the ability to put [one]self in someone else's place" ("'Headnote'" 106). Empathy entails a genuine caring "about the fate that [one's] fellow creatures fall victim to" ("Man, Android, and Machine" 211). Empathy generally requires "identification" with the other person, which means to "regard one's self as part of a whole to which the [other person] also belongs and [to care] about the fate of that whole." When feeling empathy, then, we define the "I" by a relation to the "we" (Sober and Wilson 233). While empathizing, an individual feels that his or her own fate is less important than the fate of all individuals in the group. Empathy also entails a sharing of the emotion of another, which of course requires knowledge about what emotion the other is feeling. An empathic individual must be a kind of psychologist, who has a belief in and an understanding of the other person's emotional state (236).

For Dick, the connection between empathy and altruistic behaviour is direct and obvious - an understanding and a vicarious experiencing of another individual's suffering will automatically lead the empathic person to help the sufferer, and a pattern of that sort will become the key in the struggle for evolution. Empathy, for Dick, has a "survival value," and for him, just as for Darwin, "in terms of interspecies competition, empathy gives you an edge" ("'Headnote'" 107). In *Do Androids Dream of Electric Sheep?*, Rick Deckard muses that "a herd animal such as man would acquire a higher survival factor" through empathy (27). In the headnote to his short story "Beyond Lies the Wub," Dick opposes the wub, who possesses empathy, to Captain Franco, who cares not for his fellow beings but transforms them into objects for his own purposes, and Dick refers to the wub in no uncertain terms as the "higher life form" (107). This characterization of empathic characters as higher life forms is sustained throughout Dick's fiction. Franco and characters like him are always characterized as comparatively unevolved because a lack of empathy, regardless of one's technological advancement, puts one lower on the evolutionary ladder. As Richard Hnatt in *Three Stigmata* first experiences the effects of E Therapy, it occurs to him that evolution may come about as a result of empathy (71), and he finds himself suddenly concerned for the welfare of mankind (73) - we start to suspect then that the E Therapy may be working after all - but he is immediately distracted by business concerns, and the evolved empathic thoughts are gone. One may say that, at that moment, Richard Hnatt's evolving left hemisphere represses the burgeoning notions of his right hemisphere. Hnatt receives one glimpse at the truth, but the technological left-brained evolution that momentarily allowed him that glimpse is an evolutionary dead end, and that glimpse may have been there only to remind him of the futility of his choice

to undergo E Therapy. By the time his therapy is complete, his right-brain skills have evidently been completely repressed.

Throughout Dick's novels, the unevolved Captain Franco-type figure appears again and again, and tends to be the product of a technological society. Now we may begin to explore why technological evolution is, in Dick's novels, anti-evolutionary: 1) empathy is necessary to ensure the evolution of the human race; 2) in order for natural selection to act on empathy, there must be communities; and 3) technology, when interacting with human beings, destroys human communities. Upon interacting with technology, communities and relationships are destroyed, the growth of empathy is prevented, and the possibility of genuine biological evolution is thereby eliminated.

Ellul has much to say about technology's effect on human relationships. Technology, for Ellul, is "the destroyer of social groups, of communities (whatever their kind), and of human relations" (126). This disruption of communities consists of several factors. Individuals in the community may, first of all, become physically isolated - technological systems are so autonomous that "there is no need for [people] to converse together," and industrial environments, because they run themselves, tend to "dispense with . . . personal contact" (131). This effect can be seen in almost all of Dick's fictions, with their automatic taxicabs, robotic waiters, and homeostatic coffee machines. In *Ubik*, the characters are in "one of the most modern, technologically advanced cities on Earth," and every service imaginable in this society is mediated through a machine (76). The community may, secondly, be disrupted by a loss of mutual understanding among people. According to Ellul, in a technological society, each individual has his or her own "professional jargon, modes of thought, and peculiar perception of the world."

Consequently, the individual transformed by technology "is no longer able to understand his neighbour," and he is forced "to live in a closed universe. He no longer understands the vocabulary of the others. Nor does he comprehend the underlying motivations of the others" (132). All through *Flow My Tears,* Jason Taverner, though considered "evolved," is shown to have no understanding of other human beings; he consistently misreads the intentions of others and seems surprised that his Six characteristics are of no help (49). The Nazis in *Man in the High Castle*, despite their technological advancements, are said to have a "lack of knowledge about others" (41). The third factor in the destruction of human relationships is the loss of compassion. For Ellul, in a technological society, any contact that does exist between human beings must be rational. The goal of all technological processes is efficiency, and no allowance can be made for "emotion or sentimentality" to disrupt the mechanism (355). When Joe Chip in *Ubik* tries to order a cup of coffee from "the speaker of the shop's ruling monad turret," it demands proper change and threatens to call the police. "One of these days," Joe Chip tells it, "people like me will rise up and overthrow you, and the end of tyranny by the homeostatic machine will have arrived. The day of human values and compassion and simple warmth will return" (76). The homeostatic machine, of course, remains silent, for its priority is not simple warmth but efficiency. And finally, a community may be disrupted by its citizens beginning to perceive one another not as individuals but as components of an abstraction. According to Ellul, technology leads to "the creation of an abstract universe, representing a complete reconstruction of reality in the minds of its citizens" (371). Instead of to the welfare of individual human beings, priority is given to abstractions such as order, efficiency, productivity, superiority, the future, "race, blood, [and] people" (Dick,

"Nazism" 117). Tod Morris, one of the Martian colonists in *Three Stigmata*, expresses the need to avoid abstractions. "We live too close together," he explains to the newly arrived Barney Mayerson, "to export any kind of ideological fanaticism. . . . It has to be live and let live, with no absolute creeds and dogma" (145). Abstract ideologies, Morris understands, will only damage the personal relationships among the colonists, because abstractions are only valorized at the expense of personal liberties and empathy.

These characteristics of a destroyed human community - physical isolation, lack of understanding, lack of compassion, and perception of individuals in the abstract - are the direct effects of a technological late capitalist society, the inevitable result of class divisions, corporate oppression, eugenics, and a police state. Jean Baudrillard defines capitalism as a "monstrous unprincipled exercise" consisting of "instantaneous cruelty, ... incomprehensible ferocity, [and] . . . fundamental immorality" (*Simulacra* 14). Rather than encouraging loyalty and sacrifice, capitalism leads naturally to "paranoia and conspiracy" (Hayles 167). Carl Freedman argues, in fact, that the only reasonable response to a capitalist society is paranoia (15), which naturally destroys the possibility of meaningful human relationships. The destruction of personal relationships caused by capitalist society, Baudrillard's so-called "closed universe," is depicted most effectively in Palmer Eldritch's Chew-Z. Chew-Z is certainly not an improvement over Can-D, and in some ways, it is significantly worse. Can-D, at least, offered the illusion of community. All the chewers could enter Perky Pat's world simultaneously, although we do see the beginnings of the fracturing of relationships in the comical way the chewers can never get along controlling the same body (47). With Chew-Z, however, the destruction of human communities is complete. Each person goes "to a different

subjective world" (92). Barney Mayerson, after chewing the drug, tries to converse with his lover Anne Hawthorne, and she disappears, transforming into Eldritch (176); he then tries to contact Allen Faine, a man who had hired him for a plot to destroy Eldritch, and Allen has no memory of ever having spoken to him (179). He finds himself alone. "Eventually," Mayerson thinks, "[Eldritch]'ll snare us all. Just like this. Isolated. The communal world is gone" (179). Eldritch represents evil, for Dick, because he "cuts us off from others . . . destroys our shared reality" (Warrick, *Mind in Motion* 110), and this destruction is especially evil because it counteracts the human capacity to evolve. In Dick's novels, the net effect of all negative repercussions of a technological late capitalist society is invariably to eliminate the possibility of human relationships, thereby preventing the development of empathy.

Dick's novels are full of technologically "evolved" characters who are nevertheless evolutionarily blocked due to their lack of empathy. We have already seen how the "evolved" Leo Bulero is an elitist and a racist who transforms people into objects, and Palmer Eldritch, the "evolved" mad capitalist who has no compassion for anyone. The Sixes in *Flow My Tears* are no better. They are said to be "aloof" (7), and Jason Taverner, the Six protagonist, begins the novel as arrogant, hateful, elitist, and racist. Sixes have little loyalty even to each other, and they eventually "drizzled off into nothingness because they could not stand one another" (132).

The bleakest world in all of Dick's fiction is no doubt the barren suburban wasteland of *A Scanner Darkly*; in this novel, Dick depicts a world utterly devoid of empathy in every quarter and consequently hopeless in terms of evolution. This is a society devolving and decaying. The junkies, like the Sixes, have no loyalty to one

another. They don't trust each other (133), and for good reason, since they tend to turn each other in (60). All the junkies care about are themselves and their own "vital, demanding, terrible, urgent needs" (7), and their loss of interest in sex is only one symptom of their loss of love for all human beings (41). They also possess no understanding of one another. Bob Arctor and Donna Hawthorne do drugs together, and Arctor tells her, "You know me. . . . You can read me" (152), but the conversation is so incoherent and disjointed, their communication is so ineffective, that the comment becomes darkly ironic, serving instead to emphasize the extent of their psychological isolation. Getting clean, unfortunately, is no escape from this isolation. In the rehabilitation clinic Newpath, no one-to-one relationships are permitted (52), and inmates are constantly shuffled about to different facilities, preventing the formation of any emotional connections (272). We also get no help from the "straights." Life as a straight is entirely "predictable," which aids entropy, and the few straights we encounter in the novel are completely lacking in empathy. An elderly straight couple cares less about the fact that their neighbour may be beating his wife than that they step in "dog do" whenever they go outside (78). A straight once uttered the statement, "If I had known it was harmless, I would have killed it myself," which became the junkies' motto for how they perceive the well-educated straights to think. The heart of a straight is compared to an empty kitchen, a mere thing and without the potential for love (94). Finally, the narcotic agents in this society are also completely isolated from one another. They wear scramble suits that hide their identities and turn the people inside them into "nebulous blurs." Conversations among the agents consist of nebulous blurs talking to nebulous blurs, and friendships are made impossible. While wearing the scramble suits, narcs are

incapable of "physically sens[ing] each other" (57). Arctor tries on two occasions to physically reach out to a fellow narc, a symptom of his feelings of isolation, but on both occasions, he falls short (121, 229). Because of the ubiquitous presence of the drug, America has become a police state where relationships are non-existent, empathy is dead, and all "warmth" is transformed into "something empty" (151). The only hope at all in this society for the human race to evolve is in the fact that, for some reason, junkies seem to love taking care of animals (95). This is the only sign of empathy they possess, but it seems insignificant in the general despair of the rest of the novel. *A Scanner Darkly* is unique among Dick's novels by providing so little hope for human evolution. The communities of the junkies, the rehabilitated, the straights, and the narcotics agents have all been splintered. There indeed seems no way out, no way to evolve, and the unempathic American population seems destined to stagnate and eventually devolve as entropy finally destroys them. Technology, then, is in Dick's novels doubly evil: it both increases entropy and destroys empathy. For the human race to have any chance at all for evolution, their right hemispheres must be dominant.

If empathy and cooperation are the true and only sources of human evolution, there has been some debate in evolutionary psychology and biology about how these altruistic tendencies first originated. According to Darwin's theories on group cooperation, a community full of altruistic individuals would on the whole leave more offspring, but Darwin offers no mechanism for this process, and he is unclear about how such a community first comes about. Two theories relevant to Dick have surfaced.

The first theory, proposed by William Hamilton in 1964, is kin selection (Evans 74). As Darwin pointed out, altruism tends to extend more to one's immediate family

than to complete strangers, and that may be because families share the same genes. In the theory of kin selection, an altruistic act towards, for example, a child would in fact be a means for the individual to protect his or her own genes, invested in the child (Trivers 35). If this theory is correct, stepparents should, statistically speaking, be violent towards their children more often than blood parents, and this has turned out to be true. Individuals do extend altruistic acts towards their distant relatives, but generally not at the expense of an immediate family member (Evans 80). Human beings, or rather their genes, in contemplating an altruistic act, must first ascertain their "degree of relatedness" with the other person (75). A person is more likely to risk his or her life to save the life of a brother, for example, than a grandparent, and more likely to save a grandparent than a second cousin. The more genes the two individuals share, the more likely is a person to show altruistic behaviour towards the other. If kin selection helps to explain instinctual altruistic acts, it may also offer a genetic explanation for why a technologically evolved human being loses the capacity for empathy - as his flesh is replaced by hardware, he possesses fewer genes in common with his fellow human beings. As a general rule in Dick's work, as the quantity of flesh in an entity diminishes, so too does his capacity for empathy.

In *Ubik*, Joe Chip is mirrored with Glen Runciter. Chip possesses empathy; he is greatly saddened by the apparent death of Runciter and by the deaths of his compatriots. Runciter, on the other hand, who runs his own corporation, possesses "artiforg parts" (7), and his transformation into something more mechanical may have played a role, along with his assimilation into the capitalist system, in eliminating his ability to empathize. He has a voice that sounds "electronically amplified," and he possesses an "abstract quality."

He smiles and chuckles on the outside, but "inside he [does] not notice anyone, [and does] not care." He is, like the Sixes, "aloof" (5). Chip refers to Runciter as "vital" (74) and "life-loving" (78), but Chip's perception of Glen Runciter is incorrect. Never in the novel does Runciter show the remotest concern for another human being. When Chip, from half-life, overhears Runciter talking over the phone, instead of showing anger at Joe Chip's death, Runciter calmly "drones on" about the legal ramifications of instigating a lawsuit against the man responsible (88). Runciter's written messages to his dead team are just as apathetic, even callous: "lots of luck," he writes on the side of a bottle of Ubik (131). The great revelation from Runciter to his people that they are all dead is communicated to them through a cryptic message scribbled onto the wall of the men's urinal: "JUMP IN THE URINAL AND STAND ON YOUR HEAD. / I'M THE ONE THAT'S ALIVE. YOU'RE ALL DEAD" (111). Patricia Warrick explains away all of Runciter's bizarre and callous rhyming couplets by claiming that Dick "writes with no more intent than to keep the plot moving forward" (*Mind in Motion* 140), but this is unforgivable laziness on Warrick's part: Runciter's rhyming couplets reflect his lack of compassion for his dead team-mates. Their deaths are a game to him, and that is because he is a partially mechanical man who has lost his ability to feel empathy. When Runciter ponders the deaths of his people, he does so in an abstract and unemotional way:

> My organization is depleted and we won't be able to resume commercial operations for months, maybe years. God, he thought, where am I going to get inertials like those I've lost? And where am I going to find a tester like Joe? (179)

If we apply the theory of kin selection to the fictional figure of the cyborg, we may surmise that the replacement of Glen Runciter's internal organs with mechanical parts has dulled his ability to empathize, and that once the replacements were made, Runciter abandoned forever his hope for true evolution.

In *Now Wait for Last Year*, Virgil Ackerman is mirrored with Gino Molinari. Ackerman is a wealthy corporation man who has been purchasing artificial organs for decades so as to live indefinitely. A significant number of his organs are now mechanical, and he has become "fleshless" (36). He may have technologically "evolved," but he is in fact a lower form of being. In his technologically granted old age, he has become isolated, and his family and friends have "no entry into this world of his" (17). Molinari, on the other hand, though continually ill and suffering, adamantly refuses artificial organ transplants. As his body deteriorates through the novel, we assume that he is, in some way, devolving or decaying, but the truth turns out to be the precise opposite: Molinari, in his decrepit and sickly body, is the most highly evolved individual in the novel. His sense of empathy is so strong that it amounts almost to telepathy (47). His gaze, his sense of sight, is more highly developed than in ordinary persons (36), and he can look into others "at [their] deepest, most silent part" and perceive "the truth" (47). His illnesses, it turns out, are the illnesses of others. He is so empathic that he literally feels other people's pain and physically develops their symptoms (89). These symptoms come about at such opportune times that they prevent his attendance at meetings where he would likely be politically coerced into entering a war that would destroy millions of lives. His suffering is purely altruistic - it comes as a result of a supernatural power of empathy, and it prevents the beginning of a war. In this imagined world, no such empathic faculty is

known to exist, and so Molinari represents quite literally the next stage in human evolution. The book never expressly states why Molinari is so insistent on not receiving artificial organs, but considering empathy's source in kin selection, the reason is clear - technological replacements of his flesh would likely decrease his "degree of relatedness" with other human beings and destroy his empathic abilities.

The beings that possess the least flesh and the most hardware in Dick's fiction are the androids in *We Can Build You* and *Do Androids Dream of Electric Sheep?*, and so by the theory of kin selection, they should possess the least empathy for biological life forms. These two novels seem to be set centuries apart in the same imagined world - Louis Rosen builds simulacra in *We Can Build You*, and the androids in *Do Androids Dream* are products of the Rosen Association - and I agree with Fredric Jameson's reading that the little family-owned Rosen business in *We Can Build You* eventually grows into the interplanetary Rosen Association of *Do Androids Dream* (*Archaeologies* 375). Because of this connection, we are invited to read the novels intertextually.

The simulacra of Stanton and Lincoln in *We Can Build You* do seem at first read to possess empathy, which would defeat the theory of kin selection. Stanton provides a clear and accurate psychological analysis of Pris (61), and Lincoln shows concern for the welfare of others (92). In this way, they hint at representing the next stage in human evolution - but we are never certain, even by the end of the novel, whether the simulacra are feeling genuine empathy or only imitating the personalities of the original Stanton and Lincoln. A close reading of some elements in *Do Androids Dream* may help to clarify.

According to the world in *Do Androids Dream*, the element that separates human beings from androids is the ability to empathize, which, in the theory of kin selection, is only natural, since the androids share no genes with the humans. This society has developed the Voigt-Kampff Empathy Test to determine whether an individual is a human being or an android. The film adaptation *Blade Runner* tends to make the test ironic, showing the androids to possess more empathy than the humans, but the novel keeps the test fairly accurate. The androids in this novel, as opposed to Stanton and Lincoln, are shown to be both cruel and uncaring. They are described as "detached and remote" (140), possessing "a peculiar and malign *abstractness*," just like Glen Runciter, as if their emotions were concepts rather than genuine experiences (137). They also have no loyalty even to each other (108). In a disturbing scene, the android Pris slowly and deliberately tears the legs off a living spider one at a time (182), and at the end of the novel, Pris kills a real goat (200). The androids in this novel, then, offer no hope for human evolution, but just as in *Scanner Darkly*, hope for evolution may not reside with many of the humans either. Most central to our discussion here is the notion of simulated empathy.

The humans in this novel consider empathy to be a survival mechanism, the key to their evolutionary future, and their human birthright, but their use of the term "empathy" is extremely problematic. As we will see, empathy in this world is not empathy at all, but is, in Jean Baudrillard's sense of the term, a simulation. Empathy can be represented in this society by two methods: the possession of a live animal and the fusion with Mercer. The problems with the latter are similar to the problems we have seen with all the virtual reality worlds explored in the second chapter; to become Mercer

is no better than to become Perky Pat, with all loss of identity involved. Mercer also turns out to be a fraud, an actor on a Hollywood sound stage. While debating what the purpose of such a swindle may have been, one character suggests that an "ambitious politically minded would-be Hitler" could have been responsible, in an attempt to manipulate and pacify the minds of the people (185), just as the Perky Pay layouts are a method for Leo Bulero's company to maintain control over the colonists. Rather, it is the notion of the possession of a live animal that offers a dilemma unique to this novel. To prove to the neighbours that one possesses empathy, one must own a live pet. To not own a pet is considered immoral and anti-empathic (10). Animals, of course, are expensive, and the implication is that the more expensive and exotic the animal, the deeper the empathy being displayed. Rick Deckard cannot afford a live animal and so instead owns an electric sheep that he pretends to the neighbours is alive. When it needs repairing, mechanics dressed as veterinarians drive up in a white van. The significance of the animal is purely social; Deckard and his wife are concerned about what the neighbours will think. The reason Deckard accepts a mission to destroy six illegal androids is so that he can make enough money to buy a live animal to prove to the neighbours that he has empathy. That he must kill in order to gain empathy in the eyes of society is a clear indication of the falsity of their concept of empathy, and the entire main plot of the novel satirizes this slippery and problematic use of the term. As Deckard massacres these androids one at a time, it is significant that he insists on always working alone (76). He is an isolated man, not part of a community, whose moods (which should be the responsibility of his right hemisphere) are determined by a mechanical box he keeps at

his bedside (2-5). Isidore, the most empathic character in the novel, perceives Rick Deckard for what he really is:

> [A bounty hunter is] something merciless that carried a printed list and a gun, that moved machine-like through the flat, bureaucratic job of killing. A thing without emotions, or even a face; a thing that if killed got replaced immediately by another resembling it. And so on, until everyone real and alive had been shot. (139)

Rick Deckard, as a bounty hunter, has all the characteristics of Dick's entropic and unevolved human being - he is predictable, unemotional, isolated, and without individual identity. His mission is to gain empathy and therefore essentially to evolve, but he lacks the genuine emotion, and his purchase of a thousand llamas will never bring him closer to feeling it. Rather than an authentic human emotion, the "empathy" he will gain is a product in a capitalist environment. We are back to a system, like that in *Three Stigmata*, in which evolution is only available to the rich, the only difference being that instead of a technology, what is being bought and sold here is empathy. Because it can be purchased at a pet store, it is the fulfilment of a social demand and dependent upon the laws of supply and demand. Like E Therapy, empathy has now been mass-produced and simulated. It has been made entirely predictable and controllable. One need not develop an understanding of others' motivations or learn compassion and kindness in order to possess empathy; one need only purchase an animal.

This simulation of empathy, like all simulations, has destroyed the value of the real. Indeed, in this society, fusion with Mercer and the ownership of an animal are valued far more highly than kindness. Only the reproducible and controllable simulation

of empathy is valued. The truly empathic Isidore is, in truth, the best hope for human evolution in the novel, and yet because he lacks left-brained intelligence, his society considers him to be a form of regression, a "chickenhead," unwanted stock, a "deteriorat[ion] back down the ladder of evolution" (64). The contrast between the truly empathic Isidore and the unempathic Rick Deckard is made clearest at the end of the novel: Isidore, having found a live spider, kindly lets it go, while Rick Deckard, thinking he has found a live toad, takes it captive as a social trophy, as an ostentatious symbol of empathy. Appropriately enough, the toad turns out to be a fake. In leaving Isidore on Earth to die, while allowing bounty hunters like Deckard to buy "empathy" and produce more offspring, the human race is destroying its chances for a future.

Simulated empathy can be found in this novel not only in pet stores or people's back yards, but also in the androids themselves. Androids are incapable of feeling genuine empathy, but they are, like those who purchase animals and join with Mercer, capable of simulating it. Pris cries in front of Isidore, declaring that androids are lonely, but Pris at this moment needs Isidore's help, and the crying is a tactic to evoke Isidore's sympathy. Because Pris later reveals herself to be without compassion for even a helpless animal, we have no reason to believe that any of Pris's emotions are sincere. The android Luba Luft admits that the primary method for an android is imitation, "imitating the human, doing what she would do, acting as if [it] had the thoughts and impulses a human would have" (117). It is precisely because empathy can be simulated so well that the Voigt-Kampff Empathy Test is necessary. Simulated empathy can fool a human, but it cannot fool the test.

If the androids in *Do Androids Dream* can simulate empathy, we must also be sceptical of the simulacra in *We Can Build You*. The Lincoln simulacrum not only seems to carry the original Lincoln's empathy but also his crippling depression. "Grief" and "emotional empathy" were both written on the original Lincoln's face (182), and we can never be certain that the emotions of this simulated Lincoln are not themselves simulations. *We Can Build You* stands out among Dick's novels in three ways: it is the prequel to another novel, it is told by a first-person narrator, and it is especially sympathetic toward technological development. The first element is in itself convincing: if the androids in *Do Androids Dream* are incapable of empathy, it suggests their forbears in *We Can Build You* would be just as incapable. The latter two elements may be intertwined: the faith we see in technological development, specifically the empathy we see in the Lincoln simulacrum, is being filtered through a first-person narrator who very badly wants to believe in it. When we are told how real the empathy in the Lincoln simulacrum seems, it could be a simple case of unreliable narration. The novel remains ambivalent on this point, but Luba Luft's comment regarding android imitation, coupled with our knowledge of the inability of the Rosen Association androids to feel empathy and Louis Rosen's biased attitude towards technological progress, tends to put a damper on our trust in the Lincoln simulacrum. The empathy in the Stanton and Lincoln simulacra is likely a simulation that destroys the value of the real. In any case, taking into account the theory of kin selection, we understand why Dick's completely fleshless androids are the least empathic of all his characters. The androids in *Do Androids Dream* represent not an improvement upon humankind, but a barrier - the human race will never

progress without the possibility for empathy, and without flesh, kin selection cannot exist. Evolution thereby becomes impossible.

The second relevant theory to develop in the last few decades regarding the initial source of altruistic tendencies is reciprocal altruism. Reciprocal altruism is an alliance, an "I'll help you if you help me" arrangement (Evans 65). According to the theory, human beings initially performed altruistic acts under the assumption that the favour would be returned. Alliances were formed. If the receiver of the favour were for some reason unable to return it, however, other members of the community who witnessed the altruistic act might provide the favour themselves. Even if the initial altruist were killed in the altruistic act, others who saw the virtue in such altruism, and its mutually beneficial nature, would then take it upon themselves to come to the aid of still other members of the community. Altruism in a community, which begins as a form of barter, thus becomes universalized. Elements of an exchange become selfless and instinctual. This evolution and universalization of altruism strengthens a community by creating an environment in which all members selflessly come to the aid of all others, and thus is the community more likely, as a whole, to succeed in the struggle for survival.

Reciprocal altruism, however, creates what is called the "free rider" problem. A free rider is a member of the community who accepts the favours of others without ever doing anything to help in return. In terms of the evolution of altruism, the existence of free riding poses a problem, because free riders, common sense tells us, who never risk their lives for anyone, will survive longer and thus leave more offspring to which they may pass their free-riding tendencies (Evans 66). In order to combat this difficulty, human beings developed the ability to remember individuals. If a free rider continues to

accept help without providing it, the community eventually punishes him by refusing to help him any further. This relationship type is called "tit-for-tat." When a community develops a tit-for-tat system, free riders no longer have the advantage (68). The basic rule of tit-for-tat is "what goes around comes around." A community that has developed an altruistic relationship among its members will band together and shun the free rider. He will no longer receive aid and will likely die before leaving many offspring. Human beings, of course, can't always afford to wait until they are betrayed multiple times before ceasing to provide help for someone, and so they developed what evolutionary psychologists call "mind-reading" abilities or "cheater-detection" abilities (Evans 87). This may be seen as the beginning of empathy. It is the skill that allows the individual to intelligently guess, based on words and actions, the motivation of the other person. If that person seems untrustworthy, he or she will likely receive no favours. Those with better cheater-detection abilities will more often avoid entering into unfair relationships, will tend to survive longer, and will thereby leave more offspring. This is why an understanding of others' motivations is a necessary component in human evolution.

Flow My Tears, the Policeman Said provides a perfect model for the evolution of a tit-for-tat community, the development of which will lead to empathy. As we have seen, once a community begins to function on mutually agreed upon rules of ethics and exchange, empathy can develop, and this novel contains two characters whose objectives are to join or create such a community. In this process, altruism must, at first, be reciprocated and free riders punished. Over time, the members of said community will develop cheat-detection abilities and eventually a generalized and universalized sense of selflessness, the beginnings of empathy. Jason Taverner and Felix Buckman are mirror

characters who both spend the novel attempting to figure out the rules upon which a functioning, coherent society is based. For, again, without these mutually agreed upon rules, there can be no meeting of the minds, no development of communally beneficial relationships, no development of empathy, and ultimately no hope for evolution.

Felix Buckman understands the necessity for communities. He views society as an agglomeration of "rules that we can understand. Rules the rest of us can apply" (101). He conjectures, for example, that "we don't murder a man who has just done us a favour. Even in this, a police state, even *we* observe *that* rule." Buckman fears his sister, Alys, precisely because "she doesn't play by the rules" (100). He has given her a rare, precious stamp as a gift, "the finest stamp ever issued" (101), and he knows she is quite capable of going home and setting fire to it with her cigarette. Buckman's goal as a character is to create and maintain a coherent society that plays by consistent, mutually agreed upon rules, for without such a society, there could be no evolution.

If Buckman, as police chief, is trying to maintain a community that is beneficial for everyone, Jason Taverner spends the novel trying to figure out the rules of such a community. Ruth Rae tells Taverner a story about a rabbit, which serves as a metaphor for Taverner's struggle. In Ruth Rae's story, the rabbit tried to "become a more evolved life form" by playing with cats and dogs. It played a chasing game with the cats in which the area behind the couch was safe, "where no one was supposed to follow." The dog, however, didn't know the rules of the game, and so when the rabbit ran behind the couch, the dog chased it and caught it in its mouth (108). The rabbit's problem, according to Ruth Rae, was that it was trying to evolve without understanding the rules by which other life forms play. Between the rabbit and the dog there was no meeting of the minds (109).

Taverner, like the rabbit, endeavours to evolve but can only do so by first learning the rules of the community. By becoming a part of a tit-for-tat system, and acclimatizing himself to the rules, Taverner opens himself to the possibility of genuine human evolution.

Taverner begins the novel, as we have seen, as a Six without empathy. He then wakes up in a world where all social advantages of his having been a Six are gone. There is no evidence that he ever existed, and even his lover has no memory of him. His surroundings, furthermore, seem suddenly overcome by entropy, with "tiny dark stores on each side of the cluttered streets, overflowing ashcans, [and] the pavement littered with pieces of broken bottles" (22). He considers himself to be at "the bottom of life," and evolutionarily speaking, he is. He plans to "climb" and "grope" his way back up (21), and this he must do in order to escape the entropy that threatens to overcome him. What has happened is that Taverner has lost the advantages of his technological so-called evolution and now has to evolve the old-fashioned way, through reciprocal altruism and empathy. He believes his "Six-determined constituents" will serve him in this struggle, but he is wrong - he is an isolated man, without compassion or understanding; the only way for him to evolve now is to form relationships with people, participate in exchanges of favours, develop the skills of cheat-detection, and eventually develop a selfless altruism. The novel follows Taverner's efforts in these various exchanges as he struggles to evolve the proper way.

The first exchange relationship Taverner forms in his new life is with Eddy, the hotel clerk. Taverner gives the clerk $500, and in return, the clerk sells him fake identification cards (22-3). In the dark, as the clerk leads Taverner to the room in which

the ID cards will be forged, he holds Taverner's hand, a symbol that tends throughout the novel to signal the formation of an exchange relationship. This early in his evolution, Taverner has no understanding of other people's motivations. The clerk betrays him by planting microtransmitters on him (81), and because Taverner has yet to develop cheater-detection skills, he falls for it.

The second exchange relationship Taverner forms is with Kathy, the ID forger. Upon meeting him, she immediately scrutinizes him, "seeking to make some kind of value judgment about him, based on his appearance" (27), and Taverner, significantly, fails to do the same to her; he still has not learned the value or the skill of analyzing another individual's motives. As a result, he is once again betrayed, failing to detect that Kathy, like Eddy, is a "police fink" (32). Now that his first two mistakes have been revealed to him, Kathy provides a way for Taverner to rectify them, and here he enters into two more exchanges: in return for Eddy and Kathy not reporting him, he must pay Eddy an extra $500, and he must spend one night with Kathy (34). Taverner agrees to both exchanges, berating himself for having "tumbled for it" (34), for lacking, in other words, cheater-detection skills.

In this new exchange with Kathy, Taverner fares slightly better than before. At Kathy's apartment, he meets the talking doll Cheerful Charley, and when Cheerful Charley declares, "I love you!" Taverner responds, "Prove it. Give me some money" (36). Taverner has learned from his first two failures not to take any show of altruism, even love, for granted; he has learned to be sceptical. This places Taverner at a slightly higher level of the exchange stage of his evolution, for he understands now that nothing comes freely and that there are always those who will try to take advantage of the system.

Clearly his cheater-detection skills are beginning to develop, because he suspects that after he goes to bed with Kathy, she will free ride on her end of the deal and turn him in anyway (47). At the same time, though, he is beginning to feel sympathy for her, the first sign of sympathy that Taverner exhibits in the novel; he is gentle with her and tries to cheer her up (43).

Kathy denies being a free rider and insists on the completion of the reciprocal exchange. When Taverner uses the forged ID cards that she sold him, she watches from the shadows to obtain "firsthand proof that her forged documents had been well enough done to get him past the pols," and she does this for a very particular reason: because she has witnessed her work fooling the police first-hand, she now has proof that Taverner is "in her debt" (65), thus ensuring that Taverner fulfill his end of the exchange. He doesn't even have the option to free ride on her if he wanted to - the police are after him, and so his continued participation in the exchange relationship is being forced upon him through blackmail. Basically, Taverner is being blackmailed into learning tit-for-tat altruism through his entrapment and compulsory participation in a reciprocal relationship. He is stuck doing favours for her (keeping her company) while she continues to do favours for him (not reporting him), and while he is thus entrapped, he begins, perhaps against his own free will, to develop empathy. Before he met Kathy, Taverner seemed without the ability to care for other people, but now, as she suffers a psychotic fit, he feels genuinely sorry for her (51). The next moment, we see the two of them strolling along the sidewalk "hand in hand," signalling his second exchange relationship (52). Unlike his first exchange with Eddy, this exchange is ongoing, and as it continues, and as his understanding of the nature of the relationship increases, he evolves.

The third exchange relationship Taverner enters is with Ruth Rae. By this point, Taverner seems to be getting the hang of the tit-for-tat system. Upon verbally entering the contract, Taverner "[takes] hold of her dry hand and [holds] it a second, letting go at exactly the right time" (92). His accurate timing with regards to the handshake signals that he has greater control and understanding of the relationship, and this turns out to be true. Just before they have sex, we are told the elements of the exchange - Taverner buys her a "fifth of Vat 69," and she gives him sex (93). Taverner's understanding of the underlying motivations of these exchange relationships is growing - "'I am using her,' he [thinks]. 'As Kathy used me.'" At the same time, he shows more empathy than he has before. He is concerned that his presence has jeopardized her life. "I hope I haven't got the pols oinking their asses after you," he tells her. "That would be too much, too goddamn much." His concern for Ruth Rae is certainly a sign of development, but he has not yet arrived at pure selfless altruism: he is concerned that he has "jeopardized Ruth Rae's life for nothing" (96), the "for nothing" implying that if Taverner were to acquire some positive outcome from this situation, jeopardizing her life would have been acceptable. So, by the end of this third relationship, he has developed the capacity for sympathy and a respectable degree of control over reciprocal exchanges, but the altruism has not yet become instinctual because he continues to expect the return of the favour.

Taverner and Ruth Rae, in fact, have a long discussion at this point about whether altruism can be selfless. Taverner has come to think of love in terms of exchanges, and he expresses his opinion that a lover may leave someone because she receives "a better offer someplace else" (109). Ruth Rae, however, believes in selfless altruism. For her, love is "like a father saving his children from a burning house, getting them out and dying

himself." She argues that, with love, "you cease to live for yourself; you live for another person" (110). Taverner argues with Ruth Rae against that kind of thinking because his evolution is only partially complete. His altruism has not yet universalized.

His next relationship is with Felix Buckman, the police chief. Upon meeting, they shake hands (126). This relationship in particular highlights the difference between a Six and a truly evolved empathic human being. Felix Buckman possesses empathy and an excellent insight into other people. In the interview, all of Buckman's hunches regarding Taverner are correct (133-4), while all of Taverner's hunches regarding Buckman are wrong. Above all, Taverner falls for Buckman's ploy pretending to be a Seven (a non-existent evolved type). Like Ruth Rae, Buckman explains to Taverner the concept of selfless love, especially to one's children, and once again Taverner does not understand. "Sixes never see," Buckman tells him; "they don't understand" (136). Buckman is perhaps being too harsh on Jason Taverner at this point because, through the course of the novel, Taverner has been evolving, and he is indeed closer now to an understanding of selflessness. After the interview, in his meeting with Alys, his cheater-detection skills are quite developed, and he immediately senses danger. "I don't want to walk into a setup hammered out between you and General Buckman" (145), he tells her. He is wary of an exchange relationship with this woman, and while he does enter her house and spend some time with her, he never lets down his guard. Furthermore, the words of Ruth Rae and Felix Buckman regarding selfless love, compounded with everything he has learned in his first four exchange relationships, must have had some effect, because in his next and final exchange relationship, he develops and demonstrates genuine instinctual empathy.

When Taverner first meets Mary Anne Dominic, he asks her for a ride, and she helps him unconditionally, asking for nothing in return. She simply possesses a "deep, intuitive, female desire" to help him (180). Taverner, after receiving her help, takes her out for coffee, and for the first time in the novel, he too genuinely desires nothing in return. He feels "sympathy" for her and desires only a conversation with her (172). It is the human connection itself that he seeks. The rest of their relationship consists of Mary Anne wanting intuitively to help Taverner and of Taverner doing his best to "reassure" her and make her feel good (180). Neither one of them is interacting with the expectation of anything in return. At her apartment, Taverner accidentally breaks one of Mary Anne's vases, an artwork she made herself, and she altruistically goes out of her way to make sure he doesn't feel bad about it. In return, he immediately begins to suggest ways he can help her artistic career (183-4). His conception of success may be limited to wealth and fame, but the thought is certainly sincere - he wants the world to know how good her art is, and he expects no payment for the favour. As he leaves her apartment, he expresses regret that the two of them have in some way "failed" (185), but I believe he is entirely wrong about that. Between Taverner and Mary Anne Dominic, a true mutually altruistic relationship has been formed. Taverner has developed the ability to empathize and care for another human being, and he is finally open to the possibility of genuine, right-brained evolution.

Unfortunately, soon thereafter, the world gets its memory back. Proof of his existence and his celebrity magically resurface, he regains his Six status, and all he has learned about altruism and empathy is forgotten. The cause of Taverner's bizarre experience may give us a hint as to why his evolution through reciprocal altruism doesn't

stick. At the end of the novel, Phil Westerberg, chief deputy coroner, launches on a jargon-laden expository bit of nonsense that tries to explain why Taverner just spent the better part of a week in a world where he did not exist. Because the explanation is scientific, the rhetoric is predictably incoherent, but about one thing we are certain: Taverner's experience came as a result of a drug taken by Buckman's sister, Alys (211). Our universe allows for an infinite number of possible choices, Westerberg explains, and the drug KR-3 sends its user into the closest potential reality (209), in this case a reality in which Taverner had never been born. For some reason never properly explained, Taverner was himself sucked into that other potential universe as soon as Alys took the drug, and everyone, every object "of his percept-system," was sucked along with him, which pretends to explain why Buckman and his entire staff also found themselves in the world where Taverner did not exist. When Alys died of a drug overdose, Westerberg continues, her potential-reality drug trip ended, and Taverner, along with the rest of his percept-system, was sent back to his original world (211). This explanation makes very little sense and serves indeed as more satire of scientific thinking, but regardless of the incoherence of the explanation, we can still conclude that Taverner's entire evolutionary journey took place in a virtual reality world created by a technology. In that respect, it is no different than the Chew-Z realm or the world of half-life. Within that world, as within all worlds mediated by technologies, true empathy is impossible, and we may therefore look at Taverner's journey as a simulation of the growth of reciprocal altruism, as a sort of Perky Pat snow-globe experiment that imitates, in microcosm, the proper evolutionary journey of the human race. When he leaves that virtual world behind him and returns to reality, no true empathy remains, because everything he experienced and learned in that

world was the product of what was essentially an unintentional (on the part of Alys) scientific experiment. In his virtual world, Taverner had intended to inform Felix Buckman about his sister's death, because he felt he "owed her something," but outside that world, at the end of the novel, he casually dismisses the idea (200). He also immediately tries to have sex with Heather Hart's maid in Heather's apartment, showing no concern whatsoever for Heather's feelings (201). Taverner may believe he has "climbed" or "groped" his way back up, but the truth is, with the retrieval of his Six life, he has once again devolved to a lower rung on the evolutionary ladder. Once again, he is devoid of empathy as well as hope for evolution. It is no surprise that Jason Taverner later dies in isolation and obscurity (230). It is rather Felix Buckman, as we will later see, the genuinely empathic soul, who succeeds in the quest for evolution and transcendence.

Technological "evolution," as we have seen, seeks transcendence but leads to entropy and devolution. Biological evolution, based on empathy and the formation of communities, has the same goal, but has a much better chance of arriving at such transcendence. We must now turn to a series of writers who will help to illuminate why the transcendence sought so futilely through technological development will potentially be attained through the process of natural, biological evolution.

In 1903, F. W. H. Myers published *Human Personality and its Survival of Bodily Death,* largely as a response to Darwin's theory of evolution. Myers deserves a place in this discussion for his attempts to formulate scientific and Darwinian explanations for psychical and transcendental phenomena, just as Dick's fiction proposes an evolutionary cause for telepathy and transcendence. Furthermore, Dick received many of his notions of telepathy from Jan Ehrenwald, a psychiatrist who in the 1960's experimented extensively

with what he believed were psychic phenomena; Myers, at the turn of the century, was the founder of the Society for Psychical Research, and many of Ehrenwald's theories seem to have trickled down from Myers; Dick's conceptions of telepathy and other psychical phenomena, therefore, find their true source in Myers. In *Human Personality*, Myers acknowledges the truth of natural selection but argues that man consists also of a soul or spirit that originated "in a spiritual environment" (36). The part of the human being that still has access to that spiritual environment he calls the "subliminal self," and that subliminal self is the most "central and potent current" in an individual, "the most truly identifiable with the man himself" (205). The subliminal self is, in short, the essence of the human being. Because it is subliminal, it is not easy to access. However, as the physical organism of the human being has evolved over hundreds of thousands of years, another side to evolution has been taking place, and that is man's growing ability to gain access to his subliminal self. Occasionally, Myers explains, a person will experience a "subliminal uprush," an emergence into conscious thought of ideas "which have shaped themselves beyond his will, in profounder regions of his being." Such an uprush of ideas, which are truths from the spiritual environment, are "a fulfillment of the true norm of man." Myers characterizes these subliminal uprushes as a form of evolution, of "an advanced stage of evolutionary progress transcend[ing] an earlier stage" (74). Spiritual uprushes are not amenable to logical analysis or mathematical thinking (75), and so technological development, for example, would be of no help. The uprushes are rather sudden flashes of inspiration "which no ordinary method of research could acquire" (82).

The text describes numerous methods of gaining access to the subliminal self, including hypnotism, dreams, ghosts, and motor automatism, all psychical phenomena

that Myers believes are pathways to the spiritual realm. These psychical phenomena, Myers explains, are products of human evolution because they tend to "bring about [an] enlargement of human powers, to open [a] new inlet to the reception of objective truth" (264). Myers states that telepathy, one such inlet to objective truth, "is surely a step in *evolution*" (265). Myers points out that the likelihood of a subliminal uprush diminishes as one grows away from childhood (75), and this is only natural since it is children who have the greatest access to the right hemisphere of their brains.

Philip K. Dick, in his essay "Drugs, Hallucinations, and the Quest for Reality," defends the existence of telepathy and argues that what appear to be delusions may in fact be "accurate perceptions of an area of reality that the rest of us cannot . . . reach" (170). Dick, like Myers, believes that children have greater access to truth than adults because children have "the clearest eye" and the "steadiest hand" and are much more able to "withstand the fraudulent" that our physical sensory environment represents ("How to Build a Universe" 279). In his discussion of telepathy and objective truth, he cites Jan Ehrenwald as an influence, and clearly it is a central influence, for in Ehrenwald we find the link between empathy and telepathy.

Ehrenwald defines empathy as "the imaginative projection of our consciousness into another person." He goes on to explain that empathy "presupposes a certain measure of *rapport* with the person with whom we are about to empathize" (*New Dimensions* 144) and then quotes A. E. Buck, who expresses that "when a group of individuals has reached a certain minimum of *rapport* a state is then established in which a degree of telepathic interaction can occur" (qtd. in *New Dimensions* 201). Empathy, which arises from the "sharing of various expressive acts, voluntary and involuntary, by two or more people,"

becomes telepathy when that sharing becomes literal. Ehrenwald believes there is a tendency to "speak of empathy or empathic linkage in a context in which reference to telepathy would be clearly called for" (144). Empathy, for Ehrenwald, indeed may be "at the very roots of telepathy" (149). Telepathy works best, for instance, among individuals who have "emotional ties" with one another (*ESP Experience* 26), among people who like and trust each other (7), and among people who are "united for a common purpose" (71), all of which serves to underline its source in empathy. Ehrenwald, furthermore, like Myers, perceives telepathy as a step in human evolution (285).

Ehrenwald, again like Myers, argues that telepathy is not associated with logic or mathematics. ESP phenomena stem rather from the right hemisphere of the brain, the hemisphere associated with intuition, metaphor, symbol, and poetry (71), and, perhaps most significantly, with emotion. Telepathy finds its source in intuition and empathy and not in intellectual or scientific contemplation, from which technology arises. Ehrenwald, in fact, spends an entire chapter explaining that drugs, the most common technology employed in Dick's novels in the pursuit of transcendent truth, have in no way been proven to lead to genuine telepathic abilities of any kind. Drugs may in fact achieve the precise opposite effect, the dulling of the right-brained skills of inspiration and creativity (75-76). Instead of enabling the development of telepathy, drugs effectively prevent it. We have already seen how drugs are of no use in the pursuit of transcendental truth in novels such as *Three Stigmata* and *A Scanner Darkly*, and we have now found yet another reason why this is so: drugs diminish the intuitive abilities of the right hemisphere of the brain, thus preventing the development of empathy and telepathy, which are important steps in the evolution of the human race. Ehrenwald also, like Myers

and Dick, believes that children are more right-brained and may more commonly experience telepathy as a result (*Anatomy of a Genius* 208).

For telepathy to represent the next stage in evolution, it must come about naturally through empathy and remain uncontaminated by technology and capitalism. We occasionally encounter in Dick's fiction characters who have achieved telepathic abilities through technological means, as for example the New Man government is attempting in *Our Friends From Frolix 8*, but this is a form of technological devolution no different than the others we have examined; it will lead to a society with even greater oppression and less empathy (30). We also encounter telepaths who have directed their talents into the capitalist system, and upon interaction with that system, these individuals have given up their hope for evolution. We see this phenomenon in *Ubik*. In this novel, there is a war between the telepaths and the anti-telepaths. A natural telepath is theoretically an evolved human being, but not all telepaths in this novel are evolving. Some are instead working for "a large investment house" (27) and are using their talents to make themselves and other firms more money. Ella Runciter points out that there are two kinds of telepath, "money-psis," and "cosmic identity-psis" (13): the former act for money while the latter act for the greater good of humanity. It is the latter who are the heroes in this novel, the genuinely evolving humans, even though we never encounter them. They are the next step in human evolution. The main characters, meanwhile, all work for an anti-telepath agency whose job it is to prevent telepathic communication. Because they are the protagonists, we tend to assume they are the heroes, but they are not. Runciter believes his corporation works to "guard human privacy" (47), but in preventing telepathic communication among the "cosmic identity-psis," the anti-telepaths are in fact isolating

humanity and preventing the possibility of evolution. Glen Runciter, then, is not the only main character in the novel who symbolizes devolution and entropy - so too do Joe Chip, Al, Edie, and all of Runciter's anti-psi employees. The telepath Hollis argues that Runciter's anti-telepaths are trying to "turn the clock back," and he is right - when the anti-telepaths arrive in half-life, a turning back of the clock and an onslaught of entropy are precisely what they suffer, and considering what they have been trying to accomplish, the devolution of the human race through a destruction of telepathic relationships, their punishment represents a kind of poetic justice.

If a telepath arrives at his or her skill naturally, through empathy, and avoids assimilation by capitalism and the technological society, he or she will evolve. There are several characters throughout Dick's novels who are natural telepaths, who have clearly come about their telepathic abilities through a strong sense of empathy, and who generally represent the most highly evolved entities in their respective novels. We have already encountered the ailing Gino Molinari in *Now Wait for Last Year* whose empathic faculty allows him to suffer telepathically for the sake of others. Molinari's form of telepathy, the vicarious suffering of other people's symptoms, can be found in Ehrenwald, in the anecdote of a "German opera fan who sat through a three hours' performance of Richard Wagner's *Siegfried* and returned home suffering from a bad case of psychosomatic laryngitis" (*New Dimensions* 147). The opera fan, in empathizing with the performer, physically embodied his symptoms, just as Molinari's empathy for those around him earned him their symptoms. Another telepath who stands out in Dick's fiction for his strong sense of empathy is Lord Running Clam from *Clans of the Alphane Moon.* The Ganymedean slime mold is, I believe, Dick's most endearing character - he is

Chuck's neighbour from down the hall who occasionally, much to Chuck's annoyance, slips under the door for a chat; he spends the first half of the book expressing overbearing concern for Chuck's welfare and constantly reading Chuck's mind. His end comes abruptly when he steps in front of a laser beam to save Chuck's life (150), the very definition of altruism.

One of the most interesting cases in Dick of an evolved empathic telepath can be found in *Dr. Bloodmoney*. At the beginning of this novel, society is destroyed by bombs from above. As the bombs drop, Bonny Keller walks along the street crying, but most importantly, she cries not for herself or her ruined house, but for "the city to the south." She cries for "all the people and things in it and what had happened to them" (81). At this moment of intense, absolute empathy, a man who sees her crying pulls up beside her, and, for the sake of comfort and human contact, the two strangers make love in the back seat of his car. We pick up the story seven years later with Edie, the daughter that Bonny conceived on that day. Edie appears normal - except that she claims to have a twin brother she calls Bill, a voice inside her head that only she can hear. Most take Bill to be Edie's imaginary friend (57), but as it turns out, Bill is not a figment of Edie's imagination at all. He is a real, miniature, sentient creature born and growing inside Edie, near her appendix (160). Her doctor can feel Bill's outline with his hands, the "firm cyst-like sack . . . [t]he head in a normal position, the body entirely within the abdominal cavity, limbs and all" (161). Edie and Bill were both conceived at the exact same moment, and both are therefore products of Bonny Keller's most heightened moment of empathy. Dick clearly likes to play with reader expectations - in both Gino Molinari and Bill Keller, Dick has taken the most unlikely, the most physically repulsive individual in

the novel, and made him the most highly evolved being. Between Edie and Bill Keller there is no cruelty or suffering; they fight occasionally, as any seven-year-old siblings would, but above all, between them there is "solicitude and tenderness" (162). They have the very definition of a reciprocally altruistic relationship. Bill depends for his very existence on Edie; he is "fed by her blood," and his sustenance is whatever Edie eats (162-163). In return, Bill prevents Edie from being lonely. The empathy felt by Bonny at the moment of their conception was so strong that she passed it along to them, and this "tiny, wizened" creature (161), who for seven years has been living inside Edie's "inguinal region" (160), is capable of telepathy.

Bill Keller knows all of Hoppy Harrington's secrets (179). Everyone else seems charmed by Hoppy Harrington's tricks, but Edie and Bill both know intuitively not to trust him. Bill can also read the mind of Barnes, one of the other survivors (213); whenever he's in close proximity, Bill can "get" his thoughts. Near the end of the novel, after being transferred into the body of an owl, Bill soars through the sky and can "[feel] the trees and the animals alive" (279). He feels a telepathic link with all living things. He is also essentially the hero of the novel, the one who stops the evil Hoppy Harrington from world domination. Bill Keller may be "hard and small, floating . . . [l]ips overgrown with downy hair that [hangs] trailing, streamers of it, wispy and dry" (180), he may be disconcerting and repulsive, but in his strong senses of empathy and telepathy, he represents the most advanced stage of human evolution in the novel.

A perfect encapsulation of the link between empathy, telepathy, and evolution can be found in *Our Friends From Frolix 8*. For most of the novel, the New Men represent the epitome of Dick's technologically unevolved creatures. They are the upper class race

of intellectuals, oppressive corporate eugenicists who turn everyone beneath them into objects. They are adept at intelligence testing, tables of numbers, and plotting of course-positions (10), but are incapable of feeling. The New Men represent everything that is wrong, for Dick, with technological "evolution" - class distinctions, corporate oppression, lack of agency and individuality, and totalitarianism; they also, of course, lack empathy. They are entirely left-brained.

Near the end of the novel, the Frolixians arrive to save the human race from the oppression of the New Men, and what they do to the New Men is fascinating: with what amounts to the wave of a Frolixian magic wand, the New Men seem to lose their intelligence and become drooling, incoherent children. This appears on the surface to be a punishment for all the evils of which they are guilty, but the truth is, the New Men, like Jason Taverner in *Flow My Tears*, have been given a second chance; they have been forced to start their evolution over again from the beginning and evolve, this time, the proper way. Unlike Jason Taverner, however, their new chance at evolution seems destined to succeed.

What the Frolixians have done is to change the dominant brain hemisphere in the New Men from the left to the right. The New Men used to be left-brained technologists and scientists; now, after being struck by the Frolixians, they are like children, appropriate since children are the most right-brained of all human beings. The New Men now sit around putting blocks together based on colour (192), a specifically right-brained skill, but they can no longer read (194), which is a left-brained skill. Nick Appleton encounters a New Man who is crying but cannot speak. Nick is told the New Man "has emotions, feelings, even thoughts" but is incapable of vocalizing them (179), and this is a

common result of damage to the speech centres in the left hemisphere. His right hemisphere, however, for the first time in his life, is working perfectly. The New Man now possesses emotions. This switch from left- to right-brained dominance is particularly clear when Nick meets Amos Ild, the eugenicist New Man doctor. Ild, like the other New Men, is now like a child (204); he draws pictures and plays with building blocks, symbols of his new right-brained faculties. But he has also now developed the capacity for empathy. He is concerned for Nick's broken arm (205) and is worried that Nick may hurt himself again (207). Ild now claims he has no understanding of politics, but he does show a great interest in love. He very coherently describes the tit-for-tat origins of an empathic community:

> I just know how it's wonderful, someone loving you that much. And if someone loved you that much, you must be worth loving, so pretty soon someone else will love you that way, too, and you'll love them the same way. Do you see? . . . Nothing exceeds that, where if a man gives his life for a friend. I wish I could do that. (207)

Not only does Ild now possess empathy, but he also has developed a sort of natural telepathy, with the ability to tell what "colour" Nick is (208). After speaking with Ild, Nick Appleton concludes that the New Men are not like children at all, but like saints and prophets (209), and he is right. In the transfer from their left to their right brains, they have been set on the proper evolutionary path and now, ironically, serve as the vanguard for the future of the human race.

The evolutionary journey from right-brained empathy, through telepathy, to spiritual transcendence can best be understood in Dick's work through the writings of

Pierre Teilhard de Chardin. Chardin was a Jesuit Father and palaeontologist who, in works such as *The Phenomenon of Man* and *The Future of Man*, influenced Dick concerning his notions of the evolutionary and spiritual future of mankind. Evolution, for Chardin, can only come about through closer union with one's fellow human beings. He conceives evolution as a "movement of convergence in which races, peoples, and nations consolidate one another and complete one another by mutual fecundation" (*Phenomenon* 242). Chardin speaks of our evolutionary hope and future in terms of agglomeration, cohesion, unification (242-3), and human solidarity (*Future* 75). Gradually, Chardin explains, this convergence of all minds will begin to form what he has called the "noosphere." The noosphere is an actual collective consciousness made up of all the minds of all the human beings in the world. If "the cooperation of some thousands of millions of cells in our brain can produce our consciousness," the cooperation of billions of humans can produce the consciousness of the noosphere (Hardy 78), a "composite brain" enabled by the mutual cooperation and union of all individuals. This noosphere, this convergence of all minds into one, is the direction in which human evolution is naturally tending, and for Chardin, this is a scientific reality. "If the power of attraction between simple atoms is so great," Chardin asks, "what may we not expect if similar bonds are contracted between human molecules?" (*Future* 184). Unsurprisingly, then, the two evolutionary blind alleys we must avoid at all costs are the isolation of the individual and the isolation of a group, such as a race or a class (237-9). These forms of isolation, elitism, and power hierarchies are not merely immoral, but are "false and against nature" (244) because they are tangible physical blocks to evolution. They "hide from our eyes the contours of the noosphere and render biologically impossible the formation of a

veritable spirit of the earth" (239). Here we see another source for Dick's conception of isolation as the death of evolution.

In Chardin, union achieves evolution, and the best way of achieving union is through love. Love alone "is capable of uniting living beings in such a way as to complete and fulfill them, for it alone takes them and joins them by what is deepest in themselves" (265). Love, as Chardin defines it, is closely linked with empathy, and here he explains how this empathy-love combination will enable the creation of the noosphere:

> To love is to discover and complete oneself in someone other than oneself, an act impossible of general realization on earth so long as each man can see in his neighbour no more than a closed fragment following its own course through the world. It is precisely this state of isolation that will end if we begin to discover in each other not merely the elements of one and the same thing, but of a single Spirit in search of itself. Then the medium will be established in which a basic affinity may be born and grow, springing from one seed of thought to the next, canalizing in a single direction the swarm of individual trajectories. In the old Time and Space a universal attraction of souls was inconceivable. The existence of such a power becomes possible, even inevitable, in the curvature of a world capable of noogenesis. (95)

To ensure evolution, love must develop and spread "until it embraces the total of men and of the earth" (95). Essentially, this noosphere is a universalization and intensification of telepathy. Chardin explains that "the pervasion of the human mass by the power of sympathy" will enable "a communication of mind and spirit that will make the

phenomenon of telepathy, still sporadic and haphazard, both general and normal" (184). The noosphere is therefore a telepathic link between all human beings simultaneously. Chardin, like Ellul, recognizes that love "dies in contact with the impersonal and the anonymous" (269), and so advanced technologies and technological societies, with their isolating effects, would likely destroy the chances of ever developing the noosphere.

We can see where Dick got many of his ideas regarding love and evolution. Dick discusses Chardin in his essay "Man, Android, and Machine." The following section from Dick's essay is central to an understanding of Dick's conception of spiritual evolution:

> I have the distinct feeling that Carl Jung was correct about our unconsciousnesses, that they form a single entity, or as he called it, "collective unconscious." In that case, this collective brain entity, consisting of literally billions of "stations," which transmit and receive, would form a vast network of communication and information, much like Teilhard's concept of the noosphere. This *is* the noosphere, as real as the ionosphere or the biosphere; it is a layer in our earth's atmosphere composed of holographic and informational projections in a unified and continually processed Gestalt, the sources of which are our manifold right brains. This constitutes a vast Mind, immanent within us, of such power and wisdom as to seem, to us, equal to the Creator. (221-222)

Here we can see how the right brain, the center for emotion, leads through empathy and telepathy to a sort of hive mind that, once established, brings us closer to the Creator. In doing so, it provides a solution to our entropic problem. As the noosphere evolves beyond

our current comprehension, mankind will mystically "detach itself from this planet and join the one true essence" (Chardin, *Future* 127). The linear progression of spiritual evolution is thus from love and empathy, to telepathic communication, to physical union of minds, to transcendence of the flesh, thus escaping forever the ravages of entropy.

In Dick's novels, there are several instances where we can see the evolutionary power of empathy and love start to form the beginnings of what appears to be a noosphere. This noosphere must be natural and biological, however. A technological hive mind is not what Teilhard de Chardin, or Dick, is advocating, despite Dick's rather technological-sounding rhetoric when describing the noosphere (holographic and informational projections, and so forth.) In *Ubik*, the half-lifers are said to be "progressively growing together" (11), but this process is not caused by love - it is caused by technology and proximity. In the process, they lose their personal identities. Those who have "higher cephalic activity" obliterate the identities of those who are weaker (14). In Chardin's view, mechanization and technologization are "perversions" of the rules of noogenesis (*Phenomenon* 257). In a genuine noosphere, individuals not only maintain their individuality, but become even more distinct, even more "hyper-personal." Chardin explains that "[i]n every organized whole, the parts perfect themselves and fulfill themselves" (260), and this is what he views as the future of human development. In a natural noosphere, as opposed to a technological link-up of minds, individuality will be strengthened rather than lost.

A naturally growing noosphere is treated lightly in *Clans of the Alphane Moon*, in which the individuals involved are two schizophrenics and a hebephrenic. The schizophrenics possess empathy for their fellow colonists and for complete strangers

(79), and it is no coincidence that these empathic beings are the ones who continually receive "clouded visions of archetypal reality" (9). The hebephrenic, appropriately, has no understanding of advanced technology (80). In the final battle of the novel, the three of them together, with their "mutually-reinforcing visionary powers" (82), attempt to prevent bloodshed (206) and have formed what they call "THE HOLY TRIUMVIRATE" (206) which, more than anything else, appears to be the beginnings of a group mind.

The creation of a noosphere is treated with much more seriousness in *Dr. Bloodmoney*. In this post-apocalyptic world without countries or cities or governments, Walt Dangerfield is trapped in a satellite that orbits the Earth. From there, he broadcasts a radio show containing music, book readings, and conversation. As he passes over a section of the planet, everyone living in that section gathers around a radio and listens to his broadcast: "Dangerfield looked down and saw everything, the rebuilding, all the changes both good and bad; he monitored every broadcast, recording and preserving and then playing back, so that through him they were joined" (109). With the destruction of civilization and the mass media, Dangerfield's radio show is the only communication these people have with the rest of the world, the only factor they have in common. And the radio show, Bonny Keller realizes, above all, is spreading love, "the love we felt for each other in the past; the love we have for Dangerfield right now, and for him in the future" (295). Chardin believes that the most effective method of achieving a worldwide love is through "the common attraction exercised by a single *Being*." For Chardin, there is "but one possible way in which human elements, innumerably diverse by nature, can love one another: it is by knowing themselves all to be centred upon a single 'super-centre' common to all" (*Future* 78). Chardin is, in this context, speaking of Christianity,

but in Dick's novel, Walt Dangerfield fills that position; he is the one being upon whom the world's love is centralized. In addition, Dangerfield's broadcasts are a completely selfless act: he is in the satellite alone; his wife has died years before from the isolation, and yet he continues to broadcast for no reason other than to console the human race. It is even suggested that the transmissions he sends to the Earth have been slowly killing him (274). When Dangerfield is discovered to be dying, Hoppy Harrington realizes that "the one voice that unifies the world will be gone and the world will decay" (186). Walt Dangerfield's radio show, a selfless act that disseminates love throughout the world, can be read as the beginning of a noosphere, and as Chardin exclaims, "The outflowing flood of Entropy [is] equalled and offset by the rising tide of a Noogenesis!" (81). Dangerfield's broadcasts are therefore a genuinely effective method of combating entropy. In the end, Dangerfield's life is saved, and the novel ends on an optimistic note, with the city awakening, and the business of the day beginning (298). Walt's continued transmissions are implied to be the link that will continue to bring the human race together, and through him, and their mutual love, they will begin to evolve to the next stages of human evolution.[3]

The development of the noosphere will eventually lead humanity to transcendence. The evolution of mankind through the development of the noosphere has as its goal an increase in "vision," the "elaboration of ever more perfect eyes within a cosmos in which there is always something more to be seen" (Chardin, *Phenomenon* 31). If Darwin exemplifies evolution through the physical development of the eye, Chardin conceives evolution as the development of a metaphorical eye, the growing ability to see the universe more accurately. With the creation of the noosphere, "the Universe emerges

from the shadows. It shows its true face, acquires its true value, glows with a new warmth, and finally is illuminated from within." This process is a penetration of "the absolute" (*Future* 93). The future of evolution, for Chardin, is "the establishment of an overall and completely coherent perspective of the universe" (*Phenomenon* 248), and this perspective can only be gained by the noosphere, a telepathic link between all members of the human race brought about by love.

A handful of characters in Dick's novels have such intense powers of empathy that, during the course of the plot, they evolve right out of our universe, into the absolute. They don't get to stay there, but unlike all the characters attempting to achieve transcendence through technology, these empathic individuals do get a glimpse at transcendent reality, and that glimpse invariably takes place at their highest moment of empathy.

In *Flow My Tears, the Policeman Said*, Felix Buckman undergoes a transcendental experience. Buckman, as we have already seen, spends his professional life attempting to maintain a society based on mutually beneficial altruism, but unlike Jason Taverner, Buckman has learned empathy long before the novel begins. He has an excellent ability to read people's motivations as well as a deep understanding of selfless love; he is also responsible for the shutting down of a number of labour camps (156-7). He is the police chief in what appears to be a police state, and yet he possesses more humanity than any other character in the novel, which makes him one of Dick's more intriguing creations. Buckman is not perfect, however. When his sister, Alys, dies, he feels an intense desire to blame someone, and he decides to pin the blame on Taverner. He orders Taverner's execution and then heads off into the night in his quibble, an

automatic flying car. As he drives, though, he begins to cry. "Who for?" he asks himself. "Alys? For Taverner? The Hart woman? For all of them?" (218). He doesn't know why he cries, but he can't stop himself. As his quibble flies him home, he falls asleep and has a dream in which his execution of Taverner is accomplished. In the dream, to his surprise, Buckman feels "absolute and utter desolate grief." When he awakes, it is clear to him that he will never be able to follow through with Taverner's execution. He is crying, he realizes, for the entire human race. He suddenly feels an uncontrollable urge to "[s]ee some person. Talk to someone." He craves human contact. It is at this moment of empathy with Taverner and with everyone else, in which he forges a psychological connection with all of humanity, that Buckman crosses over into another reality (220).

He lands at a gas station where he meets an "aristocratic"-looking black man with three children. In Buckman's reality, the eugenic laws state that a black individual is only permitted one child, and the presence of this black man with a family of five buying gas at the station as though it were nothing unusual signals Buckman's entry into a different world. Once there, Buckman's desperate need for human contact leads him to reach out to this man, first by drawing him a heart on a piece of paper and then by hugging him. The black man, rather than growing nervous about this strange man's bizarre show of affection, reciprocates the friendly overture. "I can sympathize and understand how you're feeling," the black man from another reality says to Felix Buckman. "You want to not be by yourself late at night. . . . Yes, I agree completely, and now you don't know exactly what to say because you did something suddenly out of irrational impulse. . . . But it's okay; I can dig it" (223). The black man understands Buckman's feelings, empathizes with him, and then gives him his card and an open invitation to visit his home

and his family any time he likes. Buckman thanks the man, gets into his quibble, and flies home, promising himself he is going to spend more time with his son from now on. Felix Buckman seems to be changed by this experience, perhaps forever. He has been given a glimpse at another, better world and the possibilities of love one can find there, and that glimpse, that evolutionary leap, was only made possible by an overwhelming surge of empathic feeling that translated into a telepathic link with a more genuine reality.

In *The Man in the High Castle*, two people gain greater spiritual vision through empathy. The first instance involves Robert Childan, the racist shopkeeper who sells fake American artifacts to the Japanese. Throughout the novel, Childan is characterized as a self-serving bigot; he cares more about impressing his Japanese masters than being kind to his fellow oppressed Americans (23), and he admires the Nazis for their genocides of the Jews, the gypsies, the Slavs, and the blacks (22). He has even taken it upon himself to think in the broken English of the Japanese. Near the end of the novel, however, while Childan tries to sell some American art objects to a young Japanese couple, he is given a moment of evolutionary redemption. Through subtle manipulation, Paul, the Japanese man, gets Childan to admit that the artifacts he sells are nothing more than "junky good-luck charms," and for the first and only time in the novel, Childan feels genuine empathy for his fellow Americans. He considers Paul's manipulation "a cruel dismissal of American efforts," and he is dismayed that he never perceived the insult until now:

> We're barbarians compared to them, Childan realized. We're no more than boobs against such pitiless reasoning. Paul did not say - did not tell me - that our art was worthless; he got me to say it for him. . . . He's broken

> me. . . . Humiliated me and my race. And I'm helpless. There's no avenging this; we are defeated and our defeats are like this, so tenuous, so delicate, that we're hardly able to perceive them. In fact, we have to rise a notch in our evolution to know it ever happened. (182)

Childan, at his moment of empathy, does exactly that: he rises a notch in his evolution and is able to perceive the truth, for the first time, about his ostensibly genial relationship with the Japanese. He finally sees himself as part of the American community and identifies himself with them, with the American "we." He speaks for his race, and when he sends the Japanese couple away without selling them a thing, he does that for his race. At this moment of identification with the Americans, he becomes one with them, and at the moment of convergence, at this hint of a noosphere, he "[rises] to the surface and [sees] unencumbered" (184). This unencumbered vision of reality comes as a direct result of his moment of empathy and is a sign of his having evolved.

The other person in the novel who experiences a transcendent vision is Tagomi, a minor functionary for the Japanese and one of Dick's greatest characters. Throughout the book, he is shown to possess a great deal of empathy; he criticizes the use of eugenics and asks the question, "Isn't it true . . . that no man should be the instrument for another's needs?" (73). In this respect, he is the precise opposite of the Nazis and all the other technologically devolved characters we have encountered. He shows concern even for something as small as a co-worker with a headache. Clearly, he is an especially right-brained individual; he values "intuition about people" (90) and is incapable of thinking about individuals merely in the abstract (201). His crisis arrives when he is forced to kill two German thugs. For Tagomi, having to murder, even in self-defence, is not merely

dreadful but inexplicable (200). In his distress, he considers going to the zoo, where things that "cannot think" can nevertheless "enjoy" their lives, and this notion of enjoying without thinking is a product of the dominance of his right hemisphere. He immediately dismisses the idea of the zoo, though, because he feels he must instead "clutch at human life." Tagomi, like Buckman, is at his moment of crisis desperate for human contact, and in his frantic search for convergence with the rest of humanity, he begins a transitional phase to a higher stage of evolution. His ethical predicament has made him "into a child, although," Tagomi realizes, "that could be good" (221). Tagomi understands that only with his child-like right hemisphere will he find a solution to his problem. Sitting on a bench, trying to wrap his mind around what he has done, he contemplates a piece of artwork "like a child." Examining it, he "imitate[s] the faith and innocence" of a child. He does try "scientific logical analysis" of the artwork for a few moments, but that seems to serve no purpose (228). It is only through intuitive and emotional contemplation of the artwork that he will be able to resolve his internal crisis. His empathy for the two German thugs he was forced to kill has thrust him into an urgent need for human contact, and he is at that moment, in the Dickian sense, in the perfect position for genuine evolution to occur.

It is at that precise moment of greatest empathy that he crosses out of his known universe. He finds himself in a world that more closely resembles ours, a world in which the Allies have won the war against Germany and Japan, and in which mainly whites rather than Japanese now populate San Francisco (231). This world terrifies him. He only remains there for a few minutes, but what he gains is the knowledge that the world with which he is presented on a daily basis, in which Japan has won the war, is not the real

one. He has broken out of the fraudulent into a more genuine reality and managed it solely by virtue of his empathy. As soon as he returns, he performs an act of pure altruism - he is asked to sign a form permitting the execution of a Jew named Frank Frink, and instead of signing the form, Tagomi, for no apparent reason, orders Frank Frink's release, thereby saving the life of a man he has never met (238). Unknown to Tagomi, Frank Frink is the artist responsible for the artwork he was contemplating as he crossed out of this world, and so we see here the unconscious formation of a reciprocally altruistic relationship. Each man has unknowingly helped the life of the other, without the two ever having met, without either of them even knowing of the other's existence. This coincidence hints at an empathic connection between the two that borders on telepathy. The mutual love and empathy telepathically and unconsciously felt between the two, a hint at the beginnings of a noosphere, should enable them both to continue to evolve. Tagomi's "vision" of that other world is an important step along that evolutionary path.

For Dick, the path of evolution does not necessarily lead to a clear and complete vision of the Koinos Kosmos, the reality hidden behind our phenomenal world of material forms, at least not any time soon, but merely to the ability to perceive that there is *something*, something else, beyond our current reality. It is the comprehension that the universe we are given is not the truth. Teilhard de Chardin, while a bit ambivalent on this point throughout his writing, does eventually state this notion precisely:

> [I]t is just this supposedly impenetrable envelope of pure "phenomenon" which the rebounding thrust of human evolution pierces, at least at one point, since by its nature it is irreversible. This does not mean that we can see what lies beyond and behind that trans-phenomenal zone of which we

> now have an inkling, any more than, having discerned the shape of the earth, we can foresee the landscape lying below the horizon. But at least we know that something exists beyond the circle which restricts our view, something into which we shall eventually emerge. It is enough to ensure that we longer feel imprisoned. (*Future* 219)

Buckman, Childan, and Tagomi are individuals who feel such powerful empathy at a particular moment that their empathy literally breaks through the confines of their immediate reality; none of these people are given full and comprehensive visions of the other realities, but all of them evolve enough to learn that they need not feel imprisoned, that there is at least the possibility of escape. This possibility of escape, of true and transcendent human evolution, is incumbent upon a gradual process of noogenesis, of union between individuals who love one another. The newly right-brained New Man Mr. Denfield in *Our Friends From Frolix 8* has an excellent understanding of how slow and gradual the evolutionary process must be:

> Someday . . . I think every living thing will fly or anyhow trudge or run; some will go fast like they do in this life, but most will fly or trudge. Up and up. Forever. Even slugs and snails; they'll go very slow but they'll make it sometime. All of them will make it eventually, no matter how slow they go. (211)

Human evolution in Dick must not be self-directed. It relies not upon quick-moving genetic manipulation, or drugs, or a virtual afterlife, or a magic spray can, or any other instant-gratification posthuman technologies. Those who are dominated by their left hemispheres, those who understand the world and try to better themselves intellectually,

mathematically, and scientifically, are both enabling entropy and preventing empathy. By preventing empathy, the human race destroys its chances for true evolution. In Dick's fiction, evolution is only made possible through the right-brained powers of love and understanding. Through love, empathy transforms into telepathy, which eventually will bring all of mankind together into a single, collective consciousness in which each individual part is made even more unique and more personal. Only with the formation of this collective noosphere will transcendence of the flesh be possible. With enough love and empathy, the human race, bound together, will finally break out of the fraudulent universe with which it is presented and thereby escape forever the destructive powers of entropy.

Conclusion

In the novels we have examined, fear of entropy is the primary catalyst for action, and one way the characters endeavour to escape entropy is through the process of human evolution. Evolution is thought both to counteract entropy here in our world and to enable spiritual transcendence to a more genuine and permanent universe where entropy does not exist. I have traced the two kinds of evolution found in these novels, the ineffective kind and the effective kind. The first is left-brained. It is technological, teleological, and self-conscious. Rather than leading to evolution and transcendence, this process tends to lead in Dick to capitalist oppression, loss of agency, loss of identity, eugenics, and a totalitarian police state, all of which are products of devolution, a transformation in the human body and mind that actively increases the entropy of the universe. The second kind of evolution, and the only effective kind, is right-brained. It is biological and unself-conscious, and it is instigated by human empathy. Empathy, in Dick's novels, as it grows stronger, becomes telepathy and eventually forms the beginnings of a collective unconscious very much like Pierre Teilhard de Chardin's notion of a noosphere. This collectivity of mankind is brought about by love and empathy and will enable the transcendence and escape from entropy that Dick's characters seek.

Dick's interest in evolution stems from his interest in the possible futures of mankind, and at the time of his writing, he perceived those possible futures to be rather grim. Dick uses evolution like he uses entropy, as a metaphor for exploring the various paths available for humanity's progress. Many of those paths entailed technologies that he feared would lead humanity in the wrong direction. Dick was writing at a time in American culture when explorations into how new technologies were endangering the

autonomous liberal human being were very much at the forefront. Canonized American writers were, like Dick, imaginatively reflecting on a technological society "that no longer respect[ed] Romantic oppositions between mind and machine, [or between] organic nature and human construction" (Tabbi 1). These writers were all engaged with the same image of the machine as a faceless and impersonal force possessing "unprecedented potential" to assist all forms of "social, political, and economic control" (1). These writers all shared the same fear - that the most effective and "potentially dangerous ideological force" at that time was to be found in those things people did every day "to sustain the technological culture" (7). Dick's concerns were, in other words, both topical and popular in the 1960's, and shared by a number of more "important" and "literary" writers.

Joseph Tabbi's *Technological Sublime* is an example of a text that ostensibly deals with the major American writers who were focused on these technological concerns. He places Norman Mailer, Thomas Pynchon, Don Delillo, and others, into a category of authors who have explored the nature of the late capitalist technological age, including the technological search for transcendence. Tabbi uses both Jean Baudrillard and Fredric Jameson throughout his book to elucidate how these authors deal with the effects of late capitalism; Baudrillard's simulations and abstractions, for example, are applied in Tabbi's reading of Delillo's *White Noise* (Tabbi 27). Nowhere in the text, I must point out, does Tabbi mention Philip K. Dick, and this is only to be expected. Tabbi acknowledges that science fiction often focuses on similar concerns, but he quickly dismisses the genre as not to his taste (15), leaving a begrudging but necessary discussion of cyberpunk for his epilogue. This omission of Dick is very common among critics of

the period, but it is also a very curious thing - for Dick's central and undeniable influence on the late capitalist image of the posthuman cannot be overstated.

Jameson himself recognized that "the supreme literary expression if not of postmodernism, then of late capitalism itself" is not to be found in Mailer or Pynchon but in cyberpunk (*Postmodernism* 419), a subgenre of science fiction that generally credits Philip K. Dick as one of its primary ancestors. In Dani Cavallaro's *Cyberpunk and Cyberculture*, Dick's *Do Androids Dream of Electric Sheep?* is cited as a proto-cyberpunk text (13). *Cyberspace/Cyberbodies/Cyberpunk* dedicates an entire chapter to the films *Total Recall* and *Blade Runner*, both adapted from stories by Philip K. Dick. Dick's representations of corporate control, biotechnological hybrids, genetic manipulations, and virtual realities are clearly precursors to the cyberpunk genre, even predating many of the canonized texts that deal with the same issues. In the 1970's, Mailer explored the possibilities of technological transcendence (Tabbi 3), a decade after the publication of *The Three Stigmata of Palmer Eldritch*. Pynchon, in *Gravity's Rainbow*, pondered the possibility of corporate technology staving off death (Tabbi 5), five years after the publication of *Ubik*. In chapter 1, I presented a list of American writers who, in the 1960's, used entropy as a metaphor for the loss of human individuality and freedom in a technological age, but Dick's concern with the acceleration of entropy can be seen as early as 1959's *Time Out of Joint*. I am not arguing influence here - it is unlikely that Pynchon or Mailer were aware of Dick's work - I am arguing only that Dick was, as always, ahead of the game in capturing and anticipating the concerns of his culture, and he explores them, in Jameson's opinion, better than his more academically accepted contemporaries (*Archaeologies* 348). To omit Dick from any

discussion regarding literary explorations of American technological culture of the 1960's is to employ a mistaken and outdated bias against the science fiction genre. Jameson and Baudrillard, the patron saints of the postmodern deterioration of human identity, are loyal fans not of Mailer or of Pynchon but of Philip K. Dick. Jameson has written numerous essays on Dick's fiction, and, in a "Memoriam" written at the time of Dick's death, Jameson claims that Dick was able to express "realities and dimensions" that often escaped "higher" literature (*Archaeologies* 345); he calls Dick "the Shakespeare of Science Fiction" (345) and "the supreme embodiment of 1960s countercultural themes" (347). Baudrillard refers to Dick several times in *Simulacra and Simulation*, citing him as a particular influence on his own ideas. Dick and the postmodern writers were running simultaneously on parallel courses, gaining different audiences and utilizing different literary methods, but both eventually coming to influence the rise of cyberpunk. Dick's fiction exists, then, as a sort of connecting link in a constellation of texts that include the postmodern fictions of the 60's and 70's and the cyberpunk of the 80's. In a way, Dick's presence haunts Tabbi's entire discussion surrounding the technological sublime in American literature, even if Tabbi doesn't know it.

There is still much to be done in the analysis of Dick's fiction. In this thesis alone, I have been forced, due to lack of space, to leave avenues unexplored that would have helped complete this picture of Dick's vision of mankind. I have omitted, for example, a discussion of the schizoid figure, an emotionless and left-brained personality structure that appears throughout Dick's fiction as a symbol of the devolved human being. Within this discussion would lie an exploration of autism - in *Martian Time-Slip*, we find an

autistic child who may represent either evolution or devolution. What is most fascinating about Dick's use of this autistic child is that late capitalist technological society has often been described as possessing characteristics associated with autism (Umland and Wessel 72-73). A further application to Dick's fiction of some of Baudrillard's other ideas would also, I suspect, be fruitful - one of the elements Baudrillard misses from a pre-simulation society is something he calls "seduction" (Horrocks 94), and this notion of seduction is, I believe, remarkably compatible with the kind of tit-for-tat exchanges and games we see played out in a novel like *Flow My Tears, the Policeman Said.* A reading of that novel through Baudrillard's notion of seduction could potentially even better illuminate Jason Taverner's evolutionary process. I have also omitted discussion of Dick's love for craftsmen; crafts are, in Dick, a product of right-brained creativity rather than left-brained simulation, and a broad discussion of this idea would have helped to explain, among other things, how Frank Frink's artwork helps Tagomi to achieve his transcendent vision. These are all examples that would help expand or layer my own argument; there are of course other readings, and other arguments, waiting to be pursued, and most of Dick's novels have yet to be approached through any sort of critical lens.

Philip K. Dick's writing, it should now be clear, is not as chaotic or arbitrary as it appears. My hope is that, as critics continue to take closer looks at his individual novels, when they arrive at a seemingly incomprehensible plot point (for example, the rhyming couplets Glen Runciter leaves on the bathroom walls in *Ubik*), rather than throw their hands up in despair and explain it away as mere silliness on Dick's part, they will take the time Dick's writing deserves, give him the benefit of the doubt, and see if perhaps these "silly" plot points aren't as careless or meaningless as they may seem. They may not be

explained in terms of plot mechanics, but they may be absolutely necessary for exploring his chosen theme, for constructing his vision of mankind.

In any case, while the literary establishment continues largely to ignore him, Philip K. Dick is one of the most important 20th-century American writers in terms of the formation of the popular psyche. Film is the current mass culture's artform of choice, and no science fiction writer since H. G. Wells has had more of his works adapted to film. Even films without his name, such as *The Truman Show* and *The Matrix*, carry his mark, and their immense popularity, especially with regards to *The Matrix*, proves that Dick's worldview represents something relevant and potent to today's mass audiences. Dick's influence has gone beyond merely the science fictional, or even the literary, world - his name has entered the popular lexicon as a symbol for technological and capitalist paranoia. But his novels suggest more than that, and perhaps as Dick grows more popular in the literary community, the other half of his vision will become better understood in popular culture: Dick's novels offer hope that mankind need not feel trapped in its capitalist and technological prisons. We may one day be able to transcend our physical limitations and gain spiritual access to a truer and better universe beyond our own, a universe in which we will never have to fear the oppression of imminent decay, and that transcendence may be made possible simply by virtue of the human powers of love and empathy.

Endnotes

[1] See the collection published in 1992 by R. D. Mullen, *On Philip K. Dick: 40 Articles from* Science-Fiction Studies.

[2] We are never told exactly how the New Men evolved, only that they "lately evolved," all at once (8), but there are strong hints that it was not a natural phenomenon but a governmental conspiracy. "Maybe," ponders Gram, "the whole structure of New Man thought is a gigantic put-on. *We* can't understand it; the Old Men can't understand it; we take their word for it that it's a whole new step upward in the evolution of human brain-functioning." The only evidence that the New Men are different at all is the "physical . . . structure of their cerebral cortex" in which are found the new "Rogers nodes" (31). A node is a communication port or terminal in a computer network, not a word generally associated with human biological matter, and so the implication is that these nodes were programmed technologically into the brains of a chosen elite in order to wrest control from the government.

[3] Dangerfield's broadcasts do require the technology of a radio, but as Christopher Palmer points out, radio is, in Dick's fiction, invariably benign (138). It does not represent advanced technology but a technology of the past, nostalgia for a lost innocence; this depiction may have something to do with the fact that, when he was young, Dick worked for a radio shop and had the opportunity to write DJ patter for a local FM station (Sutin, *Divine Invasions* 53).

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