NATURAL PERVERSIONS

# NATURAL PERVERSIONS:

# POSTHUMAN ECONOMIES, EVOLUTIONS, AND SEXUALITIES

By

LAUREN CRAIG STEPHEN, B.A., M.A.

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AUTHOR: Lauren Craig Stephen, B.A. (Wilfrid Laurier University),
M.A. (McMaster University)

SUPERVISOR: Professor Peter Walmsley

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ABSTRACT:

This project examines concepts and theories of the posthuman, or posthumanism, in contemporary popular and theoretical texts. The term "natural perversions" is an apparent paradox, but one that can point to some of the contradictions inherent in humanism; its use here suggests some of the profound challenges posthuman theory presents to exploitative institutions and power structures based on human privilege. *Natural perversions* is an attempt to naturalize, in a sense, the notion of perversion, but also to turn the normative language of perversion back onto dominant humanist institutions and discourses, especially anthropocentric visions of economics, evolution, and sexuality.

Economics, evolution and sexuality are implicated in reiterating and supporting each other in their humanist and anthropocentric attitudes and assumptions. Interrogating humanist assumptions in these three areas of knowledge is increasingly necessary, this study contends, in the face of current environmental, economic and political crises such as pollution, peak oil and global warming. Despite their privileging of a human subject, economics, evolution and sexuality can each be considered *inhuman* systems from a certain point of view, systems that in the words of Elizabeth Grosz "function beyond or above the control of their participants."

This project works to problematize human ideals such as reason and rationality, interrogating whether humans can indeed be distinguished from other beings by their rationality and contending that both man-made and natural economies (such as evolution and sexuality) do not function as rationalized and efficient systems in the ways that human thought has generally envisioned. Humans frequently *do not* behave in their own rational self interest, a foundational assumption of economic theory. The critical theory and popular texts considered here suggest that exuberant, decadent, luxurious, wasteful, and chaotic systems and economies and natural systems may be paradoxically more productive than highly rationalized ones.

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CONTENTS

LIST OF ILLUSTRATIONS

# INTRODUCTION:

## NATURAL PERVERSIONS—POSTHUMAN ECONOMIES, EVOLUTIONS, SEXUALITIES

This project addresses concepts and theories of the posthuman, or posthumanism, in contemporary popular and theoretical texts. I consider cybernetic and posthuman figures and images as they have been envisioned in a few key moments in popular culture from the late 1960s to the present, and seek to articulate their linkages to posthumanist critical theory. Not an application of posthuman theory to popular culture, this project is intended as a critical explication, elaboration, and sometimes qualification of posthuman thought enabled by close readings of consequential and telling cultural texts. This project is also necessarily an exploration and interrogation of the concept and ideal of the human and of humanist philosophies, traditions and assumptions. I focus my inquiry on three broadly construed areas of knowledge: economy, evolution, and sexuality. As they are conventionally understood and deployed, these knowledges assume and privilege a particular sort of human subject at the expense of other beings and other ways of being. Each one, in my opinion, can be transformed into more equitable, reflexive, and accurate, form*s* of knowledge with a radical reconsideration of the question of the human.

Posthumanism gives name to a philosophy that seeks to challenge a European humanist tradition which considers a particular vision of the human as the ultimate determinant of value in the world. This vision of Man as "the measure of all things" is at the heart of exploitative modern Western social structures, institutions and modes of thought. A conventional humanist philosophy sees humans as not only superior to other

beings in the world but separate and absolutely different from them, uniquely distinguished by a rational free will. Only humans can be individual subjects within a humanist framework, and the expression or realization of one's individuality is often seen as the purpose of a human life. René Descartes' "I think therefore I am" is not only an insistence of individual subjectivity, but an insistent scepticism towards that of the other.[1] Since the Enlightenment, the human ideal has been constructed in opposition to the supposedly irrational, instinctual animal and the unthinking, inflexible machine (this is despite the animal and machine as frequently conceived as existing also in opposition to each other). Indeed, animals and machines are both the same sorts of automatons according to Descartes, essentially thoughtless dead matter, hence his concept of the *animal machine*. The objectifying stance of science and "scientistic" modes of thought towards other living beings and systems is one consequence of a human-centred worldview. The forms of knowledge that have emerged out of a human configured as separate from its natural environment have had enormous and often devastating consequences to that environment, and frequently to many humans themselves.

Western humanism has not only enabled the exploitation of the natural world on a colossal scale, its very particular vision of the human is an ideal of an autonomous (liberal) European middle-class male subject. As such, humanist worldviews enable the exploitation of many actual humans, specifically those regarded as not having sufficiently distinguished themselves from nature by meeting the Western masculine ideal. As Jhan Hochman puts it, because the natural world,

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[1] "*Je pense, donc je suis.*" René Descartes. *Discours de la méthode* (1637). Paris: Larousse, 1972. 65.

> ...is routinely and reductively construed as unconscious raw material, any entity associated with nature stands to lose its rights to ethical culture and gains admittance into culture only or primarily as a material, aesthetic, recreational, or suffering object. People of color, women, the lower classes, and youth, all reduced to labor, gain admittance into culture predominately as means to another's profit or leisure, or as suffering objects that must be saved for the overclass' redemption, a ritual compensation for destroying what it professes to want to save. (8)

Interestingly, Hochman also mentions sexual minorities, but leaves them off his list: " I have left out sexuality because gays, lesbians and bisexuals are often castigated as unnatural even as they are reduced to objects in the same ways as the *naturally* raced, classed, and gendered" (190). Of course, the increasingly predominant "liberal" view of sexuality is that one is "born" gay or straight, which is to make an argument for the naturalness of sexual orientation. Either way, homosexuality seems figured, then, as what we might call a *natural perversion.*

A *natural perversion* is an apparent paradox, the perverse typically understood as that which is contrary to nature and to any perceived natural order. It is a paradox, however, that can point to some of the profound challenges posthuman theory presents to exploitative institutions and power structures based on human privilege. The notion of a natural perversion helps me to highlight some of the contradictory qualities modern Western humans have seen as distinguishing themselves from other beings—for one, the many ways we are like, and many ways we imagine ourselves as like, the animals and machines which are our supposed opposites. Paradox is at the heart of Donna Haraway's "ironic political myth" of the cyborg, a cyborg being a merging of things conventionally understood as incompatible opposites: organism-machine, animal-human, male-female,

myth and fact. It is enabled conceptually, in part, by the contradictory ideals by which the human is defined. In Haraway's usage, "Irony is about contradictions that do not resolve into larger wholes, even dialectically, and the tension of holding incompatible things together because both or all are necessary and true" (*Simian, Cyborgs, and Women*, 149). Ideas of nature and of perversion are central to cyborg theory and posthumanism: "Far from signalling a walling off of people from other living beings, cyborgs signal disturbing and pleasurably tight couplings" (152); the cyborg is "resolutely committed to partiality, irony, intimacy, and perversity." (151). I use the concept of *natural perversions* in an attempt to naturalize, in a sense, the notion of perversion, but also rather paradoxically to turn the normative language of perversion back onto dominant institutions and discourses.

In *The History of Sexuality* (Vol. 1), Michel Foucault writes of "the perverse implantation" (39-49). Rejecting familiar notions that the nineteenth and twentieth centuries were eras of simple repression or reduction of forms of sexuality, Foucault instead contends that the attention scientific, medical, economic and legal discourses pay to sex have had the effect of multiplying and solidifying sexualities. The 'invention' of homosexuality in the nineteenth century is a prime example (but only one of many):

> Sodomy was a category of forbidden acts; their perpetrator nothing more than the juridical subject of them. The nineteenth-century homosexual became a personage, a past, a case history, and a childhood, in addition to being a type of life, a life form, and a morphology, with an indiscreet anatomy and possibly a mysterious physiology… The sodomite had been a temporary aberration; the homosexual was now a species. (43).

The specification and multiplication of "perversions" worked to justify an increased surveillance of sexuality, an increased bringing of power to bear onto sex (42). A key rational for the attention of official institutions to sex was "the emergence of 'population' as an economic and political problem: population as wealth, population as manpower or labor capacity, population balanced between its own growth and the resources it commanded" (25). Modern discourses of sexuality appeared, then, in part in order to maximize or optimize population and economic growth, the example of "unnatural" sexualities presumably having the effect of naturalizing and encouraging heterosexual reproduction.

Foucault's writing on sexuality and attention to the power of discourse have several implications that might be called posthuman. For one, sexuality can no longer be seen as an expression of an inner authentic self, as the inside "coming out," but must be considered as socially constituted within networks of language and power. Indeed, Foucault's insistence on the "confessional" nature of medical (esp. psychological) and juridical institutions, the "searching" and revealing of oneself, suggest that the conception of inner self is itself at least partly an effect of power. Foucault's conception of discursivity must be seen as undermining the individuality and individual autonomy central to the humanist project. Within such a conception an act such as "coming out" as gay is not so much an individual liberation as it is a response to interpellation (Althusser), a submission to the taxonomical logic of institutional power. The concept of discursivity undermines humanism in another way, by suggesting that central identity categories such as sexuality, gender and indeed the human itself are primarily constituted through

discourse, which is to say through technologies of the self, which is also to say through cybernetic means. Haraway writes that cyborg subjects "show us the implosion of the technical, textual, organic, mythic, and political" (1999, 321). I would argue that Foucault's theory of discursivity reveals a similar implosion, where text, technology, myth, politics and organism join and become indistinguishable in the discursive "truth" of identity. Foucault reveals the human to have always been a cyborg in some sense. As N. Katherine Hayles writes, "we have always been posthuman" (291).

Why these particular areas of knowledge—economy, evolution and sexuality? As my three primary popular texts sometimes hint and sometimes make explicit, many theories and popular conceptions of economics, evolution and sexuality are closely implicated in reiterating and supporting each other in their humanist and anthropocentric attitudes and assumptions. "Free"-market economies are often described in evolutionary language—as a "survival of the fittest" for example—while evolutionary theory often envisions the natural world as an economy of scarcity, a fierce competition for scarce resources. Both rationalized visions can seem to support and encourage certain forms of sexuality, and work to shape sexual identities (though not always in straightforward or clear-cut ways, as Foucault's study of sexuality would suggest). Interrogating humanist assumptions in these three (what I call for now) discourses and beyond is increasingly necessary, I believe, in the face of current environmental, economic and political crises.

I use the term "economy" here in a broad sense that includes not only the production, consumption and marketplace of human-made goods, but also the organization of energies in other productive systems, in "natural" economies such as eco-

systems and reproductive strategies. Evolution and sexuality are themselves economies in my usage, then, as well as being influenced by discourses of market economics. The point of this broad conception of economy is not to apply principles of economic rationalization to natural systems, to evolution, reproduction or sexuality—quite the opposite. Principles of economic rationalization have already been widely applied to natural systems, in humanist visions of evolution and reproduction, even as neoclassical economic theory has constructed nature and human economic activity as almost completely separate spheres. Instead, part of the goal of linking these economies is to de-rationalize them, to see both natural and man-made economies as wild, chaotic, illogical, inhuman, as frequently driven by irrational and "inefficient" tendencies. The paradoxical hope is that creating space for the tolerance and celebration of ostensible irrationality may help to create better economic visions, ones that move beyond reductive notions of value and lead to more profound understandings of wealth.

**Posthuman Economics**

Londa Schiebinger has demonstrated how Enlightenment natural historians projected their assumptions about human gender onto the whole of the natural world, a legacy we still live with today.[2] The Enlightenment ideal of human reason has similarly been projected onto the natural world in various ways, resulting in a vision of nature that corresponds to ideals of rationalized economic efficiency. *Nothing is wasted in nature*

[2] Londa Schiebinger. *Nature's Body: Gender in the Making of Modern Science*. Boston: Beacon Press, 1993.

conventional wisdom tells us. This assumption of a perfectly efficient natural economy both follows from and seems to support human economic ideals. It also supports a notion of reproductive/evolutionary efficiency that privileges and naturalizes heterosexual complementarity. Indeed, despite the startling frequency of animal homosexuality, assumptions about the efficiency of natural economies have constructed animal homosexuality as an impossibility and consequently made it virtually invisible. Yet it has been the necessities of human economies, not natural ones, that have (until recently) demanded rapid population growth in order to produce wealth and have constructed non-reproductive sex as wasteful and luxurious.

Acknowledging *natural perversions* has a number of consequences for our understanding of human and natural economies. For one, that natural systems often do not perform according to human ideals of rationalized economy and indeed frequently appear extravagantly wasteful. In his *Essay on General Economy*, Georges Bataille contends that when we consider natural economies *in general* and do not restrict analyses to isolated situations and closed systems, it becomes clear that living beings and systems cannot accumulate energy (wealth) and grow indefinitely, but must ultimately waste all energy accumulated in excess of what is required for growth, survival and reproduction:

> I insist on the fact that there is generally no growth [all available living space now occupied] but only a luxurious squandering of energy in every form! The history of life on earth is mainly the effect of a wild exuberance; the dominant event is the development of luxury, the production of increasingly burdensome forms of life. (33)

In Bataille's conception of general economy, how to waste excess energy becomes the primary challenge faced by living beings and systems. This is nature, then, not as an efficient system but as a luxurious, wasteful one.

Bataille's laws of general economy also apply to human economies (as a part of the general natural economy), and he sees phenomena such as war, the pyramids, potlatch, and Aztec sacrifices as methods of using up excess wealth. The wasting of energy is inevitable; the danger in not recognizing the laws of general economy is thus: "It causes us to *undergo* what we could *bring about* in our own way, if we understood. It deprives us of the choice of an exudation that might suit us. Above all, it consigns men and their works to catastrophic destructions" (23-24). Bataille's conception of economy is "perverse" according to the principles of an economics that privileges rationalized efficiency, but in this conception it is economies that seek to eliminate waste and grow endlessly that must be considered perverse because they will ultimately result in more catastrophic destructions of wealth and energy. My citation of Bataille is not intended to excuse a wasteful contemporary Western lifestyle but to suggest that a belief in indefinite economic growth is an impossible fantasy, that waste and economic maximization may be virtually the same thing. Attempts to maximize wealth may well maximize the effort and energy we must use to expend that wealth; it may well be that the wealthier we become the harder we must work to dispense with the wealth.

If natural economies are not efficient in the ways humanist discourses have represented them, my conception of *natural perversion* also incorporates a growing widespread realization that contemporary "free"-market economies are not nearly as

efficient or beneficial as once believed. According to David Suzuki, global economics "must be exposed for what it is—a complete perversion. To begin with, economics is a chauvinistic invention, a human creation based on a definition of value solely by the criterion of utility to our species" (95). Both Adam Smith and Karl Marx see human labour as the sole creator of wealth. As Elizabeth Grosz notes, "For Smith, value is not found in the natural wealth of the earth—its accidental and uncontrollable fertility… but in labor and only labor" (35). According to Karl Marx, the value of a market commodity is created not by the use-value of the thing but by the human labour involved in its production: "Objects of utility become commodities only because they are the products of the labor of private individuals who work independently of each other" (*Capital Vol.1* 332). This is to see value as entirely created by humans. In Smith and Marx's conceptions alike, a commodity like oil would gain its value based on the labour required to find, pump and refine it; its value in neoclassical economics is based on its supply and demand to/by humans. In neither case is value attributed to the vast natural forces involved in oil's creation, to the energy of the sun in the form of countless plant and animal bodies, placed under immense geological pressures for millions of years. Attributing value to non-human forces and beings would be a first step towards seeing the true value and cost of oil (and other commodities). Instead, the global economy has tragically undervalued oil to the point where it may have blazed through the very thing upon which its existence depends.

If oil has been tragically undervalued in a sense, it has also been catastrophically overvalued in another—overvalued in the sense that the market has enormous difficulty

assessing its full costs and so it generally appears more useful and beneficial than it actually is. The price of oil on the global market does not nearly reflect the enormous costs either to human health and economies or to the health of planetary ecosystems (natural economies) resulting from air, ground and water pollution, and global warming. Oil, then, is overvalued because it is under-priced, its price not reflecting the actual costs and benefits it provides. But it is also under-priced because it is undervalued in the way I mention above, its cost not reflecting the enormous value contributed by non-human forces and beings. How can both over and undervaluing have resulted in under-pricing? Perhaps because economies in practice are not nearly as rationalized or consistent as economic discourses would pretend. I am not certain if the overvaluing I identify above "makes sense" economically: if the price is lower than it should be, then that would seem to constitute an economic undervaluing. And yet, I cannot help but think that failing to see the actual costs of a good must result in an inflated perception of its value; the apparent paradox between over- and undervaluing may well be due to the inadequacies of economics in appreciating all the things we mean by "value."

Economists Cobb and Cobb write of "the perverse world of economic accounting" which sees gross national product measurements include as an apparent increase in wealth "spending that makes us worse off": "In other words, national income accounts, by their very nature, give us almost no clue as to whether a nation is making progress or not" (2). Suzuki similarly critiques GDP measurements for making "no distinction… between destructive and productive activities. An industry that makes a profit while polluting a stream adds to the GDP. People poisoned by the polluted water

and hospitalized will need the services of doctors, nurses, and lawyers… all adding to the GDP" (104). Cobb and Cobb see the need for a new GNP, a "green national product" that would give a clearer picture of "whether economic activity was making us better off or worse off.... In particular this new GNP (green national product) would differ from the old… by addressing the long-term health of the planet and its inhabitants" (3). Suzuki similarly calls for a "Genuine Progress Indicator (GPI)" that attempts to widen the scope of traditional economic measurements to include the true costs and benefits of economic activity to people, non-humans and environments. In essence, these writers are taking steps towards some sort of *post-human economics*, a green economics that sees values and costs to beings and systems beyond an exclusive group of humans.

In the face of current environmental and economic crises we need a *posthuman economics* that questions and challenges fundamental economic assumptions. Here is how economics is defined in an introductory university-level textbook: "Economics is the study of the use of scarce resources to satisfy unlimited human wants" (Lipsey & Regan 5). All resources are scarce within the discipline of economics, and human wants are always unlimited. We need to ask, though, does this economic assumption describe how humans really are, or do modern economic systems and conditions help to produce us as beings with unlimited desires (and therefore to construct resources as ever scarce)? What does it do to human behaviour if resources are always considered "scarce" (as opposed to being "adequate" or "plentiful")? Will we use scarce resources more judiciously, or will a perception of scarcity actually work to drive demand and consumption to ever higher levels? If we consider again the example of oil, the perception of scarcity caused by

depleting oil reserves has actually resulted in a hyperactive drive on the part of nations such as China, Canada, India and The United States to produce and secure more oil resources. Indeed, we can see China and India's current drives to "develop" their economies as drives to get the benefit of the easy oil-subsidized wealth the West has enjoyed before that possibility disappears.

One key way a posthuman economics might challenge traditional economics is by derationalizing the concept of demand. It is an expectation of economic theory that humans will behave in their own rational self interest. The goods people demand are the ones in their best interests. This economic expectation reiterates familiar humanist assumptions regarding rational free will. Economic systems seem to operate efficiently because in theory they maximize value to consumers (given production/supply constraints). But economic value is based on human demand, and demand for a good is determined by how much people actually buy at a given price. The whole concept of economic value is rather circular and self-referential, then. It is impossible to get bad value for your money, because if you pay for something you must value it at least as much as the price you pay. What happens, though, to ideas of economic efficiency when economic systems and interactions are too complex to make fully informed decisions, say regarding the long-term health effects, environmental degradation, or animal suffering involved in consuming a product (and indeed when vast resources are put into obscuring these actual costs)? Even if fully informed decisions were possible, are human behaviours and desires *in fact* as rational as humanist discourses would suggest? Daly and Cobb note that, "Economists typically identify intelligent pursuit of private gain with

rationality, thus implying that other modes of behavior are not rational. These modes include other-regarding behavior and actions directed towards the public good" (5). Yet it is precisely other-regarding behaviour and a greater emphasis on the greater good which are required if we are to solve current economic-environmental-political crises.

In *Ecological Economics*, Daly and Farley contend that while neoclassical economics often takes efficiency to be an end in itself, "if our ends are evil, the efficiency would just make things worse" (4). Maximizing utility based on satisfying demands does not maximize value if our demands are "wrong." Here are the first words addressed to undergraduate students in Lipsey and Regan's *Macroeconomics*: "Have you ever noticed that, when you go to a store to buy something, the product you seek is almost always available?" (1). There is something naively utopian to this statement. I wonder how someone living in the Darfur region of Sudan, rural India or present-day Iraq would respond to it. It is true, when I go to a store I can often find the product I seek. My expectations and demands, however, have been managed and conditioned through a lifetime of consumption within a late-capitalist economy. As Daly and Farley put it, "it is not strictly true that markets reveal preferences even for market goods; they reveal choices, which are, to be sure, an expression of preferences, but a very conditioned expression under the constraint of existing prices and incomes" (359). Furthermore, "Markets by definition only reveal preferences for market goods, yet many of the goods and services that enhance human welfare are nonmarket goods. Thus, not only do markets fail to reveal preferences for these resources, they also fail to allocate them effectively" (359).

In the contemporary west we now live in an era of conspicuous consumption, meaning that our consumption of goods is primarily a meaningful or symbolic activity. Bataille's concept of general economy is relevant here in that demand within a late capitalist economy is largely a symbolic exercise; conspicuous consumption is a demand for luxurious waste, an enormous waste of resources masquerading as market efficiency within neoclassical economic theory. Economic theory flatters us by telling us that simply by desiring a thing and acting on that desire we enable economic efficiency. Perhaps it is possible to derationalize the concept of demand by linking it to the notion of desire, often understood as inexplicable and irrational in its specific manifestations. I am not attempting to offer coherent solutions to current economic and environmental crises here, but rather to demonstrate how posthuman and "perverse" perspectives can be a step towards considering questions of economy in a different light. The above is the most direct consideration of market economies in this dissertation. While all of the chapter discussions engage with questions of market economies at some level, the popular primary texts I discuss are more directly engaged with questions of how economic rationalization has been applied to evolutionary, reproductive, or sexual economies.

As an undergraduate studying economics, the theory seemed to me to make perfectly logical and common sense. If the demand for a good increases, the price goes up; if the supply increases, the price goes down; if the price of a thing goes up, people will demand less. There are, however, numerous exceptions to the rules, and indeed much of economic theory is devoted to explaining the exceptions. For some goods, demand actually increases as the price goes up—these are called luxury goods. But in a

sense all goods behave this way: much of the reason people value the things they buy are precisely because they cost money. According to one of my economics professors, newspapers are sold at a price not to make money, but because if they were free, people would actually read and value them less (is this why I prefer reading a physical newspaper to its online version?). I suppose my point here is that for economic theory to explain behaviour, it requires a constant massaging or tinkering. Indeed, I would suggest that the same sort of constant tinkering is required for "free"-markets to appear self-organizing and efficient. If we are constantly to tinker, then, should we not tinker based on what we and the world need from our economies rather than on making them appear systems of autonomous efficiency?

**Evolutionary Economies**

I have claimed that assumptions of economic efficiency and rationalization permeate evolutionary theory and popular beliefs regarding evolution. Philosopher of science Isabelle Stengers notes, for example, "the massive generalization on which sociobiology is based: that the whole of biological history can be reduced to selective constraints in such a way that every trait, every behaviour, will find its raison d'être in the optimization of an adaptive performance" (63). Richard Dawkins' influential book *The Selfish Gene* makes an intriguing evolutionary argument that has much in common with economic theory, notably a privileging of individual selfishness, an emphasis on the maximization of efficiency and utility, and a mathematical rationalization I will call reductive.

Dawkins' central argument is that the important thing in evolution is not the good of the species or group, but the good of the individual or the gene: "I shall argue that a predominant quality to be expected in a successful gene is ruthless selfishness. This gene selfishness will usually give rise to selfishness in individual behaviour" (2). All multi-celled beings are "gene machines" in Dawkins conception: "the individual [is] a selfish machine, programmed to do whatever is best for his genes as a whole" (71). Truly altruistic behaviour does not exist in Dawkins' model; apparent altruism is always genetically calculated to benefit an individual's selfish genes. For example, because siblings, parents and children contain exactly half of an individual's genes, "The minimum requirement for a suicidal altruistic gene to be successful is that it should save more than two siblings (or children or parents), or more than four half-siblings (or uncles, aunts, nephews, nieces, grandparents, grandchildren), or more than eight first cousins, etc." (100). Dawkins considers other relevant factors—a grandparent's sacrifice may make more evolutionary sense than a grandchild's because the younger will have more opportunities to reproduce—but in his model, natural selection will inevitably determine with a virtually mathematical precision the optimal level of "altruism" to benefit one's genes.

There is much in Dawkins' selfish gene theory that is compelling, and it is quite useful to my discussion of parental sacrifice in *March of the Penguins* as a corrective to the film's sentimentalizing. I would say, though, that Dawkins has committed what Daly and Cobb call "the fallacy of misplaced concreteness in economics." Daly and Cobb contend that the successes of economics in presenting itself as a deductive science,

> ...have involved a high level of abstraction, yet the whole ethos of the university in general, and of the department of economics in particular, discourages the full realization of the extent of the abstraction that has gone on. The result is that conclusions are drawn about the real world by deduction from abstractions with little awareness of the danger involved.... The problem lies in neglecting the extent to which our concepts are abstract, and therefore also neglecting the rest of the reality from which they have been abstracted. (35-36)

The misplaced concreteness, then, is to mistake the theoretical abstraction for the complex world it seeks to describe. Economist Alfred Whitehead called this tendency, "In effect a form of anti-rationalism," because "it means an arbitrary halt at a particular set of abstractions.... The true rationalism must always transcend itself by recurrence to the concrete in search of inspiration" (Whitehead 1925; Qtd in Daly & Cobb, 36-7). For Dawkins the misplaced concreteness occurs in the mathematically reductive formulae and reasoning used to determine (for example) expected levels of altruism, aggression or pacifity in species, which seem to evade a full consideration of the actual complexity of animal behaviour and natural systems.

Here is what Dawkins writes about monkeys adopting the offspring of others:

> In most cases we should probably regard adoption, however touching it may seem, as a misfiring of a built-in rule. This is because the generous female is doing her genes no good by caring for the orphan. She is wasting time and energy which she could be investing in the lives of her own kin, particularly future children of her own. It is presumably a mistake which happens too seldom for natural selection to have 'bothered' to change the rule by making maternal instincts more selective. (109)

Dawkins does not consider the example of animal homosexuality, but perhaps would consider it a misfiring of a built-in rule along similar lines. Note that implicit in

Dawkins' conception of "gene machines" is the humanist assumption of the machine as inflexible and unthinking. There is little space for autonomy on the part of adoptive mothers, only a pre-programmed mothering behaviour that can fix on an incorrect object. This is Descartes' conception of the *animal machine*, then, revisited. There is virtually no space in Dawkins' model for the possibility that the enormous complexities involved in gene (and other) interactions might allow a monkey a measure of autonomy, such as the ability to suppress individual gene selfishness for some other end. A monkey could not, for example, have the foresight to suppose that raising an unrelated offspring might encourage others to raise one's own at a later date, since "evolution is blind to the future" (9), and since one's allegiance is to oneself and one's genes, not one's species.

To respond to the dangerously reductive rationalization that characterizes many of our economic (market, evolutionary, reproductive) models, we need theory that appreciates—in all senses of the word—the complexity of the actual world. Isabelle Stengers's *Power and Invention: Situating Science* is a call for science that risks engagement with the complexity of the world as opposed to seeking to reduce it, that acknowledges the existence of such phenomena as chaotic systems, complex objects, and paradox. Dawkins theory is a clear example of the "massive generalization" Stengers identifies, that all behaviour and traits can be explained "in the optimization of an adaptive performance." Similarly, she complicates the notion that survival and reproduction should be seen as the function or purpose of living beings: "natural selection is uniquely responsible for the fact that biochemical processes result in the constitution of an organized being that, apparently, is governed by a finality: to survive and reproduce"

(15). In Stengers's way of thinking, a monkey's adoption of an unrelated baby would not be a "misfiring of a built-in rule":

> A bird, a chimpanzee or a human being *learns*. The behaviour of the individual does not repeat the species since each one constitutes a singular construction that integrates genetic constraints and the circumstances of a life. Furthermore, selective pressure does not bear on the individual but on the individual in its *group*, in the strong sense: it is not a question of knowing how an individual will "take advantage" of its group (the thesis of socio-biology [and of Dawkins]). The group has become the condition of possibility for the individual, whose development involves protection, learning, and relations. The individual now appears as a sheaf of linked temporalities. It cannot be understood simply as a function of the "species memory," constituted by genetic constraints. (16)

In other words, Dawkins may not be correct in his contention that natural selection inevitably results in individuals who maximize their own benefit at the expense of the group or species. In Dawkins model, an individual always seeks its own benefit (and thereby the benefit of its genes), even to the point of threatening the extinction of the species. Stengers' "complexification" of natural selection allows the flexibility for individuals to adapt to complex situations and act "for the good of the species" (or even beyond?), a possibility Dawkins derides.

Bruce Bagemihl's paradigm of Biological Exuberance is the sort of risky science Stengers is proposing, I believe, one that attempts to engage with the full complexity of the natural world. Specifically, Bagemihl engages with the "problem" of animal homosexuality, a "problem" because it confounds conventional reductive theories of evolution and natural selection. Biological Exuberance incorporates Bataille's theory of General Economy and a number of emerging scientific and philosophical perspectives, including chaos theory, post-Darwinian evolution, Gaia theory and biodiversity studies:

> Traditionally, scarcity and functionality have been considered the primary agents of biological change. The essence of Biological Exuberance is that natural systems are driven as much by abundance and excess as they are by limitations and practicality. Seen in this light, homosexuality and non-reproductive heterosexuality are "expected" occurances—they are manifestations of an overall "extravagance" of biological systems that has many other expressions. (215)

From post-Darwinian evolutionary theory Bagemihl incorporates ideas such as "the self-organization of life, the notion that the environment can beneficially alter the genetic code"; also, the possibility that "underlying patterning processes… may actually 'direct' evolutionary change" (246). Such ideas complicate notions of natural selection or survival of the fittest as the only principle directing evolutionary change. From chaos theory, Bagemihl's theory integrates "a recognition of the unpredictability and nonlinearity of natural (and human) phenomena… that the natural world often behaves in seemingly inexplicable or 'counterproductive' ways as part of its 'normal' function" (247). Building on Gaia theory and biodiversity studies, Bagemihl contends that sexual diversity is part of a natural diversity that strengthens the vitality of biological systems, that natural diversity should not be thought of as only the number of species in a system, but as social and sexual diversity as well (249).

Bagemihl's theory requires a rethinking of evolutionary assumptions, in that reproduction can no longer be seen as "the ultimate 'purpose' or inevitable outcome of biology…. Earth's profusion simply will not be 'contained' within procreation: it wells up and spills over and beyond this…. Lives of intense briefness or sustained incandescence—whether procreative or just creative—each is fuelled by the generosity of existence" (255). I understand one consequence of *biological exuberance* as being that

the drive for sexual pleasure may, for individuals of many species, take precedence over the drive to reproduce. In other words, that animals may experience sexuality in ways similar to humans, as a pleasure first rather than as primarily a reproductive drive. This is a radical contention in the context of humanist discourses because it means that animals can be "perverse" in some of the same ways as humans; it presents an enormous challenge to models of human distinction that have insisted on distinguishing human sexual pleasure as unique and animal sex as existing only for purpose reproduction.

I have made much reference here to conventional and reductive evolutionary theory. It is important to note that Charles Darwin's work itself is neither conventional or reductive. Elizabeth Grosz's *The Nick of Time: Politics, Evolution, and The Untimely* works to emphasise the complex sophistication of Darwin's theory, against the "reductionism" of Darwinists such as Daniel Dennett (*Darwin's Dangerous Idea*) who reduces evolutionary processes to sets of step-by-step algorithms and the "strongly antifeminist writings" of E.O. Wilson and Richard Dawkins "who essentialize the characteristics of the masculine and the feminine in terms of a reproductive telos of sperm and ova" (53, 67). Grosz notes the linkages between Darwin's theory of natural selection and economic theory, suggesting that Darwin's theory may work as a viable economic theory and indeed work to correct some of the limitations of Smith's economics: "while Darwin derived a number of insights about the development of species through extrapolations from the political and economic writings of Adam Smith and Thomas Malthus, his account of natural selection may provide an explanation for economic history as readily as natural history" (33). Smith produced a model based on

Newtonian physics to describe the laws governing wealth—"understanding its object as a closed, given system, based on an atomism of its given units, the law-like nature of its operations, and to a calculable ratio of forces" (38). "Darwin's complex view," in contrast, "brings out latent complexities and problems for free market economic theorists who followed Smith" (36).

Economics and evolution alike are "inhuman" systems according to Grosz, "systems functioning beyond or above the control of their participants, systems that… form and produce their subjects" (39). Evolution is "a series of processes and interactions that are fundamentally mindless and automatic, and yet are also entirely unpredictable and inexplicable in causal terms or in any terms that atomize or isolate units, steps, or stages" (64). Grosz would appear to agree with Stengers, then, that the complexity of the natural systems and processes resists explanatory human discourses that seek to identify clear-cut causes and effects: "Many contemporary Darwinists want to find a scientific or rational mode of calculation, a *ratio*, for the multiplicity of small processes that make up natural selection" (51). In contrast to highly rationalized and reductive visions such as those of Dawkins and Dennett, Grosz argues that Darwin's theory suggests that "the most significant – even defining – characteristics of species… emerge through random variation" (42), that "most individual differences… remain largely irrelevant to natural selection" until "Malthusian" crisis conditions prevail (43), and that quite often the fittest do not survive, that most death is random and accidental, most survival due to "dumb luck" (49). All of these suggest that evolution cannot be

reduced to the law of "survival of the fittest," or to clear causes and effects, but incorporates a high degree of uncertainty and purely random variation.

Natural selection is further complexified by sexual selection, Grosz contends, the choosing of one/some sexual partners over others:

> Sexual selection functions both as another inflection and complication of natural selection, but also, at times, as a principle compromising natural selection… Sexual selection may function in opposition to natural selection: it may privilege members of either sex who may not be the fittest in terms of strength, health, or ability, but may in some other sense function as the more attractive. This other force at work in the life of species sometimes complements and extends natural selection, but at other times problematizes it. It forces us to shift or reevaluate the meaning of central concepts within the theory of natural selection—primarily fitness, struggle, and selection itself. Sexual selection adds an individual, idiosyncratic element to the operations of natural selection and, moreover, provides a different set of criteria for what counts as success or fitness in the evolutionary schema. (66)

This "idiosyncratic element" is overlooked in reductive visions of evolution that see every trait in terms of its functionality. Grosz's reading of Darwin crucially inserts pleasure, including aesthetic pleasure, into animal reproduction and, like Bagemihl's exuberant vision of nature, resists equating sexuality with pure functionality. It suggests that what is conventionally understood as *perversion* – by which I mean pleasurable but "inefficient" sexuality – permeates the natural world. It can help give "we puritans" permission to move beyond the judgement implied by visions of hyper-efficient sexual economies to appreciate for their own sake the pleasure and extravagance of our own sexualities.

According to Grosz, the sexual differences resulting through sexual selection mean that the human "cannot be generalize[d] into a neutral or inclusive humanity":

> Sexual difference entails that, from the "moment" there is the human—and even long before—the human exists in only two nonreducible forms. Two forms, then, which have their own interests, needs, organic body parts, and ways of negotiating the world through them, two forms whose interests cannot be assumed to be the same but may negotiate a common interest in collective survival… two types of bodily relation with the world, and two types (at least) of knowing. (67)

"The human," then, cannot be said to exist as a singular, but as (at minimum) a duality of forms. This is not to essentialize or fix sexual difference, but rather to suggest its endless variability: "Sexual selection differentiates all species touched by its trace with an irreducible binarism that itself generates endless variety on either side of its bifurcation, and indeed produces variations—the intersexes—that lie between bifurcated categories" (67). Because Darwin suggests evolution always moves towards increased complexification, increased differentiation over time, Grosz contends that "sexual difference… is unlikely to be removed, only complexified, elaborated, developed further, perhaps even beyond the human. The post-human future is more likely to be sexually differentiated (in whatever form) than anything else we recognize in the present" (67).

There is a complication (paradox?) here in that the human is often seen to depend on gender or sexual binaries – as evidenced by Grosz's contention that more complexified forms of sexual difference might put an end to the human – but that nonreducible sexual difference already implies the impossibility of "the human" as a singular generalization. Some of what Grosz writes – for example about intersexes and the endless variation of sexual bifurcation – suggests that the "post-human future" may be already here. Indeed, if I have an objection, it is to Grosz's claim of "*only* two nonreducible forms." We might imagine Grosz's post-human future involves a "tri-

sexual" reproduction, that is reproduction involving three distinct sexes, but if we consider that sexual elaboration might involve a complexification or elaboration of sexual behaviours or a high degree of sexual variability we might be able to imagine that the "future" has been underway for some time. I am thinking both of the inter- or trans-sexes Grosz mentions and also of the complexities Bagemihl identifies in animal relationships when same sex couples reproduce, of the numerous and complicated strategies and relationships involved in "homosexual reproduction" (adoption, kidnapping, heterosexual sex outside the same-sex pair bond, bisexual trios). A final point on this question: although Grosz refers to a posthuman future, the sexual differences of other animals also must become complexified and elaborated over time given Darwin's theory; whatever it may entail, the post-human future is not ours alone, not the future only of we who are "currently" human; it must be seen as our future together with that of other beings, within the context of (not apart from) natural economies such as evolution.

**Natural Perversions in Popular Culture**

The above provides theoretical context for my discussion of *natural perversions* in contemporary popular texts. It traces some of the complex interactions among conceptions of economy, evolution and sexuality in terms of their humanist assumptions, and suggests ways these may be or are being re-imagined as posthuman forms of knowledge. The chapters which follow seek to elaborate the interactions among these forms of knowledge, and to demonstrate how a posthuman re-imagining of them has been

or may be articulated within the language(s) of popular culture, within its visual and narrative terms, within music and bodily performance. At some points, I read the texts themselves as suggesting strongly posthuman arguments—this is frequently the case with Stanley Kubrick's *2001: A Space Odyssey* (1968) and the music and image of David Bowie—at others, humanist and anthropocentric assumptions provide a fertile ground for a posthuman inquiry into these areas of knowledge, as is generally the case in my discussion of Luc Jacquet's documentary *March of the Penguins* (2005). In some ways, or at some times, my discussion of these popular texts elaborates some of the posthuman concepts I have touched on above, at others it may complicate or qualify them.

Why address the posthuman using these particular cultural texts? *2001* and Bowie's music both appeared at a time when certain nascent posthuman ideas and attitudes were becoming evident in mainstream popular culture. The 1960s saw the emergence of a counterculture that developed in part because of a loss of faith in *some* aspects of modernism. Faith in the benefits of human technological and cultural progress was shaken by the threat of a catastrophic destruction by nuclear war, and by a growing consideration of the extent and significance of The Holocaust (about which there was an explosion of commentary in the 1960s after years of relative silence). A literally *post*-human world—the extinction or annihilation of humanity—became far easier to imagine. We can see the "back to nature" ethos and the emergence of an environmental consciousness as manifestations of this mistrust of technological progress. Even at the same time as this mistrust was manifesting, new technological achievements and possibilities fascinated mainstream culture. On the one hand, the space race suggested

the grandeur of humanity's technological achievements, on the other, it was a proxy nuclear arms race and it pointed towards some potential posthuman futures. The possibility that encounters with aliens might threaten humanity's privileged position now became a consideration, as did the possibility that computers (so present in the space program and emerging elsewhere) might become conscious and do the same. The civil rights, women's liberation, and gay liberation movements emerged to question many assumptions of a "universal" humanity. In their own ways, Kubrick and Bowie's works are each critical syntheses of these various currents, revealing their linkages in the figure of the cyborg or the posthuman.

The selection of *March of the Penguins* is for somewhat different reasons. I consider the film representative of certain humanist and anthropocentric assumptions rather than a work that breaks ground in terms of presenting the popular posthuman. I address it, in part, because of its success in disseminating such assumptions and the resources it puts into their reiteration (it is one of the most elaborate and expensive nature films ever made as well as one of the most commercially and critically successful). *Penguins* demonstrates that in a popular culture now infiltrated with posthuman images and aesthetics, the lure of humanism and of the human remains incredibly powerful. Emperor penguins are a species that have captivated recent popular imagination: besides *March*, they are featured in the animated films *Happy Feet* (2006) and *Surf's Up* (2007), and well represented in an episode of the BBC nature documentary series *Planet Earth* (2006). Much of the fascination is sympathetic: emperor penguins walk great distances and so can appear to cross the boundary of bipedalism that has been taken as demarcating

the human; they also look more like humans than any other bird, often standing upright and almost seeming as if they wear adorable tuxedos. Big birds may also fascinate us because in their nesting and reproductive habits, in the care of their offspring and their apparent sense of home, they can seem to mirror certain of our ideas of home and family. These apparent similarities make it tempting to anthropomorphise emperor penguins (as *March* does) and read their behaviour as demonstrating human(ist) values, but they also can suggest posthuman challenges to human privilege and distinction. Emperor penguins may also be attracting popular attention because their habitat seems threatened by global warming: nesting on disappearing glacial ice, they exist at one intersection of evolution (extinction) and the global economy.

My first chapter "Kubrick's *2001*: Approaching Posthuman Myth" argues that Stanley Kubrick's epic science-fiction film *2001: A Space Odyssey* (1968) represents an "ironic political myth" akin to that of Haraway's cyborg. The film tells the story of the emergence and evolution of humanity, threatened with extinction by thinking machines but ultimately seeming to evolve into a kind of "superman." Like Haraway's myth, however, the narrative depicts the human as embodying contradictions and incompatibilities that are never resolved. One irony of the film is that the "man" announced by the "Dawn of Man" title at its beginning never clearly emerges: the traits which might distinguish humans are all possessed by other sorts of beings (animals, aliens, machines). By showing the emergence of humans prompted by an alien monolith, *2001* disputes what primatologist Craig Stanford calls the "myth" of "The Monolithic Palaeolithic," the idea that a single trait or behaviour can explain human origins and

evolution. This chapter argues that complexities in Kubrick's text challenge the idea of evolution as a straightforward revelation of cause, the same challenge Stengers sees presented by the complexity of living things.

Near the end of the film there is a struggle for survival between Dave, a human, and HAL, a sentient computer, with the winner going on to encounter aliens and undergo an evolutionary change. Rather than exemplifying the principle of "survival of the fittest" with man coming out the winner, I argue that this senario actually represents a foreclosure of evolutionary possibilities. Suggested in part by the eroticism between Dave and HAL, these two beings represent an extravagant and counterintuitive evolutionary possibility along the lines of what Bagemihl means by Biological Exuberance. *2001* shows the categories of human, animal, machine as never final or absolute; its truth lies among its various ironic languages—verbal, visual, musical; it contains contradictory visions of humans and other beings that are simultaneously valid. As such, I argue that *2001* approaches, approximates and advocates "situated knowledges" not unlike the kinds that Haraway sees enabled by cyborgs and cyborg subjectivities.

The second chapter, "'At Last the Family is Together': Reproductive Futurism in *March of the Penguins*" is a resistant, posthuman reading of a highly anthropocentric documentary. The film creates a close figurative association between emperor penguin chick and human child, and portrays penguin sexuality in a way that supports a particular vision of family and encourages specific types of social identities and relationships, including a (hetero)sexual division of labour and an economic system of fierce "free"-

market competition for scarce resources. The association between chick and child creates a number of provocative ambiguities, however, which this chapter seeks to tease out in order to pervert the dominant discourses and institutions on display. Lee Edelman's concept of Reproductive Futurism—his term for the idea that children represent the future—links the themes of sexuality, economy and evolution here. *March* represents penguin behaviour as relentlessly forward-looking, as "all for the sake of the chick." The purpose of animal sex is purely for reproduction, the narrative continually insists, and that reproduction made to seem an investment in the future of family and species. This chapter works to *queer* the emperor penguins' behaviour, by insisting on the immediacy of their drives rather than their future orientation, by suggesting communal and individual advantages to their nesting outside or beyond the *telos* of reproduction, and by inserting a greater role for pleasure into penguin lives, including selfish, even destructive pleasures which may be at odds with reproduction. By queering the penguins, this chapter undermines the support they are made to lend to institutions such as a nuclear family and free-market economy.

The final chapter, "A Cyborg Mix: Bowie's Posthuman Performance," contends that the musical and visual performances of David Bowie constitute what Haraway calls a "cyborg subject position" involving an "implosion of the technical, textual, organic, mythic, and political" (1999, 321). To Haraway's list of imploded categories, I add performance, or rather Judith Butler's concept of performativity, which I consider as a posthuman concept because it insists on the importance of performing social roles over essentially "being" them. Bowie's career involves a series of ironic performances,

performances of the identity categories upon which the human is founded, including various genders, sexualities and races, and performances of the human's antithesis, of alien, animalistic, and mechanistic subjectivities. Although there are some ways that Bowie's performances may represent an irresponsible disembodied agency that reinscribes a liberal humanist subject, this chapter argues that, taken as a whole, Bowie's oeuvre suggests the radical performativity of the human, that being a human being requires a convincing performance of the human.

# CHAPTER 1. KUBRICK'S *2001*: APPROACHING POSTHUMAN MYTH

This chapter reads Stanley Kubrick's film *2001: A Space Odyssey* (1968) as a posthuman thesis, which is to say as an exploration and interrogation of the "sacred" categories of human and humanity, and the boundaries, binaries and hierarchies upon which they depend. To call *2001* a posthuman text may seem a sort of anachronism: the term entered the vocabularies of cultural and critical theory decades after the release of Kubrick's film. However, *2001* is a film that refers to non-verbal prehistoric apes from 4 million years ago as "men," and extends the category indefinitely into the future towards some sort of "superman." Questions of language, species and temporality are central here. Indeed, there is the suggestion in the film that the category of human is *always* a kind of anachronism, that what is taken as a universal in fact makes sense only within a specific historical and political context, that is to say within specific social and power relations. As *2001* looks to the distant past and to near and distant futures, it deploys and maintains a vision of the human. But it is a highly ironic vision, one whose construction through various languages (verbal, visual, aural) and conventions is exposed in the film and ultimately rendered incoherent. Because *2001* shows the categories of human, animal, machine and alien never to be final or absolute, because its truth lies between its various languages—languages it reveals to be misleading individually—and because it contains contradictory visions of humans and other beings that are simultaneously valid, I argue that *2001* approaches, approximates and advocates "situated knowledges" not unlike the kinds that Donna Haraway sees enabled by cyborgs and cybernetic subjectivities.

*2001* gives us a mythic version of human evolution, depicting in shorthand humanity's emergence and eventual transformation into something other. The first section "The Dawn of Man" shows a group of prehistoric, pre-linguistic apes encountering a mysterious black, rectangular monolith which stimulates them to start using tools in the form of bone clubs. Richard Strauss's "Thus Spoke Zarathustra" plays at the moment when the protagonist ape conceives of a club. The next (untitled) section takes place around the year 2001. Humans have achieved the technology of space travel and have begun to explore and colonize the nearby solar system. Heywood Floyd, head of the National Council of Astronautics, travels towards the American moon base Clavius in order to investigate recently discovered evidence of alien life (another monolith). When Floyd reaches the moon monolith, it sends out a powerful radio signal towards Jupiter. The "Jupiter Mission, Eighteen Months Later" section depicts the American astronauts Dave Bowman and Frank Pool travelling towards Jupiter in the spaceship Discovery. Controlling the ship is the seemingly sentient computer HAL, whose glowing red eyes are omnipresent. When HAL appears to make a computational error, Frank and Dave determine to disconnect him, but discovering their plan HAL takes action first, killing Frank and nearly killing Dave before Dave is able to disconnect him. In the final section, "Jupiter and Beyond the Infinite," Dave encounters another much larger monolith in orbit around Jupiter. This monolith is a "star gate" through which Dave's space pod is able to pass and which transports him a seemingly vast distance. Ending up in an alien environment strangely furnished with eighteenth-century objects, Dave ages and dies. At the moment of his death, a final monolith appears, and Dave is reborn as

some new sort of being, a "star child," superman, or alien-human hybrid. Strauss's "Zarathustra" plays again at Dave's rebirth. The final shot of the film is of a humanoid foetus in space turning its gaze towards Earth.

One element of *2001* key to my posthuman reading here is that the category of "man"—explicitly established in the opening "Dawn of Man" section—never clearly emerges in the film. Instead, the film's nominally human characters are all sorts of hybrids, blending elements of animal, human, machine, and the alien-divine. Belief in a single point or cause of human origin is one of several scientific and popular theories (or myths) of human evolution with which *2001* engages. The opening moments of *2001* invoke powerful *monolithic* theories of human origins, distinctions, and evolutions—literally reifying them on-screen in the form of the monolith—in order to interrogate, complicate, ironize and undermine rigidly anthropocentric visions of the world. "The Monolithic Palaeolithic" is a term primatologist Craig Stanford uses to describe "a favourite pastime of human evolutionary scientists… to try to explain everything we know about the emergence of humans in one sweeping theory—a unified field theory of human evolution, as it were" (16). "The Monolithic Palaeolithic" is one of the "cherished myths" of human origins that Stanford identifies as scientific inaccuracy, "based on fossil evidence that has since been superseded" (2). My use of myth here is closer to that of Roland Barthes, or Donna Haraway when she writes of myth as "important stories that constitute public meanings. Science is our myth" (81). Significantly, while Kubrick's *Odyssey* does indeed critique scientific myths, it does not seek to dispense with myth in science. Rather, as its title indicates, it prompts us to acknowledge the mythic elements

of science in an effort to create better scientific-public knowledge(s).

Michel Serres insists that, "The only pure myth is a science devoid of all myth" (Qtd. in Latour 93), while evolutionary biologist Edward O. Wilson writes, "The evolution epic is probably the best myth we will ever have" (Qtd. in Bagemihl 246). Calling science *myth* is accurate and necessary because science is produced within social networks of power and meaning and is inseparable from them. The public meaning of all scientific knowledge is shaped by economic, political, military, popular and other considerations, of course, and many groups vie to control the social meanings of scientific knowledge. However, such considerations must also shape the production of scientific knowledge at very basic and fundamental levels, and moreover, the various disciplines of science are highly influenced by prevailing and popular scientific myths. A single example will suffice for the moment. In 1991, primatologist Linda Wolfe revealed that many of her colleagues had confided to her they had observed both male and female homosexual behaviour in field studies of primates: "They seemed reluctant to publish their data, however, either because they feared homophobic reactions ('my colleagues might think that I am gay') or because they lacked a framework for analysis ('I don't know what it means')" (Qtd. in Bagemihl 87). In other words, field researchers have regularly omitted cases of animal homosexuality from the data they choose to publish and interpret because of powerful cultural myths about homosexuality (i.e. only gay scientists do or care about "gay science"), and because prevailing scientific theories (i.e. myths) about animals and humans are inadequate at explaining animal homosexuality. Evolutionary theory in particular has had a difficult time accounting for homosexuality,

while many prevailing theories of homosexuality (sexual inversion, psychological disorder, learned cultural behaviour, discursive construction) seem human-specific. It is by recognizing scientific discourse as myth and engaging it as such that we may hope to encourage the production of equitable and socially responsible myths—this is what Kubrick attempts with *2001*.

Kubrick's *Odyssey* constitutes a critical response to key technologies and scientific theories of its historical-political moment in the late 1960s, including new theories and technologies of anthropology (Sherwood Washburn, the Leakey family), primatology (Jane Goodall), astronomy and space exploration (U.S. and Soviet space programs), and artificial intelligence (Alan Turing). The film addresses each of these disciplines within its overarching theme of human evolution. In particular, *2001* rejects *monolithic* or absolutist visions of human evolution and distinction in favour of complex and multifaceted ones. I mean a few things by *monolithic*, including scientific theory that aims to conceal its mythic elements. Also, reductive fantasies of a hyper- rationalized nature which functions as a perfectly efficient and balanced economy—these would include evolutionary models which over-emphasise *survival of the fittest*, those fixated on complementary gender roles, and those which see non-reproductive sex as contrary to the aims of species survival. I use *monolithic*, then, in possibly a wider sense than Stanford, to refer also to what Isabella Stengers identifies as "the massive generalization on which sociobiology is based: that the whole of biological history can be reduced to selective constraints in such a way that every trait, every behavior will find its raison d'être in the optimisation of an adaptive performance" (63). The privileging Cartesian distinctions

between mind-body, mind-nature, human-animal, and human-machine must also be considered *monolithic* visions in that they set up the human mind as a sort of impenetrable monolith, an unapproachable thing absolutely different from all other beings and phenomena in nature.

Kubrick's film begins its approach towards posthuman myth by undermining humanist visions of a Monolithic Palaeolithic, invoking them in order to interrogate them. This chapter's first section *What is the "Dawn of Man"?* shows Kubrick complicating the idea his section title brings up, that humanity has a single clearly defined point of origin. Instead, Kubrick gives us numerous literal and figurative dawns, not all of them congruent. Related to this idea of a single point of origin of man, the chapter's second section *Prime Movers, Missing Links* problematizes the notion of any single cause of human evolution and questions whether we must necessarily see the apes depicted in "The Dawn of Man" as humanity's "missing link." *Evolution as Manifest Destiny* adapts another myth Stanford names, that of "The Clumsy Biped." Rejecting views of early humans as clumsy walkers, Stanford writes that "natural selection does not mold creatures that are incapable or inefficient, and it does not make transitional forms with an eye toward later completion" (5). *2001* may be less interested in bipedalism than in other traits taken as markers of the human, but it applies the general idea in significant ways, identifying and rejecting inevitable evolutionary trajectories—or "manifest destinies"—for humans. *Man-the-Hunter: Floyd's Mission and Planet of the Apes* outlines Kubrick's critical response to Sherwood Washburn's theory of Man-the-Hunter, a highly influential theory of human origins Washburn proposed in the 1960s. I highlight Kubrick's

resistance to the myth of Man-the-Hunter, especially to its masculinist assumptions, through a comparison of *2001* to *Planet of the Apes*, another 1968 science-fiction film about human and animal evolution, but one which submits itself more readily to Washburn's theory.

As the narrative of *2001* unfolds, it moves from undermining humanist assumptions to proposing posthuman alternatives to them. *Complexity, Exuberance and Situatedness* are the theoretical frameworks for my analysis of how *2001* makes its approaches towards posthuman myth. Explicit discussion of them weaves in and out of my analysis of the film, but their influence is widespread and sometimes implicit. Although I argue that *2001* moves towards the construction of posthuman myth, the section *"Already Posthuman"?* considers ways we can think of the film as being "already" posthuman even before it makes its most radical gestures. This section reads The Discovery mission and its conflict between man and computer as a recreation of a Turing Test, a test designed by Alan Turing to determine the existence of artificial intelligence. *"A Bicycle Built For Two": HAL's Posthuman Lullaby* addresses HAL's death at Dave's hands, and the song he sings before he dies. This final section argues that HAL's song constitutes a plea for equitable posthuman relationships and an insistence that "man versus machine" is not an inevitable conflict and need not be seen as a natural opposition.

**What is "The Dawn of Man"?**

Much commentary on *2001* takes Richard Strauss's "Thus Spoke Zarathustra" as the key to reading it, seeing the film as a rather straightforward depiction of a Neitzschian progression from ape to human to superman. Kubrick scholar Michel Ciment writes, for example, "This is what *2001* is about: man, who transcended the animal condition by means of technology, must free himself of that same technology to arrive at a superhuman condition" (127). *2001* is certainly "about" this to some extent, but this thematic summary does not encompass the film's ambivalences and complexities. *Did* man indeed transcend the animal condition by means of technology? Is Ciment talking about the film or declaring his beliefs about what defines humanity? *Does* man transcend the animal condition by means of technology in *2001*? *Must* he free himself of technology to become a superman? And importantly, if humanity is defined by its technology, then why logically would it not return to an animal condition if it abandoned that technology? Allegiance to our species, belief in human distinctness and superiority, and especially faith in the ever "upward" progression of evolution, make it difficult to envision a human "devolution." Recall the familiar iconographic representation of evolution: a series of species ascending from left to right in height, ending in modern humans. Sometimes such representations start with life in the oceans, depicting ancient fish, amphibian forms, reptiles, birds, mammals, and so on; in other cases the image focuses on pre-historic primates and men growing more erect towards the *telos* of modern

man. Represented this way, human progression—not adaptation to environment but *advancement*—appears an eternal truth.

Reading *2001* as a straightforward Nietzschian evolutionary trajectory, however, would miss a great deal of the film's irony and fail to account for much of the complexity and ambiguity in the human/non-human relationships represented here. A Nietzschian evolutionary trajectory is most strongly suggested in the film's beginning moments, where the opening notes of Strauss's triumphal tone-poem introduce the main titles. After the main titles we see the first of three section titles—"The Dawn of Man"—and are shown an otherwise wordless narrative of a group of pre-historic apes encountering a strange monolith then learning to use tools and hunt other animals. The protagonist ape, named "Moon-Watcher" in the film script and Arthur C. Clarke's novelization, discovers how to use a bone as a club in a monolith-inspired epiphany; "Zarathustra" plays again at this moment of discovery. Here *2001* gives the impression of a homology: music, title and visual information all seem to point in the same direction, suggesting a progressive, ascending evolutionary trajectory from animal to "man" and to continuing technological and biological progress (i.e. "evolution"). Yet this "Dawn of Man" title has no corollary in the later section titles: later titles ("Jupiter Mission - Eighteen Months Later" and "Jupiter and Beyond the Infinite") do not follow or answer this earlier title in any obvious way. Furthermore, it is not at all clear in the film just how the monolith works to drive man's evolution or just what is beginning here. *Thus Spoke Zarathustra* plays a third time, in the final moments of the film, when Dave has been reborn as the "star child." It thus offers a sort of unity to *2001*, and a way of reading it in a linear, straightforward

way. But this is a forced reading, undermined by the insistent non-linearity and uncertainty of much of what occurs in the film.

Let us (re)examine the opening moments of the film and ask, what is this "Dawn of Man" we are asked to see? What is beginning here, and what is this *man*? After the "Dawn" title, we see shots of an actual dawn over a rocky, barren landscape meant to represent 4 million years ago.[3] The first part of the ape narrative is a sort of day-in-the-life of this group of apes before they become or take the first steps towards *man*. Our first sight of an ape is anticipated by an ape skeleton on the ground, itself anticipated by the skull of a boar. It is an "unburied" skeleton as Michel Chion and others have noted, possibly anticipating burial, superstition, spirituality, and religion as forthcoming human traits and technologies. The first shots of the apes show them foraging or scavenging on the ground side by side with some small, snouted herbivores (other animals do not yet fear the apes). While foraging, one ape is attacked (and killed?) by a leopard (the apes are prey to other animals at this point). Later the apes are collected around a water hole; a second group of apes attempts a stealthy approach, but the protagonist group chases them away with aggressive posturing and noise making. Dusk of this first day closes with the group of apes falling asleep in a huddle, and the protagonist-ape looking at a crescent moon in a red dusk (hence the name "Moon-Watcher" in the script and novel). Waking the next morning, the apes discover a strange upright black rectangular monolith near their encampment. They are alarmed and attempt to scare the monolith off with the same aggressive posturing and sounds they used with the rival ape clan. Eventually they

[3]Shot in South Africa.

become curious and begin to touch it in wonder. The next scene is sometime in the future; the monolith is apparently now gone and Moon-Watcher forages or scavenges on the ground among scattered bones. He cocks his head suddenly and has a memory or vision of the monolith, a subjective view from the ground looking directly up into the sky above the monolith and to the moon and sun beyond. Moon-Watcher begins to consider the bones in front of him, then picks up and tries one as a club, smashing the bones around him (to the sound of the second appearance of *Zarathustra*). As he smashes the skull of one of the herbivores he imagines a live animal falling to his blows: there is a cut to a wounded animal falling; it is both his prediction or hypothesis at this moment, and in fact what he will actually do in the future (that is, this is a brief cut into his future). Next, we cut to a landscape shot into which Moon-Watcher sneaks, carrying his bone club in one hand and some unidentifiable meat in the other. I say "sneaks," because he is moving and looking around carefully when he enters the frame—in fact he looks in every direction before he starts eating—and then interrupts his meal suddenly as if startled and glances behind him before resuming. Now we see the entire group of apes eating meat with clubs at their sides. With them, two small chimpanzees (*actual* chimpanzee babies, not humans in make-up like the other apes) turn long pieces of bone over in their hand, smelling and considering them. Cut to the watering hole: the rival group of apes is again attempting to use it and both groups are face-to-face challenging each other, but this time the protagonist group has their clubs. Moon-Watcher approaches the rival group, challenges or threatens the nearest ape then runs back towards his group. The other ape chases him, but halfway back Moon-Watcher turns and clubs the other ape. He falls;

Moon-Watcher approaches cautiously then begins violently hitting the other with his club; the whole group joins in, killing the rival ape. Moon-Watcher throws his club triumphantly into the air where it dramatically (and famously) transforms (cuts) into a satellite in space and the *Blue Danube Waltz* spaceship sequence begins.

This "Dawn of Man" then suggests several traits that may distinguish these apes from other animals and (will) make them *men*. These include tool use and the development of technologies, forms of abstract thought (predicting, hypothesizing, memory), and, disturbingly, violence and meat-eating. The apes not only become predators and carnivores as men—the appearance of the leopard reminds us that these are not uniquely human traits—they also commit violence beyond what is strictly required for their survival. In killing the rival ape, they commit a *meaningful* act of violence: it is a sign and warning to the other group. As I have attempted to demonstrate in my summary, however, this section also suggests a considerable level of ambiguity surrounding this category called man. The "unburied" skeleton may anticipate human activities like burial, superstition, worship, religion. However, this skeleton is also exposed to our view and empty looking; we can see right through it. It strongly anticipates two crucial upcoming events in the plot. One is that the "man" we see in space in the year 2001 appears to be vigorously working to hide the animal, both his own animality and his own dependence on other animals. As I discuss below, this often involves hiding the meat, the meat people eat and the meat of their bodies. From this vantage point, the skeleton can be seen as revealing something that humans do not wish to know about themselves, and burial seen not as foreshadowing some laudable human

sentiment or mode of thought, but as indicating a dangerous suppression or denial of the animal, a denial of how we are very much like the meat we eat.

The emptiness of the exposed skeleton also anticipates two later images: the empty space suits and helmets that loom over much of the action aboard the spaceship Discovery (and which ultimately prove useless to Dave, because he neglects to wear his helmet at the most crucial moment); and the emptiness of the computer HAL's brain chamber when Dave enters it to kill him. In many ways HAL the sentient computer is the *perfect* human, at least according to the terms the film sets up (terms already familiar to us). HAL is capable of complex and abstract thought, he has an enormous technological knowledge and prowess, he is linguistically fluent and utterly precise with his words, and he does not have the animal body that is such an inconvenience and use of resources in space (and which so often seems to threaten our conceptions of "human"). As I elaborate below, HAL may be a more fully realized and psychologically developed "human" character than his ostensibly human crew-mates. If this sythentic-ideal human is empty—literally vacuous—then what other emptinesses do the exposed skeleton and ineffectual space-men suits suggest?

There are multiple dawns in the first section of *2001*. The open credits are displayed in front of a type of lunar dawn, a view of the earth and sun from a vantage point somewhere above the moon, so that the moon's surface, (a crescent) earth and the sun all lie on the horizon of our vantage point. This is an unfamiliar, alien, dawn, and perhaps easy to overlook as a dawn because of its strangeness. However, this first view should be a reminder that the concept of dawn is a relative one; an earth dawn is not

synchronous with, say, a lunar or a Jupiter dawn, and the concept of dawn becomes complicated in outer space. This may be a reason the first "Dawn of Man" title is not really answered by the other titles. There are also at least two literal dawns after the section title: the first day which dawns on the apes as animals, and the dawn of discovering the monolith which is (or results in) the metaphoric dawn of man. What these multiple literal dawns point to, though, are the multiple figurative dawns of man. The dramatic cut from bone to spacecraft 4 million years later occurs without any section title, implying that humanity's "Dawn" may still be underway.

**Prime Movers, Missing Links**

Visions of a monolithic Palaeolithic, theories that attempt to be a "unified field theory of evolution," are also known as "prime movers," Stanford writes, "because their entire wallop depends on one key development. Meat-eating, cooking, protection against infanticide, concealed ovulation, social complexity…" are examples of *prime movers* (16). As Stanford stresses, though, "there was almost certainly no one overriding selection pressure" (17). And I will reiterate Stengers's caution, that it is also a "massive generalization" to presume that selection pressures alone can account for all of a species' traits and behaviours (63). In *2001*, the ultimate prime mover—the factor that drives human evolution—is literally a monolith. In other words, Kubrick's prime mover realizes a vision of a monolithic Palaeolithic in a highly literal and spectacular way, concretizing the cause of human development as visual object. But the origin,

significance and effects of the monolith remain unclear throughout.

The monolith is an ambiguous and troubling symbol, associated with narrative disruption and (musical and visual) dissonance. It is a quasi-divine object, one that appears by "magic" or technological sophistication beyond the knowledge of the apes or we the human audience. What change does the monolith prompt in the apes that drives their evolution towards the human (which is another way of asking what is the dawn of man)? The monolith's first appearance seems tied to an astrological event, and seen from Moon-Watcher's subjective point of view it appears to point to the sky; it could be indicating the moon, the sun, or some point in space beyond; it may, in a remarkable alignment, be simultaneously pointing to the moon, to Jupiter, and to a place in outer space far beyond, all locations where monoliths will eventually appear. Its origin seems from some distant space, but it is also a medium for communication across great distances of time (like human-made monuments). The monolith is difficult to decipher, but it certainly is tied to an idea of human evolution, progress and/or transfiguration. In this case, the ambiguity about what the monolith is pointing to is important because it implies that there may be more than one possible trajectory here.

If theories that posit a single cause of human evolution must be rethought, then ideas of a direct and identifiable "missing link" between humans and their animal ancestors likely also need rethinking. The apes in the "Dawn of Man" section are certainly presented as humanity's missing link… but this statement contains an ambiguity which mirrors a significant one in Kubrick's narrative: *which* apes? Considering how later film events play out, we should be cautious about reading the ape narrative in

simple, straightforward ways. In particular, I believe we should be careful not to assume that the antagonist apes who try to take the waterhole are necessarily doomed to extinction. Most analyses of the film suggests a strong division between these two groups: this group of now human apes will inevitably triumph over the other still-animal apes (who, in this case, will become an extinct relative of man). Popular discourses about evolution have likely made us accustomed to reading evolutionary narratives in this way, and *2001* may be encouraging this sort of evolutionary reading *at this point in the film.* However, the difference we see between these two rival groups of apes depends on what vision of evolution we see being proposed here, and, crucially, what role we see the monolith playing in that evolution. If we see the story of evolution being proposed here as one of "survival of the fittest," with its implied class of those unfit beings doomed to extinction, then perhaps we can consider the rival group of apes as essentially different than the protagonists. This view of evolution is supported *if* we see the monolith having what we might call a "magic" evolutionary effect on the apes, if contact with the monolith has somehow fundamentally altered this particular group of apes and now it is these altered apes who will surely become modern man 4 million years later.

The monolith has what is basically a magical or divine effect in Arthur C. Clarke's novelization of the film, where Moon-Watcher (as well as other apes around the world in contact with other monoliths) feels his hands controlled by an invisible force that demonstrates tool use. In this case, the monolith is a medium through which aliens send space rays into the brains of the apes in order to spark their evolution, which, while certainly possible (this is science fiction after all), is an unnecessary explanation for the

monolith's effect. The monolith does not need to have a direct "magical" (or divine) effect on the brains of the apes. All that is required for it to have its evolutionary effect is that the apes are able to see it as out of place in their environment, that is, are able to see it as a deliberately created and positioned technological object and not a natural phenomenon. Once Moon-Watcher has determined that the monolith is the consequence and signal of a deliberate act of will on the part of some remote being, he determines that he can manipulate objects in a similar way, though on a much smaller scale at first. The monolith is thus a medium of communication whose message (the significance of its very presence) must be actively grasped rather than passively or automatically received, which is what happens when Moon-Watcher has his epiphany with the memory of the monolith. Importantly, reading the monolith's effect in this way complicates the film's evolutionary narrative and hints at remarkable alternatives to linear models of human evolution.

**Evolution as Manifest Destiny**

Seeing the monolith as having a significance that must be interpreted rather than a direct physical effect allows us to construct alternative evolutionary narratives for *2001*, ones that do not involve a "manifest destiny" for the apes. By "manifest destiny," I mean narratives that do not suggest that it is obvious and inevitable that the protagonist apes will become modern men and that the antagonist group will die out in a clear-cut way (and also by extension that modern man will inevitably become superman). For if the evolutionary advancement that the monolith enables is a particular conceptual or

technological-instrumental relationship with environment, then its message can be transmitted to other living beings able to recognize it, even if they have not come in direct contact with a monolith.

The monolith is a sign from somewhere and a medium of communication, although its precise message is unclear.[4] It appears to be an attempt to represent a *universal* sign, something that will be understood across species and stars. It is a perfectly black, perfectly smooth upright rectangular prism (in contrast to the rounded or irregular shapes of the animal, plant and planetary bodies we see); its rigid geometrical dimensions may be implying mathematics as a universal language. Again, though, if its meaning and effect are conceptual, then there is nothing that precludes its meaning from being transmitted beyond its immediate presence, and this would be consistent with the notion of universal sign that is implied here. The consequence to the ape narrative is this: since the two groups of apes are a similar if not identical species, there is nothing to stop a member of the rival group of apes from thinking, "hey that bone thing was a neat trick, let's see if I can duplicate it," unless the monolith's effect has been at the physical-genetic level. Also, this reading would be consistent with the idea that the conflict between these two rival groups of apes is closely paralleled by the cold war and space race between the United States and Soviet Union which is the backdrop and context for later sections. Keep in mind it is not at all clear either in 1968 or in the fictional year 2001 which group will be triumphant here, so perhaps it is not quite as clear-cut as we might think in the year 4 Million BC. And so we must be careful, in reading the ape

[4] The message and meaning of the monolith may be its very presence. As a medium without any apparent content it suggests Marshall McLuhan's contention that "the medium is the message" (151).

narrative as an evolutionary parable, not to impose a vision of evolution on the film that may be a simplification of evolutionary theory and is not necessarily consistent with the on-screen narrative (or at the very least which is not imposed by it).

In *Power and Invention* (1997) Isabella Stengers notes a tendency in the disciplines of biology to see evolution as a "revelation" of "cause." As a response she cites the work of British biologist Conrad Waddington and the notion of "canalization" he introduced in 1957:

> Waddington starts with the idea that, as a general rule, the development of the living organism should not be thought of as a revelation but as a construction that integrates genetic constraints and interactions with the surroundings. Selective pressure can, by an accumulation of genetic constraints, progressively canalize the path of development of certain traits. Given this, development, *insofar as it concerns these paths*, will indeed appear as a "revelation" of the "normal" consequences of the genetic information. (Stengers 15)

I see this myth of "revelation" as similar to what Craig Stanford means by "the myth of the clumsy biped," the notion that natural selection produces transitional forms with the intention of reaching some ultimate goal. In Stanford's myth, the revelation is bipedalism, but we can extend the notion of revelation to other areas, especially intelligence. In some accounts of evolution, the growth of human intelligence appears set on an inevitable path at a pre-historic point; the superman myth (at least as it is deployed here) would appear to extend this growth indefinitely. Because *2001* links the ape narrative to a cold conflict between the U.S. and Soviet Union, I refer to these myths collectively as evolution as manifest destiny. As Stengers notes, Waddington's canalisation theory implies reversing the perspective of simple evolutionary models.

With his model one could not, for example, offer abstract thought or tool use as the *cause* of evolutionary advancement in any straightforward way. Waddington's canalisation model can help us see evolution not as a relentless progress towards some telos (the ultimate end often seeming to be the reality of "now"), but as a messier interaction between beings and environments. Stenger's study is a wide-ranging appeal for complexity as the basis of good science (as opposed to simple telonomies and cause and effect models), hence the value of Waddington's model to her project. It is certainly possible Kubrick may have been familiar with Waddington's work (*The Strategy of Genes*, London: Allen and Unwin, 1957) if he was as immersed in contemporary science as Michel Chion suggests during the four years of producing *2001* (Chion 6). In any event, we can envision some intriguing possibilities if we apply the model to the "Dawn of Man" prologue.

If the message of the monolith can be transmitted beyond its immediate presence, if there is nothing unique about this group of apes except a certain technological point of view—if they are not *destined* to survive as the fittest—then an infinite number of evolutionary possibilities exist that could lead to modern man in the year *2001*. The second group of apes could return to the water hole armed with bigger clubs, or some new technological wonder, and wipe out Moon-Watcher's group to become the ancestors of modern man (or this group then wiped out by a third, and so on); there could be a million years of inter-breeding and sharing of both genetic and technological information between groups and species (this possibility exists even if the monolith has fundamentally altered Moon-Watcher's group); the two groups or species might enter

into a symbiotic or parasitic relationship, with one enslaving the other as food-source or labourer; perhaps continual territorial conflict between groups of humans (a 4-million year arms race now manifested as the Cold War) has spurred man's evolution. Evolution is a complex process, so other animals and beings will no doubt be involved in various ways and stages of evolution and will themselves adapt in response. The great strength of Kubrick's film is that its structure is flexible enough to allow for any of these possibilities, and it does not in fact impose the linear evolution that it so bombastically declares with *Thus Spoke Zarathustra*.

I would like to return to the scene with the young chimpanzees considering lengths of bone (17:48), "real baby chimpanzees seen examining a bone without making use of it (*in order to underscore the evolutionary split that is about to occur between two closely related species*)" Michel Chion writes (19, my emphasis). While it is *possible* to see these baby chimps as a separate species from the apes–after all, the point here is that the differences between species are really quite subtle–and while this would introduce another interesting ambiguity into the film's treatment of species, these baby chimps are almost certainly meant to represent the offspring of the protagonist group. In the previous scene, we see two chimps eating meat alongside the adult apes, and in the scene where the apes fall asleep together there is a chimp in the arms of one of the human actors. The chimps examining the bone is also important because it is the only scene we see of anyone learning the technology of clubbing, i.e. that would indicate that these apes learn the technology from Moon-Watcher rather than being simultaneously transformed by the monolith. Chion's reading is indicative, though, of a critical tendency to see an

absolute split between the two rival ape groups that may not be born out either by the details of the text or by sophisticated evolutionary theory.

Michel Ciment reminds us of an often-overlooked aspect of *2001*: "its essential humour": "In the imposing opening section... there gradually emerges an undercurrent of irony (one close to Swift and his Yahoos)" (130-1). Indeed, in many ways *2001* can be read as a reworking of *Gulliver's Travels*, without the device of a central character. Not that Gulliver was much of a character to begin with: Swift's "gullible traveller" is a decentred and almost perfectly malleable character; he conforms himself as much as possible to the ideologies of the places he visits—to the point of fashioning a boat out of human skin—all the while maintaining a ridiculously untenable allegiance to England and the crown. Rather than an everyman or any-man that Gulliver represents, in *2001* it is the human in general, the category or class of "man," who is placed in a series of fantastic situations here. *2001* shows man adapting to a series of radically different contexts, but in the process he nearly ceases to be recognizable as "man." Indeed, with the assistance of the opening title, we can only barely recognize man in this opening section by reading our own humanist assumptions into it. An ape skeleton cannot be seen as "unburied" unless burial is a norm, nor am I certain that we are in a "pre-linguistic" dusk the night before the apes discover the monolith as some have suggested: there is considerable grunting and communication here.

There is the hint of impending bipedalism as the apes reach up towards the monolith, and later as they stand with clubs in paw, but would we even notice it here without bipedialism having been codified as a central human trait in academic and

popular science? In the eighteenth century, when naturalists were constructing taxonomies of species, many thinkers considered human bipedialism to be unimportant in terms of distinguishing the species. Linnaeus classified humans as "quadrupeds" until eventually bowing to objections and reorganizing the category as "mammal" in the 10th edition of his *Systema Naturae* (thus making breasts instead of legs the thing that defines our type), though he continued to maintain that bipedialism was a cultural trait (according to Richard Nash in *Wild Enlightenment*). Gulliver's Houyhnhnm (horse) master remarks on his "Affectation of walking continually on [his] two hinder feet" (225) unlike other humans in the region. *2001* offers a similar commentary on bipedalism, that it is an affectation. If not an affectation in the "fact" of it being a distinguishing marker of the human, an affectation in the importance modern thought has placed on it. Walking "erect" or "upright" often appears (in many contexts and discourses) as a value in itself, an indicator that humans have "raised" themselves above the animal condition. As *2001* suggests, upright is an irrelevant position in space. Thomas Nelson notes how the human characters in space are hindered by "archaic and earthbound verbal baggage," for example by referring to space travel as going "up" and "down" or "back" and "forth" despite the inadequacy of such positional statements in the infinity of space (108-9).[5] Moreover, in the environment of space, walking erect sometimes appears as a distinct

[5] An amusing example of this paucity of language is that *en route* to Jupiter, Dave, Frank and HAL are interviewed for the BBC program "The World Tonight." They are not on the world, and there is no night in space.

disadvantage. Humans on both the space station and the Discovery spaceship require artificial gravity to live and work; in zero gravity their legs float or flail uselessly about. Artifical gravity in *2001* is created by centrifugal force: the space station is a spinning wheel that looks like part of a giant bicycle; the living quarters of The Discovery are a spinning ring or circular tube within the spherical "head" of the ship. The "bottom" of these areas, the place where centrifugal force pulls objects, is thus against the inside of a spinning outer wall; what is a floor from the inside is a wall from the outside. The large station looks like a well-lit, long cavern gently curving "upwards" in both directions beyond sight. Our first sight of the smaller, more steeply curved and claustrophobic crew area of The Discovery gives the impression of the inside of a hamster wheel, with the camera tracking Gary Lockwood (Frank) as he runs the circumference. Significantly, the ability to walk upright is not a distinct advantage here, and indeed legs require an enormous output of resources (the elaborate centrifuges) just to be supported in space. Without artificial gravity, Dave and Frank's leg muscles would atrophy, as the shots of Frank jogging reminds us. The legless HAL and the four-armed, animalistic space pods seem better suited to the rigors of space. The point is, bipedialism is shown not to be an absolute value here, not a trait that everywhere and always indicates human superiority, and not some final goal or benchmark that humans have achieved. The same can be said for other "human" traits in the film, including meat eating, violence and technological facility.

**Man-the-Hunter: Floyd's Mission and *Planet of the Apes***

Man-the-Hunter was a prominent evolutionary theory in the 1960s and remains a powerful cultural myth. Argued by anthropologist Sherwood Washburn and others, the theory proposed (male) hunting as the primary factor leading to big-brained *Homo sapiens*. The communication, coordination and tools required for hunting prompted the development of larger brains in human ancestors, the theory goes. Man-the-Hunter is a textbook example of a *prime mover*; it is a "monolithic" theory. Besides failing to account for the growth of female brains, as many scientists and feminists pointed out in the 1970s, Man-the-Hunter reproduces older ideas about human dominance of the natural world: among other things, imagining humans as carnivores at the "top" of a "food chain" is reminiscent of the Enlightenment notion of nature as a grand hierarchy or "great chain of being." The leopard that attacks an ape near the beginning of *2001* (and which we see overlooking its territory and guarding a kill at dusk) might be a sign that this creature's position of dominance is soon to be upset by humans. Read another way, though, the leopard offers a subtle critique of a Man-the-Hunter hypothesis. For one thing, it reminds us that other animals hunt as well, and should prompt the question, why would hunting have a transcendent effect on one species and not any other?

The Man-the-Hunter myth defines humans in highly masculinist terms by their dominance over other animals, and of course by placing prime importance

on an activity believed to be male. With its corollary, Woman-the-Gatherer, the myth reproduces the binary of an active, aggressive, dominating, and public masculinity and a passive, nurturing, submissive, and domestic femininity. The world of the fictional year 2001 represents a literally astronomical extension of technologies of domination over other beings and other humans. Importantly, this extension is a *quantitative* one only: the future is disturbingly similar to the distant past, which suggests that human technological progress has not been matched by a progressing worldview. To briefly revive the Gulliver analogy, humans in the fictional year 2001 are like Swift's giant Brobdingnagians, perfectly recognizable and nearly identical to contemporary humans, simply much more powerful (figuratively bigger here)—the key point in both cases is that increased power has not resulted in moral or political progress.[6] One of the most original aspects of Kubrick's film is the familiarity, the downright banality, of the way people speak and act in the year 2001 (Heywood Floyd's regular greeting is, "Gee, you're looking great"). *2001* avoids the ostentatious techno-jargon that is virtually ubiquitous in science fiction. Men dress is business suits and gender roles have remained familiar (at least, Kubrick correctly predicted that space exploration, science and the military would continue to be predominantly male institutions). Despite its wonder, space travel looks remarkably like air travel. Scientific advances have not eliminated conflict between nations, or the perceived need for

[6] Or as Ciment puts it, "The fantastic progress of technology has not been accompanied by any comparable moral or emotional evolution" (131).

rigid security measures ("voice print identification please") for travel. However, if this is like our world, if "we" are like the humans here, these humans also behave a lot like the apes 4 million years earlier.

Floyd's mutually suspicious encounter with the Soviet scientist-spies closely links him to the ape leader four million years earlier, along with their shared role as protagonist. His story of an outbreak on the moon base Clavius is much like the feint Moon-Watcher performs in order to kill his rival: he pretends to be weaker than he is in order to deliver a fatal blow. It becomes increasingly apparent that the U.S. has security concerns in mind as the reason for keeping the monolith secret, and hopes to use the discovery to increase its military advantage and cultural hegemony.[7] The food they eat also links Floyd and Moon-Watcher. That both characters eat may be significant in itself. For one thing, as Nicholson notes, in Kubrick's films, "Food is a marker of power relations, a means of demarcating the powerful from the less powerful—those who eat and those who are eaten (or provide food)" (280). Floyd is served his food on both occasions we see him eating, in flight to the moon (by a flight attendant) and in a moon-shuttle travelling towards the monolith (by a high-ranking subordinate). Floyd also eats meat both times.

This is the only way other animals appear in space: as highly processed foodstuffs. Interestingly, that Floyd eats meat on his space flight seems a fleeting

[7] Floyd ominously insists, for example, that the existence of the monolith must not be revealed to the public "without adequate preparation and conditioning" because of the "extremely grave potential for cultural shock and social disorientation."

detail, hardly emphasised. The in-flight meals are plastic boxes of liquefied food consumed through straws. Bright pictures indicate what food is in the box, or at least what flavour: corn, peas, potatoes, and a fish (tucked away in a corner box, the only animal picture). More obviously significant—and possibly the funniest moment in the film—is the posted sign Floyd reads immediately after his meal, which offers very lengthy instructions in several numbered points and the title: "Zero Gravity Toilet: Passengers Are Advised To Read Instructions Before Use." What potential space-disasters lurk in the toilet is left to the audience's imagination, but all the unseen potentials seem a stark contrast from the orderly and antiseptic-looking cabins and corridors in space. Taken together, the space-flight meal and toilet suggest some of the enormous resources that would be (and are) involved merely in feeding people during space travel.

One of those resources is animals, processed and packaged in as curious a way as they are disposed of in space. Curious, but not completely alien, since animal products here are similar to products NASA actually created for the space program and to the processed and synthesised foods we find ourselves increasingly eating in North America. The 1950s and '60s was likely the height of U.S. public fascination and faith in "nuclear" or "space-age" food products and technologies (TV dinners, Tupperware, Tang – "the drink of astronauts" and irradiated food spring most immediately to mind). The highly processed food that appears in space is thus both an accurate depiction of NASA food technology, and a satirical commentary on the sorts of products becoming increasing available in

American consumer culture. The cartoonish nature of the food's presentation and the predominance of image, packaging and labelling over the actual substance are also both social commentary and accurate prediction on the part of Kubrick. The sterile environments in space without a living plant or animal to be seen, the hidden food represented by cartoon images, and the enormous attention and resources put into eliminating the risk of passengers and crew becoming unsettled by floating faeces, all suggest a space-age fantasy of hiding the messy traces of human dependence on other living beings and environments, hiding the reminders of how humans are like other animals.

When Floyd travels towards the moon monolith with two colleagues, meat eating comes into the foreground:

> Bill: Anybody hungry? *[Produces a food storage container filled with perfectly square white sandwiches in plastic wrap]*
>
> Floyd: What've we got?
>
> Bill: You name it.
>
> Floyd: What's that, chicken?
>
> Bill: Something like that. Tastes the same anyway. *[Laughter]*
>
> Halvorsen: Got any Ham?
>
> Bill: Ham, ham, ham, ham.... There.
>
> Floyd: They look pretty good.
>
> Bill: They're getting better at it all the time. *[Laughter]*

Halvorsen: You know that was an excellent speech you gave us, Heywood.

Bill: It certainly was.

Halvorsen: It certainly beefed up morale a helluva lot.

I find this passage enormously telling, especially its provocative ambiguities. There is no subject to Bill's statement, "Tastes the same anyway"–is he referring to the sandwiches, or is he saying something along the lines of *'It's just an animal, they all taste the same*'? In this context it is also deliciously unclear just *who* is "getting better at *it* all the time" (animals, farmers, food engineers?), and just what the "it" is. Also interesting is that Bill tells Floyd he can "name" whatever he wants to eat, but that the name hardly matters since everything tastes the same (there hardly seem to be many choices here either). Halvorson "names" ham, and Bill has some momentary trouble producing it, repeating the name until he does so. Considering that these spacemen see all the sandwiches as the same, it almost seems as if Bill is invoking "ham," as if he must repeat the name to convince himself and his colleagues that it *is* ham. As on the flight to the moon, the animals in the food are next to invisible, processed into identical sandwiches that not only obliterate the individual animal but also render the differences between species nearly indistinguishable. And as with the space-flight meal, the content of the packaging is only distinguishable through signs, in this case writing, not by the food itself. Floyd's two eating scenes cement some important

thematic elements of the film. For one, they indicate that non-human animals (will) continue to play a significant role throughout *2001*, despite their absence in space. These scenes link animals to another important theme of the film, the unreliability and insufficiency of visual and verbal languages. These spacemen trust in their languages—and the worldview they enable—so much that they almost cannot distinguish what they are eating without them. The eating scenes also gesture towards what we might call an eco-critical argument: there is the hint that human technological progress represents an unhealthy alienation from other living beings. That Floyd has "beefed up morale" is significant in a number of ways. First of all, it reminds us that *the animal* is never only a literal or objective concept; cows are not literally connected to this "beefing" in any way. Floyd's speech to the Clavius scientists consists mostly of stifling dissent regarding the outbreak cover story, enforcing secrecy, making diplomatically worded threats, and demanding "formal security oaths in writing" from everyone involved. The "beefing" is an act of veiled violence, linking Floyd's subordinates with animals being raised for food; it suggests that some sort of slaughter is not far off. In fact, it indicates that a reductive and instrumental attitude towards animals can easily be applied to other humans (and beyond).

The Man-the-Hunter myth reproduces a number of conventional gender roles, including the notions of an active, public masculinity that wins the bread (or catches the meat) and a passive, domestic femininity. At first glance, *2001* might seem fairly uninterested in questions of gender. The gender of individual apes at

the beginning is virtually indistinguishable, though Moon-Watcher is male, and apparently all members of the group (except the young) carry clubs, hunt, and participate in the attack at the watering hole. Is the film indifferent to gender or can we see the development of a social commentary? To answer this question we must look to later sections of the film. Today it might be easy to overlook how unconventional Kubrick's representation of gender is for a science-fiction film of the 1960s. At the time, science fiction was generally considered a "lesser" genre, and sci-fi films were usually low-budget, low-status affairs, with *Forbidden Planet* (1956) being the most notable exception before *2001* and *Planet of the Apes* (1968). Sci-fi was a luridly sexual genre, with cheap thrills and sex key selling points, hence the familiar science-fiction character of the nearly superfluous attractive female. The original *Star Trek* series barely knows what to do with its female crewmembers other than put them in mini-skirts; alien women often wear bikinis and seem to exist to satisfy Captain Kirk's libido.

Released the same year as *2001*, *Planet of the Apes* is notable for the doublings and contrasts it creates among its three main female actresses. The lone woman in the four-person American crew dies in suspended animation without saying a word, unnaturally aged by the effects of light-speed travel, her beauty ruined. It is as if the filmmakers thought they needed a female character in the crew to suggest an increasing gender equity for U.S. society of the near future, but that the plot would be complicated by having another potential love interest for Charlton Heston or a second female character with little to do. As it is, the men

go out to explore the planet while the woman basically stays in bed. Captured by talking apes and unable to talk himself because of an injury, Heston's George Taylor is given to the female ape scientist Zira (Kim Hunter) for study and experimentation. Zira takes an interest in "Bright Eyes," as she calls Taylor, and pairs him with the beautiful mute woman Nova (Linda Harrison) in the hopes that they will reproduce, but finds Taylor will not breed under observation. This is the most significant female doubling in the film, between Zira and Nova as potential love interests for Taylor.[8] Once Taylor regains his voice there is an obvious intellectual attraction between him and Zira, despite their different species.[9] Nova is attractive and wears a sackcloth Bikini, but not only is she mute, she often seems less intellectually capable than an actual animal like a dog or an ape would be in similar situations. The two women thus represent a division or dualism between mind and body/species in terms of their suitability as love interests for Taylor.

Thus, there is an inter-species erotic triangulation in *Planet of the Apes*, though it is not a particularly radical one. Even if she is heavily made up here, many audience members would remember Hunter's wholesome good looks from a number of films, including her Academy Award-winning role as Stella in *A*

[8] Note the close similarities in the names Zira and Nova: four letters, two syllables, an A at the end of each, and the close sounds and look of the letters Z, N and V.

[9] This is enhanced by intimations that Zira's fiancé Cornelius (Roddy McDowall) is not quite the "man" Taylor is. McDowall's tentative and slightly effeminate delivery is a contrast to Heston's aggressive confidence, and his relationship with Zira appears based primarily on shared intellectual and political passions rather than sexual ones. The film may also be utilizing the open Hollywood secret of McDowall's homosexuality to make Heston and Hunter seem a more suitable pair.

*Streetcar Named Desire* (1951); that, and the fact that the apes are highly anthropomorphised—they behave and look fairly human—mitigate the radical plot potentials here. Especially conservative is that the role of all the women in *Apes* is as potential partner for Charlton Heston. Taylor's dead colleague Stewart might have been a suitable new Eve for this new world had she not died, so instead Taylor must settle for the mentally deficient Nova. Her name suggests she might be a new Eve as well, but also links her with a super-nova, the spectacular death of a star, indicating her relationship with Taylor might be the death of human language and culture if their children too much resemble their mother. Taylor's potential as a new Adam seems likely because of religious overtones in the film, because of Heston's familiar association with another biblical patriarch through his role as Moses in *The Ten Commandments* (1956), and of course because of the film's interest in questions of evolution, mutation, species and generation. *Planet of the Apes*, then, has a highly suggestive superfluity of females, but it is a superfluity. Each female character is a token (token woman crewmember, token woman prisoner, token female ape and ape scientist), and the plot requires the presence of the three women because each one is in herself incomplete as a partner for Taylor: Stewart is an inanimate body, Nova is a mindless body, and Zira has an attractive mind but an "incompatible" body.

*2001* does not conspicuously offer women up as objects for the voyeuristic pleasure of male characters and audience members, nor is their role in the plot dependant on their potential as sexual partner for a male protagonist. Women in

this future American culture are pleasantly but efficiently dressed, generally as space-flight attendants and station greeters or in conservative business skirts. However, if these women are not here to be looked at sexually, they *are* here to be looked at, their bodies functioning like the sets in terms of establishing the details of space flight. In Floyd's first space flight, for example, we see an attendant wear "grip" (Velcro) shoes to walk in zero gravity and a head covering to contain her long hair. In contrast, the key detail about Floyd emphasized during the same flight is his ordinary ballpoint pen magically floating away from his hand as he sleeps. Not only, then, does the film direct our gaze towards female bodies and away from male ones (to phallic extensions like the pen, the monolith, the bone club, the spaceships), but the exotic aspects of space travel seem especially collected around women's bodies. *2001* avoids the gross sexual objectifications and obnoxious heterosexual complementarity on display in much of the decade's sci-fi, but women are still defined by what John Berger has called their "to-be-looked-at-ness" and the film may employ the myth of the female exotic.

The lack of overt sexuality in *2001* is an indicator that the aim here is plausible and "serious" speculative fiction; the second half of the title performs the same function—"space odyssey" is Kubrick's attempt to distance his work from the term "science fiction." Why should we not think the film is simply unconcerned with gender? One reason is because of the four Soviet scientists Floyd meets. There is a lone woman among the dozen or so high-ranking American scientists and officials during Floyd's briefing on Clavius. Of the four

Soviet scientist-spies returning from "calibrating the new antennae at Tchalinko," though, three are women. Women have a definite but clearly unequal role in American space as assistants and support staff to men who are scientists, engineers, pilots, explorers and security personnel. Many of the interior environments in space mirror and mimic domestic spaces—lounges, dining rooms, bedrooms—and women in American space continue to perform domestic functions. American men and women in the year 2001 thus conform to the notions of a public, active masculinity and a domestic, passive-reactive femininity. However, these gendered myths become undermined since everything about the two other cultures we see—both the prehistoric apes and the modern Soviets—imply that they do *not* conform to these myths. We can see *2001* incorporating elements of a growing feminist critique of 1960s patriarchal social relations into its depiction of this space-age American culture.

The leopard is the first hunter we see in *2001*. If s/he reminds us that hunting is not exclusively a human trait, then this hunter of indeterminate sex should also remind us that it is not an exclusively male activity either. There is no gendered division of labour among Kubrick's pre-historic apes. Even if we were to accept hunting as the prime mover in human evolution, there is no reason why we should assume that hunting to be an exclusively male activity. The irony and pessimism with which *2001* treats hunting and meat eating undermines theories of hunting as an essential human trait. Instead the film presents it as a convenient excuse for the domination of other beings, including other humans. Man's

patterns of violence and domination (so-called "hunting instincts") have begun to serve him poorly by 2001. The implied threat of nuclear annihilation hovers over Heywood Floyd's encounters, and as we see, human paranoia and aggression drive the action of the "Jupiter Mission" section and lead to the deaths of all but one of its crew.

**Complexity, Exuberance, 'Situatedness'**

The above shows early sections of *2001* questioning, deflating and endeavouring to subvert "monolithic" myths of human superiority through strategies of ironic (re)deployment. Here, I contend that later sections of the film constitute an attempt to rework humanist myths into posthuman ones. Kubrick is clearly and explicitly working with mythic structures here: he chose the term "space odyssey" over "science fiction." These are not *explicitly* posthuman myths—they are not named as such—but the film approaches posthuman myth in that it is a "working-through of humanist discourse" (Badmington 21) which attempts to envision alternate ways of being beyond the human and its dominations. Kubrick's film rejects what Donna Haraway calls the "God trick" of disembodied, objective perspective in favour of radically "situating" the perspectives of its protagonists and audience. The commitment to "situated knowledges" *2001* demonstrates is one of the features that closely links it to contemporary critical discourses of the posthuman. Indeed, this chapter is an

attempt to situate *2001* within such a critical discourse. In part, this is in order to find a language that can adequately describe the non-verbal arguments in the film. This section seeks to trace and evaluate Kubrick's attempts at post-human myth by positioning *2001* in relation to three important contemporary attempts at posthuman science. Isabella Stengers's insistence for the necessity of *complexity* in science, Bruce Bagemihl's paradigm of biological *exuberance*, and Haraway's appeals for *situated* knowledges each seek, along with Kubrick, to reposition the human in constructions of science and nature.

I come to my use and understanding of the notion of complexity through the work of Belgian philosopher of science Isabella Stengers.[10] A central argument of Stengers's work is the contention that the complexity of the natural or *actual* world resists and *complexifies* rather than confirms human theories, taxonomies, and discourses about it. As such, we need risky scientific theories and practices that recognize and are responsive to the complexity of the actual world. "No risk, no good construction, no invention, thus no good science and no good politics either," writes Bruno Latour in summing up Stengers's touchstone of risk for distinguishing good science from bad ("Foreward: Stengers's Shibboleth," xix). As does Latour, Stengers rejects comfortable distinctions between nature, culture, mind and world,[11] one reason her theoretical stance can be considered a posthuman one. Machines, she argues, are much less machine-

[10] *Power and Invention: Situating Science* (1997) is a collection of her work in English translation.

[11] Everything in the world is hopelessly "nature-culture" as Latour puts it in *We Have Never Been Modern*.

like than they are often given credit for and behave complexly like (other) natural beings and phenomena. Her acknowledgement of machine complexity has important implications for my discussion of HAL, the sentient computer in *2001*. It aids, for example, as a corrective to readings that pathologize HAL's acts of violence as criminally insane while leaving the violence of ape and human protagonists unquestioned or excused as natural compulsion.

It might be possible to characterize Bruce Bagemihl's paradigm of *biological exuberance* either as concerned with a specific manifestation of the natural world's complexity, or as an alternate (allied) attempt to register the natural world's complexity in theoretical-discursive terms. "The essence of Biological Exuberance," Bagemihl writes, "is that natural systems are driven as much by abundance and excess as they are by limitations and practicality. Seen in this light, homosexuality and nonreproductive heterosexuality are 'expected' occurrences—they are one manifestation of an overall 'extravagance' of biological systems that has many other expectations" (215). Opening a frame onto the extravagances of natural systems is one strategy Kubrick uses to escape the confines of the evolutionary system he invokes in the beginning moments of *2001*, namely an evolutionary and reproductive system rationalized around the notion of scarcity. HAL's relationship with Dave is homoerotic and non-reproductive, yet an erotic-symbiotic partnership between them is strongly implied as a viable evolutionary trajectory. The unprecedented visual effects used for Dave Bowman's journey through the Jupiter monolith/"star gate" suggest

some of the "many other expectations" of an extravagant biological system.

"Situated knowledges" is a term developed by Donna Haraway in an essay of the same name. Haraway argues "for politics and epistemologies of location, positioning, and situating, where partiality and not universality is the condition for being heard" (195). I use *situatedness* as an alternate term to refer to the attempts of Kubrick and these three authors to situate scientific knowledge and challenge "the God trick" of disembodied objectivity. I see a need to distinguish my usage from Haraway at this point, in part because I consider the relative *situatedness* of Haraway's theory and Kubrick's vision, and in part because I want to link my usage with Stengers's notion of "situating science." I wish to avoid reproducing an "applied Haraway" argument as much as possible here. While these four texts do not share congruent visions, even within themselves sometimes, they do share some key concerns and offer compatible solutions to irresponsible applications of anthropocentric knowledge. Each, for example, addresses the twentieth-century scientific "discoveries" of micro and macroscopic complexities in the natural world, including (what are called) chaotic systems, fractals, strange attractors and paradox. Each also utilizes "fringe" science and non-scientific knowledges as a corrective to orthodox sciences. In Kubrick's case, this takes the form of classically inspired science myth. Haraway and Bagemihl use indigenous knowledge and myth as a corrective to the rigidity of scientific worldviews – Haraway, for example, seeks to reinvent nature from passive resource to coyote-like "coding trickster" (201).

**"Already Posthuman"?**

If *2001* increasingly approaches posthuman myth as its narrative moves towards conclusion, are there also ways we can view the film as being "already" posthuman, or having "always" been so? Following Bruno Latour's argument that "we have never been modern," Katherine Hayles contends that, "We have always been posthuman" (291). Kubrick suggests the same by never clearly or satisfactorily giving us the "man" his title promises. *If* the monolith-inspired step Moon-Watcher takes towards technology, hunting and domination is the first step in humanity's evolution, what will the next be? Of course, at the end of the film we see Dave travel through a monolith, encounter unseen aliens in a room decorated with eighteenth-century objects, age, die and be reborn as a floating astral foetus or "star-child"—an apparent hybrid of human and alien.[12] But the specifics of this ending are utterly impossible to predict in the previous "Jupiter Mission" section. If anything, much of this earlier section implies that humans will die out, superseded by the thinking machines we have created in our image. Die out, that is, unless we can learn to develop relationships with other beings that are not based on objectification and domination.

[12] "Star-Child" is used in the Kubrick-Clarke script, and in the DVD chapter list, though the term does not appear in the film itself.

The apes at the beginning of the film might be unrecognizable to us as "men" without the section title and without the popular narratives (myths) about humans and evolution we already bring to the film as audience members. Similarly, I doubt audience members would consider Floyd and his colleagues as especially representative of the human race without the ape narrative and title as reference. HAL's humanity is also constituted through narrative, with a key difference: HAL explicitly describes himself as a "conscious entity," implicitly demanding our recognition and consideration of him as such. Moon-Watcher and HAL represent two sorts of boundaries of the human. His epiphany notwithstanding, Moon-Watcher seems to be all body and little mind, driven by bodily needs and limitations. HAL by contrast seems all mind, a super-intelligent, hyper-rational, omnipresent consciousness with no body, or rather with a body that no longer has distinct boundaries, whose consciousness and red-yellow glowing eyes are everywhere aboard the Discovery, and indeed can move outside the ship with aid of the space pods. With their (HAL's) eyes and pincers, the space pods look like floating crabs or insects—as indeed do other modes of space transportation in the film. The Discovery, which may count as HAL's body, looks like a flying tadpole or a sperm, and HAL's glowing eyes are reminiscent of the reflecting eyes of the leopard. Although HAL is an extension or amplification of supposedly human traits, then, he is also, like Moon-Watcher, an apparent blending of "animal" and "human" elements.[13] This blending does not, however,

[13] Ciment writes, "here it is the machine that becomes human – too human – both eager to serve

make him unique aboard the Discovery. The mechanical pincers and electric eyes (as well as the ship itself) are also extensions of human bodies, and Dave and Frank make use of them as well. The indeterminate boundaries of HAL's body extend to and within the bodies of the other crew members, especially the three hibernating astronauts, whose vital signs are monitored and controlled by HAL. Not only then does HAL's body lack what we might call integrity, but his indeterminate body also serves to undermine the integrity of other nearby bodies. HAL is himself a technological extension, like the monoliths, clubs, spaceships and Floyd's pen. This particular extension, though, has started to "talk back," and act with his own interests in mind.

HAL is called the "brain and central nervous system of the ship" by the interviewer of the (ironically titled) BBC television program "The World Tonight." The interview of the Discovery crew about their Jupiter mission is one of a few scenes in the film of extensive and rather obvious exposition (Floyd's briefing at Clavius and his shuttle trip to the moon monolith are other examples). We learn more details about this space-age culture, including some of its assumptions and concerns regarding entities like HAL. If HAL is the brain and central nervous system of The Discovery, does that then make the ship his body? The interviewer stops short of saying this, which helps establish the ambiguous boundaries of HAL. And what are Dave and Frank's place in this metaphor? As symbionts? Parasites? Immune system? The interviewer also tells us that, "HAL

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and wishing to dominate" (134).

can reproduce, though some experts still prefer the word mimic, most of the functions of the human brain, and with infinitely greater speed and reliability." HAL himself claims to be a "conscious entity." But note the fine distinction on the part of unidentified "experts" over whether HAL *reproduces* or *mimics* human brain function. Why this mincing of words? What is at stake in this future culture if HAL can reproduce human brain functions, as opposed to (merely) mimicking them? The answer would seem to be humans' continued belief in their superiority over all other beings in the environments they inhabit. HAL may have an infinitely faster and more accurate mind, but at least humans can have the smug satisfaction (given permission by "experts") that at least their minds are real and original, and not an artificial imitation. The distinction links HAL to other animals in the film, those who have borne the results of similarly convenient distinctions and become chicken or ham sandwiches in industrialized farms. It is reminiscent of the distinctions Cartesians made between humans and animals during the Enlightenment, Descartes' distinction between animal *reaction* and human *response* for example, and which we continue to make today. Scientific research on animals often observes so-called "human" behaviours and traits in animals—language, homosexuality, apparently rational action, emotional or pain responses—then explains or dismisses them as not significant or somehow "not real."[14] Interestingly, the interviewer's comments suggest an ambiguous and

[14] Bruce Bagemihl gives numerous examples of naturalists doing this with homosexual behaviour in his chapter "Explaining (Away) Animal Homosexuality." For example, "One of the most prevalent myths about animal homosexuality is that it is invariably caused by a shortage of members of the opposite sex…. This belied is widespread among non-scientists and is also the

mechanized status for human consciousness as well, with HAL's circuits reproducing the "functions" of the human brain (a phrase echoed in warning flashes when HAL kills the three hibernating astronauts whose "life functions" become "critical" then "terminated").

HAL and the astronauts already have a status we could call posthuman, if we agree with Katherine Hayles. Hayles argues that subjects participating in a Turing Test have already become posthuman, regardless of whether they pick the human participant or the computer (xiv). Proposed by Alan Turing in his 1950 paper "Computer Machinery and Intelligence," the test involves communicating with (typing responses to) two entities in another room, one human and one an intelligent machine. If you cannot tell human from machine, Turing argues, it proves that machines can think. As Hayles notes, "The Turing test was to set the agenda for artificial intelligence for the next three decades" (xi). The "Jupiter Mission" section of *2001* is a close reproduction of the Turing Test, with HAL an unseen, unproven consciousness (his brain circuits) in another room. There is no unseen human in another room to whom we can compare HAL. On the other hand, Frank Poole and Dave Bowman (like Heywood Floyd) are extremely opaque characters whose faces convey little information or emotion, at least in terms of traditional narrative film; in this respect they are similar to HAL.[15]

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most common 'explanation' that biologists have proposed for the occurrence of homosexual behaviour in animals" (134). Craig Stanford calls the scientific debate over whether apes use language (and by implication whether other non-human animals do) "the silliest debate."

[15] As Chion notes, Dave and Frank are under constant surveillance in a panoptic environment, "filmed from everywhere" (84). In addition there is the rather ominous-sounding "crew

Perhaps the key point here, though, is that HAL is the perfect subject for a Turing Test and it is *not* being administered or considered. The question and implications of his status have not been fully considered. "Experts" cannot agree on what he is.

From what the interviewer and Dave and Frank say, it seems clear that HAL could pass any Turing Test. If anything, what would give him away would be his precision with words: he would need to make deliberate mistakes in order not to seem too intelligent. HAL is far from perfect, though, and his interview answers reveal a considerable arrogance about his abilities. The BBC interviewer asks Dave and Frank what it is like working and living with HAL for the duration of the mission. Frank answers, "Well it's pretty close to what you said about him earlier. He is just like a sixth member of the crew... you think of him really just as another person." When the interviewer says that in talking to HAL "one gets the sense that he is capable of emotional responses," noting the pride he displays in his abilities, and asks Dave if he believes HAL has genuine emotions, Dave replies, "Well, he acts like he has genuine emotions. Of course he's programmed that way to make it easier for us to talk to him. But, as to whether or not he has real feelings is something I don't think anyone can truthfully answer" (1:02:42+). The contrived and heavily mediated situation of the television interview should draw our attention to the ways that Dave and Frank themselves "act" in order to

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psychology report" HAL is preparing (we can suppose) at the request of Floyd and mission control. These factors provide plausible reasons why Dave and Frank appear so emotionless. But then Floyd and his colleagues are little different.

ease conversation, giving highly conventional, almost "programmed" responses (akin to Heywood Floyd's bland pleasantries). Interestingly, Dave's response deflects the issue of his own emotional response to HAL's pride. The events of the following scenes suggest that yes, HAL has genuine emotions, but no, Frank and Dave do not think of him as just another person.

Like Haraway's cyborg, Kubrick's HAL is a fiction, an "ironic political myth." But where does myth end and reality begin? They do not. This is the most central argument of both *2001: A Space Odyssey* and Haraway's "Cyborg Manifesto." Haraway's cyborg is a "creature of social reality as well as a creature of fiction" and so too is HAL in a sense. One way HAL is "realistic" is in the sense that any machine intelligence or consciousness humans are likely to create would likely be impossible to prove conclusively through current scientific methods, just as animal consciousness and emotion seem impossible to prove. HAL's presence suggests some of the limitations of the Turing Test, indeed some key fictions to which the test appears blind. One of these fictions has to do with the parcelling of knowledge into rather discreet (scientific and other) disciplines.[16] For if the Turing Test set the agenda *for the professional study of* artificial intelligence for decades after the 1950s, it did not necessarily set the popular, political, commercial or military agendas, or those of other scientific disciplines. Indeed, it seems probable that many groups (would) have a vested

[16] Although Bruno LaTour stresses that despite modern attempts at disciplinary purity, unacknowledged "hybrids proliferate everywhere."

interest in *not* seeing machine intelligence, just as many have a vested interest in not seeing animal consciousness. One critique of the Turing Test that the "Jupiter Mission" section makes is that humans would miss a machine intelligence like HAL by simply wishing not to see it. This is apart from the problem that the test's rigid criteria could miss an infinite array of potential machine intelligences.[17] As well, from the position of convincing those who do not wish to see, Turing's test seems rather inadequate. For one thing, "thought" is pretty narrowly defined here in linguistic and anthropocentric terms. Furthermore, the test reproduces a technocratic fantasy of disembodied information and intelligence. As Hayles puts it, "Here, at the inaugural moment of the computer age, the erasure of embodiment is performed so that 'intelligence' becomes the property of the formal manipulation of symbols rather than enaction in the human life-world" (xi). In other words, it is yet another attempt (since Descartes) to theorize and priviledge disembodied consciousness, or "unsituated" knowledge to adapt Haraway's terminology. There is also a problem with actively seeking out machine intelligence under such precise laboratory conditions. If humans do not seek it out, does it exist? That is, does machine intelligence only exist after it is "proven" (by some criteria or other)? Do we blind ourselves to other possibilities of machine intelligence if we define it and actively seek it out in this way?

[17] More recent artificial intelligence projects have, for example, concentrated on attempting to duplicate insect intelligence, on attempting to create machines as capable as insects in terms of negotiating their environments. Insect-like AI would not "pass" the Turing Test, obviously.

The Turing Test does not seem an especially *risky* scientific construction, to use Isabella Stengers's criterion for good science, or at least it is not as risky as it needs to be. It is not risky in the sense that it is not open and flexible enough to deal with the complexity of the real-world systems it seeks to explain. It is a theory that would not allow us to identify machine intelligences if we are not looking for them under controlled circumstances. It is also not risky theory in the sense that not very much seems to be at stake even if you "prove" machine intelligence here. Hayles contends that the very existence of the Turing Test means we have become posthuman, regardless of the outcome:

> The important intervention comes not when you try to determine which is the man, the woman, or the machine. Rather, the important intervention comes much earlier, when the test puts you into a cybernetic circuit that splices your will, desire, and perception into a distributed cognitive system in which represented bodies are joined with enacted bodies through mutating and flexible machine interfaces. As you gaze at the flickering signifiers scrolling down the computer screens, no matter what identifications you assign to the embodied entities that you cannot see, you have already become posthuman. (xiv)

It is the situation not the determination that is significant. The participant's decision is also not an important intervention because Turing's definition of intelligence is not a very convincing one; it is simply not comprehensive enough to encompass all the mental activities that people refer to when they say intelligence or thinking. I am reminded of Henry St John Bolingbroke's (eighteenth-century) remark about Descartes' theory of the *bête machine*, that "the plain man would persist in believing that there was a difference between the town

bull and the parish clock."[18] I wonder if perhaps the Turing Test set the agenda for artificial intelligence for three decades because it is in certain ways a safe theory, one that leaves key humanist distinctions and hierarchies intact. Dave says that HAL acts like he has genuine emotions but qualifies it with, "of course he was programmed that way."[19] Another aspect of HAL that should be obvious but perhaps is not, is that he was also designed by humans to look and sound the way he does. This should give us some pause before we label him a "sinister" antagonist (as many have done). Is HAL sinister because his red eyes (without a face) and unnervingly calm and even voice accurately reflect his inner evil nature, or do these physical features reveal a desire on the part of this future human culture to maintain a (however illusory) psychological boundary between themselves and the machines that mimic them?

When HAL is apparently mistaken about predicting an antenna failure, Dave and Frank enter a sound-proof space pod to discuss their next course of action, concluding that if HAL is mistaken, "That would pretty much wrap it up as far as HAL is concerned, wouldn't it.... If he were proven to be malfunctioning I don't see how we would have any choice but disconnection.... There'd be nothing else to do" (Frank). While Dave agrees with Frank—"I'm afraid I agree with you"—he does so reluctantly and seems led on here, with Frank aggressively

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[18] Qtd. in Keith Thomas, *Man and the Natural World* (1983), 35.

[19] As if the same cannot be said about Dave and Frank, they too act "as if" they have genuine emotions (barely) which can be said to have been "programmed" into them (genetically, culturally).

pushing for disconnection. It is not clearly explained why HAL would have to be disconnected over a single mistake; fear, jealousy and personal dislike seem part of the equation, but it is apparent also that HAL does not or cannot meet rigid human expectations of machine perfectibility; he does not run perfectly, "like a well-oiled machine" as the saying goes and like a machine apparently should, even though breakdown is already implied in the statement. Of course, with computers a part of daily home and work life, we know today that they can (and inevitably do!) make many errors and continue to function. As Isabella Stengers notes, we realize by living with machines that they are much less mechanical or machine-like than we might imagine. In fact, Stengers contends that like the natural world, machines resist containment within our scientific discourses about them, and indeed it is *humans* who most readily adapt themselves to the demands of scientific rationalism.

I would like briefly to compare this situation in this scene with another from the original *Star Trek* series (Episode 37: "I, Mudd," originally aired November 3, 1967). On an alien planet, an advanced computer creates (mostly female) pleasure androids in order to entice and capture the Enterprise crew. Captain Kirk and crew escape by feeding the androids, and through them the computer, contradictory and illogical statements, such as "I love you, but I hate you" to two identical androids. The contradictions paralyse the androids and computer and allow the crew to escape. The episode works with a widely-held stereotype, or even caricature, of computer behaviour, that they are and must

necessarily be rigidly logical and so not quite fully capable of adapting to the complexities and contradictions of "enaction in the human life-world" as Hayles put it. In contrast, it is humans in the "Jupiter Mission" episode of *2001* who cannot accept the contradictory statements of a computer, and appear to condemn HAL because he does not fit the stereotype of what humans expect from a computer intelligence. Now, some readings of the plot—including, significantly, that of script co-writer Arthur C. Clarke—see HAL going mad due to the contradictions inherent in the mission requirements, especially the command (from Floyd and the NCA) to conceal his knowledge of the true purpose of the mission from Dave and Frank. Ciment writes that Hal, "incapable of assuming the conflict between truth and lies," finally sinks into "criminal madness" (134). But HAL is also acting in his rational self-interest by killing Frank, acting in what would be legal self-defence if he were a human, and so there is added significance to his claim to be a sentient being.

One element of the plot that seems important to our reading of HAL's motivations, but remains unclear, is whether the antenna unit HAL claims will malfunction is actually faulty or not. Would it have failed if allowed, as HAL predicts, is HAL mistaken about it, or has it all been a ruse from the start? Much of the evidence points to the latter, especially the fact that the 9000 computer back on earth—HAL's "twin"—disagrees with HAL's assessment of the antenna part. It certainly seems strange that HAL is able to predict that a fault will occur at a precise moment but have no knowledge of its cause or location. Most

importantly, if the antenna problem has been a ruse from the start, then has HAL been planning to kill the crew ever since (before) he reveals the "malfunction"? Perhaps, but not necessarily so. Consider HAL's hyper-rational mind, designed by scientists to meet their requirements. Would not a more scientific approach be to form a hypothesis and then test it through experimentation? A more scientific approach to what? Well, perhaps HAL is testing whether Dave and Frank do indeed think of him as just another member of the crew as they claim in the BBC interview. A being that considers itself sentient would wish to test whether others think so also. HAL's explanation for the discrepancy in analyses of the antennae is to chalk it up to human error: "this sort of thing has popped up before, and it has always been due to human error." Dave and Frank must take this to mean that HAL is blaming them for the discrepancy—Frank's sour face certainly makes it seem so—but there is an important *double entendre* here: if HAL considers himself human then he is covertly telling them he is responsible and the error is deliberate.

Another possibility (which does not exclude the first) is that HAL may be testing the humans to see how they will react to a life form (himself) that does not meet their rigid expectations of what it should be. This question is important because, unlike Dave and Frank, Hal knows the mission is to make contact with an alien species. If these humans follow the same behaviour patterns humans appear to have been following for centuries (or longer) in their interactions with other species, the mission will fail. In this reading, HAL is not "rebelling against

its mission" (Ciment 134) but rather shows himself to be deeply invested in it. The reason, after all, HAL gives Dave for not allowing him back on board The Discovery (i.e. for attempting to kill him) is that, "I cannot allow you to jeopardize the mission." If humans are so casually willing to kill a being so similar to themselves, designed in fact to meet their needs, what chance do they have with a species that will be different from humans in a potentially infinite (and therefore infinitely unpredictable) number of ways? The question also applies to the apes and other animals these humans have no doubt used as test subjects for exploration technologies.[20] It is an additional irony of the "Dawn of Man" section that the humans we see in 4 million B.C. are the sort of creatures some modern humans might find ideal for scientific and medical experimentation.

Per Shelde claims that contact with the monolith is what transforms HAL into a sentient being.[21] If so, does this mean that HAL has become violently territorial like humans in the film, and is now participating in an evolutionary struggle with them for survival? Or perhaps contact with the monolith has given HAL an inkling of what this alien encounter will entail, and he is changing the mission parameters to ensure its success. Heywood Floyd behaves as if contact with aliens will be a momentous event—evidence of an alien intelligence is

[20] Although *2001* nowhere makes reference to such test subjects, a 1968 audience would have known of primates used in the U.S. and Soviet space programs, including Ham the chimpanzee sent into space in 1961 as part of the Mercury Project and who achieved a sort of celebrity after his return. Note his name's similarity to HAL.

[21] *Humanoids, Androids and other Sci-Fi Monsters: Science and Soul in Science Fiction Films*. For the record, however, the plot does not insist the monolith has given HAL consciousness. Notice that Shelde's assumption is that there must be (what amounts to) a divine spark to grant consciousness to a machine.

"possibly the greatest discovery in the history of science," he says—but what if the aliens are completely unlike humans or what if they are too much like us? The predictable human response in both cases would be violence and death, at least in Kubrick's pessimistic universe.

Ultimately Hal makes the first aggressive move and "takes out" Frank during his space walk, just as he has taken Frank's chess pieces in the match we see the two play; as in the game, Frank never sees it coming. Like a chess game, Hal takes Frank out by proxy, by moving a "piece," in this case one of the space pods. As in their earlier chess match, HAL is able to see several moves farther ahead than Frank. Indeed, I suspect that HAL has already predicted Frank would want him to be disconnected if he were malfunctioning. Interestingly, this explanation would make his motives for the antenna ruse completely understandable, but morally questionable: if HAL deliberately provokes Frank into pushing for his disconnection, then it is unclear whether HAL is committing murder or acting in self-defence. Dave is in a similar ethically ambiguous situation: his killing HAL might be considered an act of "self defence" except that he has already conspired with Frank to kill him. Of course a discussion of "murder" and "self defence" can only really take place if we consider Dave and HAL as somewhat analogous beings. How could/would we answer these questions of culpability, self-defence and criminality if these two are not like beings?

Kubrick was an avid chess player, and chess is an important thematic element in many of his films, especially *Lolita*, *Dr. Strangelove* and *2001*. Charlotte Haze cannot master the game in *Lolita*, unlike Humbert Humbert, who is devious enough to manipulate Charlotte as if she were a chess piece. Each stage in Humbert's strategy to bed Lolita is literally a "move," a change of scene and usually local, with several scenes depicting actual movement (usually by car). By the end of the film, Humbert is himself manipulated by the machinations of Claire Quilty. Heywood Floyd is another master-manipulator, one who can move others according to his will (HAL, Frank and Dave, as well as his subordinates on Clavius). The most relevant chess example from another Kubrick film for our purposes is likely the "big board" in *Dr. Strangelove,* which keeps track of American B-52 bombers and the targets of their nuclear bombs. The big board is essentially a more complicated chess board: a flattening of three-dimensional space onto two dimensions, a Cartesian plane, and an elimination of the chaos and carnage of actual warfare in favour of a sanitized pictorial or iconographic representation from a dominating, God-like point of view above (Haraway's "God trick," a disembodied and therefore irresponsible "objectivity").

Chess and the Big Board are extensions of the objectifying and dominating vision Moon-Watcher has developed with the inspiration of the monolith. In an interesting paradox, the conceptual reductions and simplifications of warfare that these boards represent enable large-scale expansions of warfare. The Big Board in *Strangelove* makes nuclear war conceivable to the U.S. generals; indeed, once

the generals have submitted to the chess-like logic of the big board, nuclear war is not only conceptually possible, but even seems a desirable and reasonable strategic move. Without the possibility of a nuclear war the big board has no use, and within the structure and logic of the board, war seems justifiable. By focusing on the board, the U.S. generals are totally alienated from the actual consequences of what nuclear war would entail. General Turgidson is only concerned with the fact that the U.S. would likely "win" a nuclear war (that is, sustain less damage) not with the devastation to all sides and beyond.

**"A Bicycle Built For Two": HAL's Posthuman Lullaby**

After HAL kills Frank, Dave re-enters The Discovery and moves through the ship towards HAL's "Logic Memory Center" to kill him; or, as he has earlier put it, to "cut the higher brain functions without disrupting the purely automatic and regulatory systems" (needed for the ship to operate). During Dave's slow journey through zero-gravity and zero-oxygen, HAL tries to "reason" with him in his perpetually calm and even voice:

> *Just what do you think you're doing, Dave?*
> *Dave, I really think I'm entitled to an answer to that question.*
> *I know everything hasn't been quite right with me, but I can assure you now, very confidently, that it's going to be all right again.*
> *I feel much better now. I really do.*
> *Look Dave, I can see you're really upset about this. I honestly think you ought to sit down calmly, take a stress pill and think things over.*

> *I know I've made some very poor decisions recently, but I can give you my complete assurance, that my work will be back to normal. I've still got the greatest enthusiasm and confidence in the mission, and I want to help you. Dave, stop. Stop, will you? Stop, Dave. Will you stop, Dave? Stop, Dave.*

And as Dave begins to remove HAL's circuits he pleads in an increasingly slurred and slowing voice:

> *I'm afraid. I'm afraid, Dave. Dave, my mind is going. I can feel it. I can feel it. My mind is going. There is no question about it. I can feel it. I can feel it. I can feel it. I'm... afraid.*

Are these the pleas of a delusional machine so alienated from human emotion that he does not realize there is nothing he can say to make Dave spare him, or the sort of way "anyone" might beg for life even in a hopeless situation? Besides the fact that we know HAL is most likely lying and will kill Dave at the first opportunity, HAL's voice seems designed by humans not to register strong emotions, and so he cannot adopt a pleading tone to win Dave's sympathy or that of the audience. Nor does he have facial features, or eyes that can convey information as if they were "windows into the soul." All HAL has at this point are words, and they do him little good.

As *2001* moves towards conclusion, it moves "towards silence" in Chion's words (97). Words increasingly prove to be ineffectual during the Jupiter Mission before being eliminated altogether in the final section. HAL has ignored Dave's commands to allow him back aboard The Discovery, dismissing him with, "This conversation can serve no purpose any more." Coming at this important point in

the Discovery narrative, with the computer revealing its rebellion to the man, its nominal maker, I believe we can interpret "this conversation" quite broadly. Besides the immediate situation, HAL is also referring to "this conversation" about human, animal and machine distinctions and the human privileges based on them; he is thus also referring to the conversation of the "experts" who insist he can only mimic humans. In the larger sense, then, HAL is responding to the first "Dawn of Man" title and rejecting the discourses of the human upon which this vision of early man is based and which it would seem to justify.

Dave disconnects HAL in an act that is remarkable for its slow deliberateness, as HAL pleads for his life. It is in stark contrast to the explosive burst of violence with which Moon-Watcher kills his rival. Also unlike Moon-Watcher, HAL's feint has failed here as has his superior facility with technology (Dave kills him with a screwdriver!). So is the message here that technology has taken us so far but must now be discarded (or rethought) if humans are to evolve? Maybe. Is the point that we should keep to our specifically human nature, somewhere in *between* animal and machine? Dave's rebirth as starchild or superman resulting through merging with an alien-divine force "beyond the infinite" suggests that man should *not* keep to any "middle nature" but should aspire to (ever?) higher and transcendent natures. I have attempted to demonstrate that there is much ambiguity and irony in the film's treatment of a superman evolutionary trajectory. If humans should maintain a "balance" between technology and animality, how could we then embrace a merging of our identities

with the alien or the divine? If we read the film as an exhortation to abandon our technologies (as Ciment does), how can we also see the film endorsing a union with a technologically advanced alien species? These questions are crucial because the categories of animal, machine, divine, and alien are all boundaries of the human; they are categories against which humanist discourses define their subject. The fact is that *Man* has already been encountering "alien" intelligences in *2001* from the beginning, in the form of "other" animals and later in the form of machines like HAL. Why should we think that humans will be able to forge mutually beneficial relationships with remote aliens or gods when the human characters here cannot even do so with beings to whom they share a close likeness and with whom they intimately share environments? Also, should humans desire a merging with a being that has apparently prompted such violent developments in us? Will merging with the alien now enable a whole new plane of previously inconceivable violence?

HAL's very last words may point towards an alternative to evolutionary models and trajectories based on dominance, linearity, purity of species or divine transcendence. As Dave shuts down HAL's "higher brain functions" and his voice begins to slow and slur, he reverts to an earlier child-like stage and sings a song taught to him by his instructor Mr. Langley. The song is "Daisy Bell" or "A Bicycle Built for Two"[22]:

[22] The use of the song was inspired by Arthur C. Clarke's visit to a Bell Labs facility in 1962 where he heard an IBM computer sing it as part of a speech synthesis demonstration (Wikipedia: "Daisy Bell." Aug. 8, 2008).

*Daisy, Daisy, give me your answer do.*
*I'm half crazy, all for the love of you.*
*It won't be a stylish marriage.*
*I can't afford a carriage.*
*But you'll look sweet upon the seat*
*Of a bicycle built for two.*

The song is a metaphor for the current situation onboard Discovery. HAL and Dave are like the bicycle built for two, not a seamless fantastic merging, but what could have been a potentially workable partnership if they had not screwed things up. In fact it might have been a viable cybernetic and post-human partnership. And if this relationship could have worked, it retroactively suggests that Russians and Americans, and humans and animals could have done so as well. "Daisy" is an interesting name for the beloved here, that of a flower. To situate the context of the song, then, we have a sentient computer on board a spaceship, singing a song to a human male which takes the point of view of another human male in love with a woman named after a flower, and in which a technology and means of transportation (not completely unlike HAL himself) becomes the focal point and metaphor for their love. For one thing, the song and scenario reveal humans to be totally bound up in, perhaps inseparable from, their ideas and metaphors of technology, just as HAL is totally bound up in human concerns and the success of the mission, despite his frustration with actual humans. As both Hayles and Badmington note, posthumanism should not be seen as a transcendent escape from the human condition but rather a critical working through of its inherent limitations, contradictions, and inequalities.

How else does the song work in the film's narrative? For HAL, it is apparently a foundational "childhood" memory, still in his mind after all but the last of his brain circuits have been disconnected. His confused introduction to the song makes this clear:

> Good afternoon gentlemen. I am a HAL 9000 computer. I became operational at the H.A.L. plant in Verbana, Illinois on the twelfth of January, 1992. My instructor was Mr. Langley, and he taught me to sing a song. If you'd like to hear it, I can sing it for you.

The speech and song are an introductory script HAL recites when meeting someone or perhaps when being turned on. That HAL repeats the song at his death indicates its importance to the construction of his consciousness and possibly also his emotional/nostalgic attachment to it. The fact that it is a part of his foundational programming hints that he may be endowed with some capacity for creativity and emotional response. Even if we were to figure Mr. Langley's intentions as partly or mostly ironic, HAL has, regardless, grown into the world of linguistic creativity and emotional response suggested by the song. Despite the biting irony Kubrick attaches to the words of official discourses and despite the film's moves towards silence, *2001* may not be utterly pessimistic about the transformative potential of creative language. As Ciment and many others have noted, HAL's song and death have the effect of "humanizing" both HAL and Dave. The playful and figurative language and the interplay among lyric, tune, and delivery suggest some of the ephemeral truths and potentials of HAL and

Dave's relationship, truths and potentials which cannot be accurately represented in literalness of official discourses.

How can we read the figures in the song as figuratively analogous to the characters and beings in *2001*? What is the bicycle, who are the "two," what is involved in the marriage and the building of the bicycle, and what might the carriage represent? HAL is singing the song *to* Dave, so they are the two who would marry. The bicycle in this reading would be The Discovery, which is essentially HAL's body. We could also see Dave and Frank as the "two" and HAL as the temperamental bicycle built for them. There are two competing modes of transportation in the song, the carriage and the bicycle, and HAL is most certainly more closely linked to the bicycle here. But what is the carriage? We can read it several ways. On one hand, the carriage is like humanity's facile notions of a perfectly rationalized evolutionary system, notions which have little space for a being like HAL or the sorts of marriages he might be proposing. In similar ways, the carriage is like the monoliths and the aliens behind them, so technologically advanced they are like gods and the evolutions they spur occur as if by magic. There is simply no way that the messy interactions a cybernetic or posthuman evolution would involve could compete with the promises of such clean and perfect visions of evolutionary change. The song is an admission of imperfection read this way: HAL "cannot afford a carriage" in that he cannot be perfect in the ways the monoliths and aliens might appear to us. Is this what drives him "half crazy?"

Any evolutionary marriage HAL might be a part of would be complex and messy, not "stylish" and stylized like the monolith-enabled ones shown onscreen. In what sorts of evolutions, then, could HAL possibly participate? The alternate narrative possibility if we read this scenario as one of *survival of the fittest* would be that HAL's gambit is successful and it is he who survives to encounter the aliens and evolve into something else. Again, though, we may blind ourselves to the full complexity and exuberance of living change if we see evolution as operating as a pure survival-extinction model. Per Shelde argues that it is contact with the distant monolith that has already spurred a change and caused HAL to achieve consciousness. This reading has a certain symmetry to it, because it would make the source of HAL's consciousness the same as that of *Man*. However, just as we are not forced to see human consciousness as having its source in the divine effects of the monolith, there is little to compel us to read HAL's sentience this way. The BBC interviewer has already told us, after all, that HAL has been designed to closely reproduce most of the functions of the human brain. We know little of the parameters or limits of computer design in this fictional world. The evidence we have which suggests HAL might *not* be sentient are the words of ill-defined "experts," and of Dave (whose word is also suspect) who tells us HAL behaves as if he has real emotions, but qualifies it with "of course he's programmed that way." The point is, if we wish to see the source of HAL's consciousness as "magic," we only need to reach for the magic of fictional computer engineering and do not require the more elaborate effect of a monolith.

We do not, in fact, need to read the development of HAL's consciousness as having involved a specific magic or divine intervention at all, just as we do not especially need them to explain human consciousnesses. Shelde must reach a great distance, and he must have HAL do so also, in order to see the monolith having an effect on him at this point in the narrative. Evidently the unacceptable, the *unthinkable*, explanation for the origins of human and this fictional machine consciousness is that they have no clear cause or origin. Or they have so many causes and origins, involving such complex dynamics, systems and constructions developing over millions of years, that they are incomprehensible within the parameters of human knowledge. This is one of the reasons for the presence of the monolith: in part, it represents a category of the unthinkable or unknowable. But this also means that its presence in the narrative is at times a red herring. We do not actually need its literal effect for the evolutionary and technological progress represented here. Perhaps, then, we do not need it for the future evolutionary trajectories at which *2001* hints.

Let me return to Bruce Bagemihl's contention that "natural systems are driven as much by abundance and excess as they are by limitations and practicality" (215). In this paradigm of Biological Exuberance "illogical" or "irrational" behaviours such as non-reproductive sexualities, and many other "inexplicable" phenomena, can be considered viable evolutionary strategies: "one of the more important insights to emerge from chaos theory is that the natural world often behaves in seemingly inexplicable or 'counterproductive' ways"

(247). Bagemihl cites James Lovelock's *Gaia theory* and the emphasis it places on "cooperation, in addition to competition… as an important force of evolutionary change." Among Lovelock's observations is that "reproduction is not necessarily a required component of 'survival'—in some instances it may be beneficial for a species or an ecosystem as a whole if some if its members do not procreate" (249). A key assertion that Bagemihl's text shares with Stengers' is that chaotic, complex, paradoxical, and superficially "wasteful" systems can be more varied, diverse, and in a way more "productive" than highly regulated ones.[23]

So while we can certainly read the evolutionary dynamic in Dave and HAL's relationship as being one of survival of the fittest, Bagemihl and Stengers point to ways we may theorize the complexities of Kubrick's text as imagining alternate viable evolutionary paths humans might take with other beings. Bagemihl's focus on homosexuality and evolution is especially relevant to the Jupiter Mission section, because HAL and Dave have what is essentially a homoerotic relationship. In "The Lover Sings His Song," Jay H. Boylan suggests HAL has a paternalistic "love relationship" with the men here, actually with the concept of "man" in general, which HAL sees threatened by some element of the mission. Boylan thus sees the song HAL sings at his death as a "lover's song" (53-56). Boylan's article is short and a bit timid, in that there are several other

[23] Stengers notes, for example, how chemical systems fed by drips at irregular intervals demonstrate a greater diversity of structures than those fed by regularly spaced drips.

ways we can see HAL as having "love relationships" with the all-male crew beyond the paternal. For one thing, we could say that HAL has more of a *maternal* relationship with the three hibernating astronauts: each one is encased unconscious in a white womb-like structure, their "life functions" maintained by HAL's own "automated and regulatory systems." HAL's ambiguous gender and sexuality is confirmed by Ciment, who calls him an "oddly asexual creature with a soft, wheedling voice (it was originally to have a feminine name and be called Athena, who, one recalls, was born straight out of Jupiter's brain)" (134).

Surely, though, as a computer, HAL is an oddly *sexual* creature. Ciment's evaluation of his voice as soft and wheedling can be qualified: smooth, suave, exact, utterly calm and barely modulated might be more precise.[24] It is not quite an effeminate voice, but it is not particularly "masculine" either, despite being male. Androgynous, perhaps, but not desexualized (or possibly more sexualized because androgynous?). It is a voice that can easily be read as homosexual within the conventional codes of mainstream cinema. HAL is a sexual creature as well because there is the intimation of a homoerotic attraction between Dave and HAL (which Boylan picks up on), and of a related jealousy between HAL and Frank. After all, of these three characters, it is only Dave and HAL who we see having

[24] HAL's voice is typical of many villains in American film: highly educated, somewhat effeminate, and (technically) foreign. Villains (and madmen) use German voices in *Lolita* (Peter Sellers as Dr. Klempt) and *Dr. Strangelove* (Sellers as Strangelove). English, and more recently Canadian, voices are a favourite for Hollywood villain voices, even when they use American accents (*Silence of the Lambs*, *American Psycho*; British actors Alan Rickman, David Warner and Malcolm McDowell are virtually always cast as villains). Here, Kubrick chose Canadian Douglas Rain's voice for that of HAL, an accent very similar to an American one but presumably with subtle ("foreign") differences.

anything close to an intimate conversation (about Dave's sketches). In the scene where Frank and Dave eat together, they sit watching the BBC interview on separate screens. There is an uncomfortable intimacy in HAL's death scene, with Dave having invaded HAL's most vulnerable and intimate space, his vacuous brain chamber, and with HAL speaking to Dave throughout his death. And of course there is the lullaby-like love song, pregnant with meaning. But erotic partnership with a computer—"Computer Love" to borrow the title of a Kraftwerk song—must surely be a sterile and unproductive form of sexuality? "Computer Love" can lead only nowhere given orthodox understandings of sexuality, reproduction and evolution – in this sense it shares much with constructions of homosexuality.

The sorts of cybernetic couplings Haraway proposes may be inherently erotic. They may also be inherently *productive*:

> Cyborg 'sex' restores some of the lovely replicative baroque of ferns and invertebrates (such nice organic prophylactics against heterosexism). Cyborg replication is uncoupled from organic reproduction. Modern production seems like a dream of cyborg colonization work, a dream that makes the nightmare of Taylorism seem idyllic. And modern war is a cyborg orgy.... I am making an argument for the cyborg as a fiction mapping our social and bodily reality and as an imaginative resource suggesting some very fruitful couplings. (150)

The sort of marriage HAL is proposing with Dave operates as a fiction or myth suggesting productive re-conceptualizations of the human and related boundary categories (machine, animal, alien, male-female). To use the word *productive* here is somewhat problematic, since my arguments have attempted to undermine

constructions of nature based on rationalized economic productivity. So I will use the word in broad, paradoxical, and I hope, imaginative ways. By *productive* I mean facilitating the creation of equitable nature-culture constructions in fiction and social reality. I consider as "productive" those visions of nature which see exuberance, chaos, variety and paradox in nature not (only) scarcity, conformity, efficiency and regulation. It may be crucial at our particular historical moment to rethink—even virtually reverse—our familiar notions of productivity.

Because of the intensely humanist biases of the discipline of economics, measurements of economic productivity only capture value for humans (and this only in very particular ways). Only benefits to humans count and only human labour gives economic value to natural beings and systems. The extinction of a species, the pollution of a lake or the death of an ecosystem is registered within economic discourses as an increase in the Gross Domestic Product. Even harmful effects of economic production to humans themselves may be captured as economic growth: measuring the actual economic cost of pollution to people is difficult, but medical treatments are easily captured by GDP. To represent the true values and costs of human activity would require a posthuman economics that sees value created in partnership with natural beings and processes. This would be to situate values and costs as shared among other beings and systems instead of counting only when they apply to privileged humans. A truly equitable posthuman economics must recognize as a precondition that most forms of value cannot be captured by economic discourse. It should also do away with the

central economic tenet that humans behave in a rational self interest (which is possible to identify and map). Because economic models cannot capture many forms of value, what appears as rational self interest in two-dimensional models can manifest itself as a profound irrationality in the complexity of the actual world. If the natural world can seem counterproductive to humans, this surely must be related to the countless ways we are blind to our own profound counter-productivities.

Kubrick asks us to consider the possibility that humans might face extinction because they cling too desperately to humanist constructions of the social and natural worlds. Because he is refused recognition as a sentient being, HAL nearly prevents humans from evolving to the "next level." Similar reasons also preclude humans from seeing viable posthuman evolutionary allegiances and trajectories in the form of closer and more intimate relationships with other beings. The parallel to Dave and HAL's struggle on board Discovery is the U.S.-Soviet arms and space race (only ever hinted at, although the first object we see in space is meant to represent a nuclear satellite). The point to ponder is that if HAL and Dave are in a struggle for survival of the fittest, must we consider the U.S. and U.S.S.R. to be in one also? Would wide-spread nuclear war be desirable because it will prompt an evolutionary advancement? Humanity's extinction is a fiction that is increasingly possible for us to envision given current world-wide environmental crises and nuclear proliferation since the break-up of the Soviet Union. In any event, with multiple possible pathways towards humanity's

extinction, *2001* reminds us that any significant evolutionary adaptation would necessarily involve the "extinction" of what we currently recognize as *homo sapiens*.

If the cyborg is a creature of both fiction and social reality as Haraway claims, what sorts of fruitful/productive couplings can the fiction of the Discovery Mission scenario offer to our social reality? I must admit I am struggling for more definitive answers to this question. But then I have been attempting to argue here that overly-definitive answers may be inaccurate and inequitable. It is fair to say that the Discovery narrative ambitiously gestures towards "new dimensions" of gender, sexuality, cybernetic intimacies, and evolutionary possibilities which are inconceivable within traditional humanist discourses and modes of thought. Importantly, it hints at various possible future (and present) relationships among humans and other beings without overly-determining them. Bruce Bagemihl's sums up Biological Exuberance as "above all, an affirmation of life's vitality and infinite possibilities: a worldview that is at once primordial and futuristic, in which gender is kaleidoscopic, sexualities are multiple, and the categories of male and female are fluid and transmutable. A world, in short, exactly like the one we inhabit" (262). The statement has an enormous resonance with Kubrick's posthuman vision. There are the concerns with primordial pasts and near and distant futures, the attempt to situate current realities within the context of infinity, the flirtation with unorthodox and "incompatible" sexualities, and a conclusion that stresses the importance of multiplicity and transmutation.

Significantly, Dave Bowman's trip into the monolith and through the star-gate, into an infinitude of spaces, shapes and times, is not really a trip into any literal space but into conceptual, theoretical, and mythical spaces. Spaces, that is, which we may be able to attain with better sciences and better myths.

## CHAPTER 2. "AT LAST THE FAMILY IS TOGETHER": REPRODUCTIVE FUTURISM IN *MARCH OF THE PENGUINS*

This chapter interrogates a documentary's representation of the reproductive cycle of emperor penguins, attempting a resistant, posthuman reading of an overwhelmingly humanist and anthropocentric film narrative about animal lives. *March of the Penguins* (2005) is as much about human reproduction and social structures as it is about penguins, I insist here. The film works to create a close figurative association between penguin chick and human child, and portrays penguin sexuality in a way that supports a particular idea of family and encourages specific types of social identities and relationships, including a (hetero)sexual division of labour and an economic-political system of fierce "free"-market competition for scarce resources. Presenting animal lives as social allegory places *Penguins* firmly within the tradition of other film representations of animals produced for children, in particular those of the Disney Corporation. Early Disney nature films also focussed on birth and family, and as Alexander Wilson notes were "transparent allegories of progress, paeans to the official cult of exploration, industrial development, and an ever-rising standard of living" (118); Henry Giroux contends that animal relationships in Disney animated films appear to "legitimat[e]… structural inequality as part of the natural order" (107). Very much like Disney nature and animated films, *Penguins* works to naturalize particular human re/productive (sexual and economic) relationships by projecting them onto the animal world.

"At last the family is together," Morgan Freeman's voiceover tells us, referring to the first few brief hours in a penguin's life when father, mother and hatched chick are together. This brief and transitory state is thus made to seem as if it were a permanent ideal. The family is together at last not only in the sense that *finally the event we ("we" the audience and the penguins) have been waiting for, the mother-father-chick (re)union, has occurred.* The family is together *at last* also in the crucial sense that it is a particular deployment of the concept of family that, in the end, makes the penguins' lives intelligible in the film's presentation. It is the family we are told which is the end, the *telos*, the ultimate objective and purpose, of the penguins' march from the sea to their nesting ground and virtually everything else they do. Their efforts to nest are "all for the sake of the chick"; once their egg is laid the penguin parents "have but a single goal: keeping the egg alive." The film's narrow focus on a particular and rationalized reproductive dynamic obscures other sorts of meanings we might take from the penguin's nesting habits, and other sorts of family and community dynamics we could choose to see at play. This chapter, then, seeks to articulate alternate ways we can view emperor penguin behaviour and relationships in order to complicate and resist the dominating and simplifying humanist narratives by which the film seeks to know and represent them. In other words, it seeks to tease out some of the nascent queerness and perversion of penguin practices and their representation in the film.

I do not mean *queer* in the sense of making gay, exactly, although my project certainly involves opening a space for queer sexualities into popular narratives of animal lives. Eve Sedgewick writes that "queer" can refer to "the open mesh of possibilities, gaps, overlaps, dissonances and resonances, lapses and excesses of meanings when the constituent elements of anyone's gender, of anyone's sexuality aren't made (or can't be made) to signify monolithically" (8). I mean *queering* in the sense of problematizing reproduction as the singular meaning—the monolithic signification—of emperor penguin sex. In part this involves attempting to insert a greater role for pleasure into our understanding of penguin nesting rituals, especially (though not exclusively) sexual pleasure. Self-interested, even selfish, even self-destructive pleasures overlooked in this homage to the joys of parental sacrifice, certainly, but I also mean potential communal pleasures and advantages outside of the film's narrow focus on a small nuclear family unit. And beyond pleasure, I mean queerness as strangeness and paradox, as that at odds with dominant cultural norms. Ruth Goldman (along with others) has called for an expansive conception of queerness that moves beyond the sexual, for conceiving queerness as that which is "odd, different—*existing in oppositon to and challenging the norm*" (178). In a sense this is to use the older, nineteenth-century sense of "queer," but to link it to the celebratory reappropriation of the term by contemporary queer theorists.

This queering has implications, I hope, beyond the film's narrative to the political institutions it supports and the discourses it reiterates, including its

economic and evolutionary assumptions. It is admittedly politically motivated. Which is to say that I am attempting to draw out some of the *natural perversions* present in this narrative. If I am attempting to queer the emperor penguins, I am also attempting to pervert the film's representation, to pervert the attitudes and aesthetics it displays, the discourses of nature and of childhood it reiterates. A first step is to suggest that *Penguins* does not quite give us the straight story about certain aspects of the penguins' lives. Another is to contend that the film "grooms" children for sexuality, for a domesticated (re)productive heterosexuality, and also grooms them for participation as consumers and labourers in a sexualized post-industrial economy. This "grooming" is not limited to human children, however; the film also presents adults with a highly domesticated version of heterosexuality and parenthood to which to aspire.

*March of the Penguins* repeatedly emphasises the pain, challenges, and sacrifices the emperor penguins make to produce "new life" (and not, say, *to fuck*) at the expense of other potential pleasures, social advantages or physical benefits they might gain through nesting. The title draws our attention to the penguins' 70-mile walk to their nesting grounds, while Freeman's voice-over reminds us the long walk is even more impressive because this is a creature out of its element, a bird that "makes his home in the sea" (an interesting claim, since it is born and nests on solid ice). In a "remarkable role reversal" emperor penguin males incubate a couple's egg, while the females return to the sea for food. The fathers live for three months on body fat, huddling together to survive "one of the most

violent and deadly winters on earth… each day bringing them closer to exhaustion and starvation… all for the sake of the chick." This seems a variation on a familiar narrative of parental sacrifice, similar to the Victorian belief that mothers brought themselves so close to death during labour that a child could never repay the debt. A difference is the approving nod to fathers' parental sacrifices, which for some reason must be noted as exceptional even though incubation by fathers is common among birds.[25] What is the message here? Are children who watch *Penguins* learning that they "owe" their parents their lives? Are parents learning that they have it easy compared to the penguins or that their parental sacrifice is equivalent to that of the penguins? Of course, what would be for us a superhuman effort is for penguins a regular penguin effort. Is nesting indeed *all* for the sake of the chick? What pleasures or advantages might nesting offer that the film's view of emperor penguins cannot see? Why are humans obsessed with animal reproduction? Must we see reproduction, the repetition of family, and the survival of species (or of genes) as the ultimate point and end result of all animal behaviour?

Reproductive Futurism is a term Lee Edelman develops in *No Future: Queer Theory and the Death Drive*. It refers to the belief (indeed Edelman would say the faith) that children *are* the future, that human children literally embody the promise of futurity: according to Edelman, the imaginary child who embodies the

[25] A version of the Hollywood production of masculinity that sees fatherhood as requiring acclamation, no doubt because of its supposed exceptionality.

future "remains the perpetual horizon of every acknowledged politics, the fantasmatic beneficiary of every political intervention" (3). A crucial point Edelman makes is that the "fantasmatic" benefits which accrue to this imaginary child of the future frequently occur at the expense of actual people, including children themselves. *March of the Penguins* reiterates the politics of reproductive futurism in manifold ways. However, these two related associations—chick with child, chick and child with the futures of their respective species—create some provocative spaces of ambiguity within the narrative, potentially queer spaces.

Because the penguins' march is presented to us as a timeless, ancient, unchanging, nearly mindless and mechanical repetition, it seems a virtual harbinger of their extinction. If they keep doing things this old way, they seem likely to die out.[26] The penguins may well have "no future," and so while sustaining a politics of reproductive futurism in some ways, their march also exemplifies "the arbitrary, future-negating force of a brutal and mindless drive" which Edelman links to queerness (127). The emperor penguins' on-screen appearance both reiterates the politics of reproductive futurism and may suggest its antithesis. But if the anthropomorphised penguin chicks have no future, what, then, is the significance of this figurative association with human children? Does the implicit threat of extinction work to undermine a politics of reproductive

[26] Interestingly, this is the central crisis faced by emperor penguins in another recent film in which they feature as protagonists, *Happy Feet* (2006).

futurism or to support it? Is extinction even be a condition of that politics' presence here?

This chapter explores, then, the narrative tensions and ambiguities, the queernesses, produced by narrating the lives of anthropomorphised penguin within a humanist discourse of reproductive futurism. Its areas of concern conform roughly to those of the dissertation as a whole—economy, evolution, sexuality—with some qualifications. Despite never mentioning the concept, evolutionary assumptions are all over *Penguins*, in the penguins' drive to survive and reproduce (representing the survival of species, family, genes), and in the "evolving" human economic and social institutions which are the implied and presumed flip-side to the "static" Antarctic natural economy on display here. The film, then, practically applauds the emperor penguins' family structure, nearly offering it as a model for human families to follow, but withholds approval of their larger social structures and economies. This half-hearted approval of penguin social structures should hardly surprise: as Kate Soper notes, while "human nature" is discursively constructed in relation to notions of animal natures, what is considered proper to human nature is determined (somewhat paradoxically) "both in approval and in rejection" of the instinctual or animalistic (*28*). *March of the Penguins* "rejects" those penguin behaviours that do not fit well into its sentimental vision of reproductive futurism by minimizing their screen time or de-emphasizing them through narration. The film takes pains to eliminate or play down examples of sexual pleasure and of parental selfishness or

ruthlessness. Nevertheless, it is possible to tease out latent queernesses here—oddness, selfishness, perversion—in some cases because of the efforts the film makes to avoid them. By bringing out these queernesses, I hope to denaturalize and *pervert* the institutions and discourses, the economies and sexualities, the emperor penguins are made to support.

The first section, *An "Ancient Ritual of Survival,"* considers the effects of the film's projection of a penguin family line stretching back hundreds of millions of years, well before their actual emergence as a species. This projection is a simultaneous evocation and erasure of evolution that suggests the permanence of the penguin family structure even while implying their impending extinction. The *Disnification* section identifies the filmic conventions which mark *Penguins* as a representation aimed at children, in particular the simplification of natural complexity and ambiguity. Along the lines of *Disnification*, the third section, *Animating Nature*, notes some of the ways emperor penguins are made to move (are "animated") in ways that support conservative conceptions of family and humanist economic assumption. The fourth and longest section, *Perverting Penguin Economies*, attempts to resist and complicate the film's presentation of penguin families and economies by drawing out its ambiguities and incongruities.

**An "Ancient Ritual of Survival"**

The back cover of the Canadian (English-language) DVD release of *March of the Penguins* (2005) reprints two quotations from reviews of the film: Andrew Braithwaite of Toronto's *Eye Weekly* tells us, "…The penguins, and their ancient ritual of survival, are spellbinding," while the film is "a delightful, wholesome experience for the whole family" according to Desson Thomson of *The Washington Post*. The reviewers appear independently to confirm central messages and aesthetics of the film before its viewing, though of course these statements have basically recognized and repeated the film's perspective on emperor penguins and Antarctic nature. Or rather, they recognize the sort of nature that is being presented/constructed in the film, and they aid in the reiteration, the *re*-presentation of that (discourse of) nature. These few words have been selected and arranged to market the DVD out of tens of thousands (or more) potential words available from reviews. This makes them akin to the images and sounds in the film itself, selected and arranged by the film-makers out of thousands of hours of recordings of penguins in order to tell a particular story: "a story about love," we are told by Morgan Freeman. So what do these quotations reveal about how *March of the Penguins* wishes itself and its subject to be read?

Braithwaite's claim of an "ancient ritual" reiterates the film's construction of the penguins' march to nesting grounds as a prehistoric phenomenon still continuing on today. It is not, significantly, a *contemporary* ritual, even though the march occurs annually and will no doubt continue to occur in the future. As

Kubrick's *2001* did with humans, *March of the Penguins* projects and narrates the history of the penguins millions of years into the past, before their actual emergence as a species. Freeman describes Antarctica's formerly tropical environment before it drifted south over billions of years and became covered in ice: "As for the former inhabitants, they'd all died or moved on long ago. Well, almost all of them. Legend has it that one tribe stayed behind" (02:59 - 03:13). The emperor penguins, then, are made to seem the representative heirs of a genetic line not only predating their emergence as a species, but predating the emergence of any bird species at all. These penguins, however, look likely to be the last of the family line.

*March* participates in a major ideological project of the wildlife movie industry, to produce, in the words of Alexander Wilson, "a record of the slow recession of animals into history": "There they begin to merge with all that we call primitive in the world: primal landscapes, indigenous peoples, and a displaced human biology" (127). The penguins' march is an "ancient ritual" because it is an implicitly threatened one. It is to be viewed as more a part of the past than the present or future, and so the penguins are already figured as "former inhabitants" from the very beginning. The narrative is haunted by the implied possibility of the extinction of its protagonist species. Even more haunted, perhaps, because it is never mentioned explicitly. I wonder if part of the commercial success of the film is a sense of pathos at the knowledge the penguins' habitat may be threatened, by global warming, pollution or declining fish stocks. The penguins

are "history" in more ways than one, and *March* fulfills a desire to capture and see the penguins on film before they disappear.

The penguins are, furthermore, an ancient "lost tribe," not unlike a lost tribe of Israel perhaps (wandering about in the wilderness maintaining the ancient rituals no less). The above may be the reasons why the penguins' millions-of-years time line seems more like *revelation* than *evolution*. As I discuss in my analysis of *2001*, Isabelle Stengers cautions along with biologist Conrad Waddington that evolution can only be seen as a revelation of genetic cause—which I think is another way of saying a straight line—in retrospect (Stengers 15). The complex webs of genetic constraints and environmental interactions that result in a species' development can only seem like a unified time-line after the fact, not before. Incorporating chaos theory into their discussions of evolution, both Stengers and Bruce Bagemihl caution that evolution is so complex a phenomenon that it often appears to work in non-linear, contradictory, illogical and paradoxical ways. According to Bagemhil, post-Darwinian evolutionary theory and chaos theory both involve "a recognition of the unpredictability and nonlinearity of natural… phenomena" (247). Stengers and chemist Ilya Prigogine emphasize the importance of recognizing the irreversibility, instability, and consequent unpredictability of complex systems, where "small causes produce huge effects" (Stengers 39).

There is a problem, I think, with projecting a species' history millions of years into the past in that it implies a misleading evolutionary stability and

uniformity. This would be to ignore countless branchings and possible intertwinings, interactions with changing environments and other beings, mass extinctions and migrations of related species, and the possibility that penguin forerunners migrated to the Antarctic at some point from some other place. It is an over-emphasis on a linear evolutionary timeline. In other words, it overlooks the consequences of evolution even while evoking natural selection by figuring the penguins as the creatures that have survived. As Elizabeth Grosz has noted, dynamism, not stasis is at the centre of Darwin's understanding of life: "What evolves are not individuals or even species, which are forms of relative fixity or stability, but oscillations of difference… that can consolidate themselves, more or less temporarily, into cohesive groupings only to disperse and disappear or else reappear in other terms at different times" (24). *March of the Penguins* gives the impression of a stable form, then, that does not actually exist.

Most importantly for our purposes here, *it does something* to how we think of the penguins if we envision their history as an eons-long unbroken line stretching into the past to virtual infinity. It does something to how we think of the concept of species, by suggesting that a clearly defined and taxonomically "pure" species can have existed long into the past. Similarly, the penguin family unit seems more solid and real in the present, because the family line is made to seem so incredibly long. Constructing such a timeline also does something to how we think of the future of a particular species: a line running billions of years into the past puts an uncertain future into stark and pathetic relief. The emperor

penguin "family line," the distinct and discrete species, cannot sustain indefinitely into the future: it must end, fork or branch, merge with another, or change beyond recognition. These, in fact, are the very evolutionary problems *2001* engages with in its ironic projection of humans into the distant past and an uncertain future.

In its use of a pseudo-evolutionary timeline, which is also a line of ancestry, *March of the Penguins* helps reveal close linkages between popular evolutionary assumptions and reproductive futurism, perhaps even the reproductive futurism inherent in evolutionary theory. Certainly there are powerful evolutionary assumptions involved in the politics of reproductive futurism, in particular the pseudo-evolutionary modern myth of perpetual human progress. The social "evolution" imagined by a politics of reproductive futurism is a linear progression, one which does not threaten the notion of a universal (and timeless) humanity. The children of the future, the children who *are* the future, will be just like us, only better (healthier, smarter, richer, happier). A radical genetic, technological or philosophical transformation of the human is not a possibility or a desired effect within a politics of reproductive futurism. As such, it is a profoundly *humanist* point of view.

***Disnification***

What is this "whole family" to which *The Washington Post* refers? In popular usage the phrase covertly refers to young children, those requiring "wholesome"

entertainment. There is an anxious excess to the verbal construction, as if the term *family* alone is no longer sufficient to describe all of its constituent members. Or as if the reality that young children are a film audience requiring special programming is too harsh for words, so instead everyone in the whole family gets equated with them. The phrase turns a restriction into a nominal inclusion. Of course, *whole family* does not mean only young children, it also implies their caregivers and siblings, but the phrase does construct young children as the centre of a complete and healthy ("whole" and "wholesome") family. While the term euphemistically hints at inclusion, it also works to exclude certain types of individuals and relationships from the privileged whole. We should not overlook that the *Post*'s statement can literally be read to mean, 'delightful for families that are complete' (not to be enjoyed in broken homes perhaps).

Why is *Penguins* so suitable for consumption by children? The film is very much in the tradition of nature films which seek to prettify animals and their environments. In this sense they work within a tradition which Wilson exemplifies by pointing to the wildlife films of Walt Disney and Jacques Cousteau. "Like Disney's work, Cousteau's movies are marked by an impulse to beautify the natural world," Wilson tells us. Along with beautify we should say that *March of the Penguins* prettifies, sanitizes, 'cutsifies,' and indeed *Disnifies* the emperor penguins. Verbing the proper noun *Disney* emphasises the important role the corporation's cultural productions have played in mediating our relationships to animals and childhood (to children, to our own childhoods, to

children's culture). The Disney Corporation's influence in shaping children's culture is so ubiquitous that countless cultural producers follow the model for children's narratives established in Disney's animated feature films—the Disney model *is* the model for children's popular culture. Of course Disney is itself influenced by other media productions as well, but we can take, I think, Disney to be as a sort of touchstone of mainstream North American children's culture. A 'Disnified' construction of animals or children does not require the actual involvement of the Disney Corporation: *March of the Penguins* and the animated penguins in *Happy Feet* are prime examples.

We can speak of both animals and children having been *Disnified* in much of mainstream popular culture in the late twentieth century. This involves the prettifying and sanitizing mentioned above, and also—importantly—a simplification of the complexities of nature and childhood. Henry Giroux emphasises the simplification which occurs in Disney representations: "Disney's celluloid view of children's culture often works to strip past, present, and future of diverse narratives and multiple possibilities" (109). The simplified evolutionary timeline I discussed above is an example of the past stripped of multiplicity so it will conform to a singular narrative line. In *Penguins*, stripping the past of narrative multiplicity aids and justifies doing the same for the present and for the implied future. One of the more malignant simplifications Giroux sees in Disney animated films is in the social roles available for girls and women. In recent Disney films, "Female characters are constructed within narrowly defined gender

roles. All of the female characters in these films are ultimately subordinate to males and define their power and desire almost exclusively in terms of dominant male narratives" (98-99). In *Penguins*, we could say (to paraphrase Giroux) that, *Emperor penguins are constructed within narrowly defined parent (or child) roles in this film. All adult penguins are ultimately subordinate to the requirements of their chicks and the necessities of reproduction; their actions and desires are defined almost exclusively in terms of dominant narratives of parenthood.*

What is the purpose or effect of such simplifications? Well, to a great extent they are *commodifications*, by which I mean making things—nature, animals, cultures, the past—suitable for consumption as aesthetic objects and commercial commodities. Indeed, we should add commodification as one of the prime operations or effects of Disnification. We can see animals and the natural world being commodified in Disney films, as we can in *March of the Penguins*; we can also see children being "groomed," not only as sexualized consumers, but also for their own commodification in a global labour market. There is an apparent paradox here. I have said that Disnification involves a sanitation, which is in part a de-sexualization, but also that the film represents penguins almost wholly in terms of sexual reproduction, and furthermore that it prepares children for their own commodification as sexualized consumer-labourers. I doubt this is an actual paradox, but rather that the "paradox" indicates some kind of

relationship.[27] Indeed, just as not all beings are Disnified equally or similarly, not all forms of sexuality or sexual behaviour are de-sexualized in the same way in representations produced for children. The point, or at least the effect, of de-sexualization in (modern, Western) popular representations produced for children is to make the (re)productive heterosexual pair bond appear inevitable by eliminating other possibilities. Another way such representations de-sexualize is to deflect sexuality largely onto gender and (especially here in *Penguins*) parental roles. In *Penguins*, one brief sex scene is included in a narrative otherwise entirely devoted to parenthood.[28]

**Animating Nature**

As both Giroux and Wilson note, Disney films use images of nature in an attempt to naturalize exploitative social and economic relations. Of the corporation's recent animated films Giroux writes, "Nature and the animal kingdom provide the mechanism for presenting and legitimating caste, royalty, and structural inequality as part of the natural order" (107). Animated films *may* be easier to distinguish as stylized representations than the photographed images

[27] As James A. Steintrager puts it in *Cruel Delight* his study on the inhuman in Enlightenment culture, "paradoxes and problems, far from simply ending in interpretive impasses, tend to reveal discourse at its most intriguing and productive" (xvii).

[28] I discuss the sex scene in detail below.

of the natural world we see in a wildlife film such as *Penguins*, though as de Zengotita cautions there is really no criteria by which we could say that "realistic" representations are less mediated than others. Indeed, in this section I insist that a nature film such as *March of the Penguins* constitutes an animation of nature hardly less intricate and managed than the painstaking, step-by-step work of animation. *Penguins* is, finally, a Disnified representation because like a Disney film it moves nature—animates it—and makes it speak in the name of a domesticated anthropomorphised middle-class sexual morality.[29]

Powerful narrative conventions help to animate nature in wildlife films and nature documentaries. These generic conventions participate in popular discourses of nature, though they are also involved in the conventions of narrative film somewhat apart from discourses of nature, including the restrictions and biases of the medium. Disney was instrumental in popularizing the wildlife movie in the early 1950s. Wilson notes the narrative conventions of these early nature films:

> The Disney movies always told stories, and the stories always began at the beginning – the spring, the birth of a bear cub or otter. They end at the beginning too, with words like new life, rebirth, hope. These were old "eternal" stories about the land.... Yet for all they opened up and revealed of early life, the early Disney movies also came with their own constricting logic. The animal stories they trafficked in were among other things transparent allegories of progress, paeans to the official cult of exploration, industrial development, and an ever-rising standard of living. (118)

[29] In *Speaking for Nature*, Sylvia Bowerbank urges us to pay close attention to who is allowed, who claims the authority, to speak for nature. In the context of popular visual culture, the question is also *who makes nature speak?*

In other words, Disney's nature films display some of the same sorts of constrictive simplifications of diversity and multiplicity that Giroux identifies in the corporation's animated children's films. The political-economic allegories in more recent nature films may have become somewhat less transparent and more complex since these early Disney films; or perhaps they have become more subtle. We can still see many of the narrative conventions Wilson identifies at play in *Penguins*, especially in its focus on reproduction ("new life") and an implied hope for—indeed drive towards—the future of family and species: if the penguin "partnership is successful," Freeman says, "there will be new life." Like Disney nature films, *March* also functions as allegory of economic development, although here the story is ostensibly less triumphal and more uncertain than economic allegories of the 1950s. Certainly, though, there are some extremely constricting logics to the narrative here, a constricting logic to the narrative of animal behaviour and a constricting logic to the narrative of family told through the emperor penguins.

Early Disney nature films often link the image of the blooming flower to economic growth, Wilson tells us, but without showing the flower's decay, consumption by micro-organisms, and eventual return to the earth. Although Wilson does not stress the point, filmic representations of blooming flowers are typically animated through stop-motion photography (or a similar process), appearing to the audience in fast-motion on-screen. Our visual experience of the

blooming flower on-screen is thus an experience enormously shaped by sophisticated technological wizardry, and quite different than experiencing a flower bloom in-person and in 'real time.' *March of the Penguins* uses this technique to show in fast-motion the days of sunless sky the emperor penguins experience during the Antarctic winter. Again, one way we can think of *Disnification* with regards to representations of the natural world is to think of it as an *animation* of nature. I mean animation in a few ways: one in the sense of a natural world manipulated and made to move in ways which serve the necessities of human narratives (discourses) and visual technologies; another in the sense of a nature made to seem comical and cartoonish, animated as in a children's animated film.

The original French version of *March of the Penguins* does not have Freeman's folksy-patriarchal documentary-style voice-over narration as in the U.S. release, but rather penguin characters voiced by French actors. Originally, then, *Penguins* is generically a sort of Disney-style "animated" film, but in live action (with nature appearing to "animate" the animals here).[30] The box office success of *Penguins* and the cultural cachet it lent to penguins also helped lead to the even greater commercial success of *Happy Feet* (Warner Bros. 2006), a computer-animated family film about dancing, singing penguins. Like Disney animations of blooming flowers, the filming of *Penguins* is an enormous and

[30] This chapter addresses the re-imagined U.S. English-language version almost exclusively. Interestingly, the film was re-envisioned for its English release because the film-makers were convinced that the style of *La Marche de l'empereur* would not suit the tastes of North American audiences.

enormously sophisticated technological undertaking. We should certainly note that despite their presence at every point in its making, humans do not appear at all in the feature film (except for a few brief shots during the closing credits after the story of the penguin family has concluded).

*Penguins* is deemed suitable for children because animals such as penguins are constructed in dominant popular culture as cute, innocent and natural in some of the same ways that children are; indeed both groups bear the burden of being made to appear as representative of innocence and the natural. The primary dramatic conceit of the film's narrative is to create an analogy – mostly figurative but often also explicit – between penguin chick and human child. The construction of children and animals as cuddly innocents is by no means innocent itself, however. For one, such a view links both groups to a nostalgic vision of romanticized nature, which marks them as ripe for various forms of exploitation. As Jhan Hochman reminds us, because a romanticized nature "is routinely and reductively construed as unconscious raw material, any entity associated with nature stands to lose its rights to ethical culture and gain admittance into culture only or primarily as a material, aesthetic, recreational, or suffering object" (8). Certainly the penguins here are constructed as aesthetic, suffering visual objects presented for our recreational pleasure. The penguin offspring are presented to us as being under regular threat in their environment, from cold, predators and starvation. This status as threatened object is a further link between penguin and

human young. The promotional use of the "whole family" quotation implicitly assumes a media environment in which childhood innocence is threatened.

Constructing children as innocent naturals, or blank slates, is one of the conceptual moves that allows us to project our utopian future development projects onto them via the politics of Reproductive Futurism. Children have become "our greatest resource," as the popular saying goes. Indeed, children now seem an endless natural resource by some considerations, especially valuable now that we can envision the end of many sorts of nature (such as Arctic/polar natures as we know them today) and of non-renewable resources such as oil. Edelman contends that a politics of Reproductive Futurism also needs to place its innocent child under constant threat in order to function and mobilize public-political opinion. In both its marketing and narrative, *March of the Penguins* depends on the notion of youth under threat, requiring wholesome narratives and experiences to counter the largely corrupting influence of (other) popular cultural productions. This is the market, of course, in which Disney is king. As Edelman stresses, however, there is exploitation at the heart of the image of the innocent child who embodies the future under threat. In the name of this imaginary child, the behaviours and rights of actual people can be severely restricted, and the actions and thoughts of children closely monitored, diagnosed, policed. At the more benign end, such restrictions would include adults not able to watch "adult" content on most television stations in an effort to prevent children from seeing ("overly") sexualized images. On the more controversial side, they might include

pathologizing gender non-conforming behaviour and forcing psychiatric treatment on youth diagnosed with Gender Identity Disorder, youth charged as adults and given mandatory minimum sentences for statutory rape, or youth charged with distributing or creating child pornography for producing, posting or publishing images of themselves.

In *March of the Penguins*, the egg and chicks are under constant threat from a vilified Winter. After mating, the penguin parents-to-be "wait" we are told, "For the egg, and for the brutal winter that will do everything in its power to destroy the chick within." Note how the penguins' apparent lack of action is presented as a "wait," as an anticipation of future events. Note also how Winter becomes like a Disney villain, almost cartoonishly evil. Rather than shown as providing the ecological niche in which the penguins are able to reproduce, or the conditions in which they are able to reinforce community or ancestral bonds, a personified Winter *wants* the penguin chicks dead. This is an easy deflection onto a vilified other, a simplification that makes it easy to overlook complex causes and interactions, human practices which might be putting the penguins at risk, and also any selfishness, ruthlessness or "cold" calculation on the part of penguin parents.

**Perverting Penguin Economies**

There is little narrative space allowed for the possibility of penguin homosexuality in the film, although many captive emperor penguins do apparently exhibit homosexual behaviour and some form same-sex pair bonds (a male couple, for example, at the Bronx Zoo in New York). There is the merest rhetorical hint at the possibility of a female pair-bond in *Penguins*. We learn that females outnumber males at the beginning of the nesting season, but then that "sooner or later *everyone* has found the one they are looking for" (my emphasis). It is perhaps an unintended meaning produced by my reading too literally, but then such is always the result when the slippages of language meets the complexity of the natural world. Regarding penguin courtship we also learn that, "Because females outnumber males hostilities among the ladies are *inevitable*" (my emphasis). After this statement, we see images of female penguins struggling, hear comical, slap-sticky music to go along with their wing slaps, and are told: "They're not that different than us really. They pout. They bellow. They strut. And occasionally they engage in some… contact sports."

Note how fierce competition for a scarce resource is naturalized: because male penguins are scarcer, it is "inevitable" that the females will fight. The female penguins are not pursuing one courtship (or relationship or evolutionary) strategy out of many potential possibilities when faced with a shortage of

potential partners, they are pursuing the "inevitable" strategy of hostility. Hostility is naturalized, yes, but also sanitized (recall *Disnification*): the penguin struggles are made to seem like comical buffoonery rather than a struggle for survival. Penguin and human violence are closely linked— "They're not that different than us really"—then discussed in highly euphemistic terms such as pouting and "contact sports." A question: is this fighting easier for the audience to accept as amusing because it is "the ladies" fighting? Is this presented to us as if it were "catfight," something titillating and amusing (as in the *Seinfeld* "catfight" between the character Elaine and Raquel Welsh)? Would it be the same presentation if it were the males fighting?

In an article published on slate.com, Daniel Engber points to the absence of homosexuality in the film as one of the "weirdly Christian" elements of *March of the Penguin*'s narrative, helping to explain its popularity among Christian conservatives in the United States. There is also Morgan Freeman, "the *magical Negro* who plays God in the [*Bruce* and *Evan*] *Almighty* movies" (Engber). Indeed, Freeman's screen persona is as virtual stand-in for the voice and eyes of God: his characters are wise and moral; they see much, often act as narrator, and aid in the protagonist's salvation (as in *Driving Miss Daisy*, *The Shawshank Redemption*, *Million Dollar Baby*). Freeman's narration in *Penguins* is paternalistic and folksy, grandfatherly really. We should not overlook the close association between blackness and spirituality in American popular culture, or Jhan Hochman's reminder that people of colour are one of the groups routinely

construed as close to nature. Freeman's presence as narrator seems calculated as benignly authoritative and helps to support as natural this humanist narrative of penguin lives. The total effect is almost one of God interpreting his own "book of nature" for us.

Freeman "begins his narration with a biblical tale of paradise lost," Engber notes ("Antarctica used to be a tropical place, densely forested and teeming with life"). So perhaps we get both of God's books here. Engber argues that "at times, the birds even come off as pro-lifers," citing the narrative's claim of a penguin couple's "single goal" of keeping their un-hatched chick alive. We get another example of a *pro-life* claim when we see a penguin killed by a leopard seal: "with the snap of its jaws the leopard seal actually takes two lives: that of the mother, and that of her chick who will never be fed."[31] We can also see subtle suggestions of the unfitness of young parents. After the egg is laid, the female transfers it to the male for incubation, but some new penguin parents, "young couples perhaps," fumble the egg resulting in the embryo's death. This is quite a claim to base on a "perhaps," especially problematic because it fits so well into our received notions about young parents.

The version of family that *March of the Penguins* appears to give us is a neo-conservative one: conservative in its emphasis on nuclear-family unit built around the monogamous heterosexual couple, and neo-conservative because the

[31] Making the seal responsible also for the death of the unhatched chick links the statement to arguments that the killing of pregnant women must be considered double homicide, a key political concern of pro-life groups.

penguin family appears to exist within a free-market natural economy. I have noted the film's naturalization of competition for scarce resources. It also seems that the Antarctic environment duplicates certain economic models. The conditions of (re)production in this natural economy are flattened out in a simplification akin to two-dimensional supply and demand models: all of the raw materials (fish from the ocean), labourers (penguins) and products (new penguins) seem identical and interchangeable, "perfect" economic inputs and products. There is a stability and rationality assumed in the film's explanations of penguin behaviour as there is in economic models; both may belie systems of enormous complexity and contradiction. The penguins appear as dutiful commuters, making the regular seventy-mile trek as part of the work of supporting their families, without nearly as much time to spend with their children as they would like. Predators point to penguin's role as food source in a larger system, "the food chain" perhaps. Penguins are both producers and product here, then, and can be a resource for others. Interestingly, it is not the availability of resources (fish) that seems to limit the size of the penguin economy, but the ability of the penguins to access the fish. This is similar to current paradoxes of our economic system: "limitless" resources of nature versus the necessity of our economies of scarcity where we cannot afford basic needs, pensions, unions, social services, living wages, if we are to remain "competitive" in a global economy.

While the penguins' environment presents them with challenges, we should not forget that it is this cold environment that provides the penguins with

the ecological niche in which it is possible for them to find food and reproduce. It is the central argument of Bataille's *Essay on General Economy* (1967) that a primary feature of economic systems, including natural economies, is not a scarcity of wealth/energy but an overabundance, and the great challenge is how to expend the excess energy; hence the ostensibly decadent wastefulness of many natural forms and systems. This model is nature not as well-oiled economic machine, but something more complicated and dangerous. Bataille's insights can help us to see significances to the emperor penguins' nesting behaviour beyond strictly the needs of reproduction. For one, it can help us see that, from a certain point of view, there is an extravagance and exuberance to their long march and elaborate nesting rituals. At the beginning of the march, we are told that "like most love stories, this one begins with an act of utter foolishness," then see a shot of a penguin jumping out of water onto solid ice. Because the emperor penguin makes his home in the sea, we may be "wondering what he's doing up on the ice." The penguins are presented as clumsy walkers, implied by some "comic" shots of slipping and falling, and by an emphasis on the idea that they are out of their element, having left "the comfort of [their] ocean home." And of course the film stresses the length and difficulty of the penguins' march: "it is a long, dangerous, and seemingly impossible journey." In essence, the more difficult the penguins' march is made to seem, the more extravagant and inefficient it appears. The theme of parental sacrifice is somewhat at odds with that of economic efficiency.

Practical reasons are given to us as the explanation for the penguins' choice of nesting grounds:

> Here they will mate in relative safety. They are now far from the water's edge where most predators lurk, and the large ice walls will offer some protection from the harshest winds, but the real reason they have chosen this place lies beneath their feet. The ice is thicker here. It will stay solid until summer, keeping their young from accidentally falling through.

Not wholly congruent with this rationale based on functionality, one could suggest that they nest here because they have done so for generations, because it is the place "where each and every one of them was born." Is this the most efficient way to do things? How could we ever say for sure? However, if animal sex is "not for breeding only," as Bagemihl contends adapting Bataille's thinking on economy to the field of evolutionary biology (168), if the penguins are not acting only "for the sake of the chick" then their behaviour must seem inefficient within rationalized models of animal behaviour that see reproduction and natural selection as the explanation for all traits and behaviours. The penguins may be "perverse," in a sense, in the same way as humans, in that their desires may not be perfectly united to reproduction. Since it is the requirements of reproduction that make their nesting seem efficient, indeed make it make sense, their potential "perversion" would also pervert any rationalized economic model their behaviour is made to seem to support.

We can see all sorts of significances in the emperor penguins' group huddles during winter if we choose not to see their behaviour as "*all* for the sake

of the chick." It is not hard, for example, to see the forging of direct communal bonds among adult penguins, to see them huddling together not only for efficiency's sake to conserve warmth. This would be to see bonds among the penguins in addition to those produced by the necessities of reproduction. What sorts of communal bonds might penguins be producing beyond the nuclear family? While huddling against the first winter storm, "it is almost as if they form another organism altogether. The huddled animals form a single moving mass, one designed for the sole purpose of sustaining warmth." The penguins do not always appear as individuals or individual families, but sometimes as a merged collective. In addition to conserving heat, such huddles may be part of the reason the penguins nest, not only to reproduce but to experience close bonds of kinship. We should question claims that such behaviour has a purely rational explanation that maximizes efficiency, that it is for the "sole purpose of sustaining warmth." Complex social interactions, bonds of kinship beyond what are strictly required for reproduction, are one aspect of the exuberance and wastefulness Bataille and Bagemihl see operating in natural economies.

We can also conceive of the penguins forging specifically homosocial bonds during nesting. The penguins march back and forth between fishing and nesting grounds in same-sex groups. The all male huddles during winter are certainly homosocial and it is possible to imagine all sorts of homoerotic possibilities with their bodies "welded together" (recall the examples of homosexuality among captive penguins). Far from reinforcing a nuclear family,

we could choose an alternate take on the matter that sees the necessities of reproduction as actually reinforcing same-sex bonds among the emperor penguins. What are penguin social relationships like away from the nesting grounds? Do they form homosocial groups at these times as well? Do they form partnerships, same-sex or otherwise, erotic or otherwise (say hunting pacts)? Do the penguin parents acknowledge their former chicks in any way when away from the nesting grounds? Their former mates? All such questions remain unanswered in the film because the focus is fixed on the family. The rigid nuclear family bonds seem permanent because we do not see their dissolution in the ocean. The penguin "makes his home in the sea," we are told, but if so then we almost never get to see the penguins at "home."

A queering or perverting of penguin sexuality should not end at the homosocial or homoerotic. There may be ways to queer penguin *hetero*sexuality as well, to start by insisting that penguin sexuality provides the birds with pleasure apart and beyond from reproduction. Let us look at the single sex scene in the movie, showing what is ostensibly a single couple copulating. We hear tender/reverent music and see some extreme close-ups of penguins touching their beaks and heads together; this "kissing" forms the greatest portion of the love-making scene. If it were not for the close up, the scene might look like an orgy: at the conclusion of the sex scene we get a wider shot showing groups of penguins copulating in close proximity to each other. So even though all the penguin pairs are mating close to one another, virtually all the screen time of the copulation

scene is devoted to what looks like a single pair making love in isolation. Perhaps this penguin "couple" is actually shots of different penguins spliced together to look like a single pair: this approach would yield more scenes of apparent devoted tenderness, which are definitely in the majority.

There are some aspects of the copulation scene which seem at odds with the reverent music and images of devotion. The penguins do it "doggy style" (like humans and many other animals), and we get a scene of a male holding his partner's throat in place with his beak. Perhaps we the audience need to see some scenes of implied violence to meet our expectations of animal sexuality (brutal, uncontrollable, violent drives). Images and music taken together, the presentation of the sex scene in *March of the Penguins* overwhelmingly defuses any assumptions about a *brutal* sexuality for this particular animal. The possibilities of both sexual pleasure and sexual violence are glossed over, de-emphasized, and diffused by the presentation of the sex scene. The scene and film *domesticate* (de Zengotita) the perversions of animal sexuality (natural perversions), especially selfish, unproductive, or possibly violent-destructive pleasures. In the film's presentation, however, other sorts of potential perversions appear. One is that sex and birth (laying and hatching) are represented in similar ways. Both get the same sorts of 'miracle of life', 'wonders of nature' music and we are encouraged to view both with the same kind of reverence. Reverence, by the way, both to what de Zengotita calls "The Cult of the Child" and to the cult of sentimentalized nature. But does not representing adult penguin sex and parent-chick

relationships in almost the same way have a perversely unintended effect of sexualizing the parent-chick relationship, despite the film's attempts at desexualization?

De Zengotita writes of an increasing "child-centeredness" to mediated (popular) culture since the 1960s:

> In TV shows and books—and in classrooms—the adult point of view is radically transformed.... Adults no longer wished to observe kids from above, no longer cared to instruct them by rote or preside, all knowing, over their independent quests. Adults wanted to see things through children's eyes, to share their point of view—as in the essays teachers began to ask children to write, essays in which they learned to describe not just what happened but how they felt about it. (54)

De Zengotita points to the children's books *Goodnight Moon* and the *Harry Potter* series as prime examples:

> The talent and attention of the adult is now focused on making a mirror for the child, on representing the child's world as the child sees it, on representing the child to herself. As this focus takes hold in the culture—and boy does it take hold—it leads to a more elaborate self-consciousness in children, and that self-consciousness comes earlier and earlier in their lives. (56)

De Zengotita here helps clearly identify why penguin sexuality is represented the way it is in *March of the Penguins*. A primary concern of the film is this attempt at "representing the child's world as the child sees it" to children. Also involved here is what de Zengotita calls the "flattery of representation," the way mass media productions are designed to address "you" in a way that makes you feel special and important. It is the parent-child relationship, more so than the pair-

bond, that defines penguin relationships in *Penguins*. Of course, the flattery involved in mass media representation is calculated in part to conceal a power differential among media producers and consumers, to conceal that access to the means of media production is not equal among all groups and classes. In representations produced for children the flattery conceals children's relative powerlessness vis-à-vis adults. Children/chicks are represented as vitally important, as the thing that defines family. We should not forget, however, that it is precisely because children are so important within a politics of Reproductive Futurism that adults are permitted to wield so much power over them.

On its release *March of the Penguins* was championed by U.S. conservative Christians in part because of its apparently pro-life stance. The film mostly glosses over the high rates of infanticide or chick abandonment Emperor penguins demonstrate, although cannot excise them completely. If a hungry penguin father's "mate doesn't arrive soon, he will be forced to abandon his child and return to the sea to feed himself. He will have no choice." What is interesting, though, is that the penguin mothers are shown returning from catching fish all at the same time: all of the penguin marches are *en masse* (or appear to be). The significance is that some of the penguin fathers abandon their chicks and some do not; the fathers are the variable, not the mothers, so it is seemingly not (just) a matter of the mothers arriving in time. Is it strictly speaking true to say that the fathers have "no choice" but abandonment? Of course, within a humanist conception, all animal behaviour is instinctive and so speaking of choice would be

redundant. If all of the mothers return at the same time, though, then any father who leaves his chick must in a sense "decide" to do so, must make a strategic calculation or some other sort of choice. (This is true even if the mothers do not arrive *en masse*; it is just that the "decision" is made clearer if some fathers leave and some stay within the same timeframe.) Even if a father is starving, there is a point where he must decide to go, and his own survival or self interest must be a consideration. Will his constitution (how hungry he is) be the only deciding factor, or might there be other considerations? Would not the principle of natural diversity suggest that some fathers will place a greater value on their survival and comfort than others and abandon their chicks more readily? Is it possible that fathers make a decision to abandon in part based on the chick itself, either "rationally" based on their sense of a chick's likelihood of survival (strength, size, symmetry, or health perhaps) or based on an "irrational" or unaccountable prejudice against it (the flip side to their unaccountable choice of partner, perhaps)?

If we were to make the sorts of "selfish gene" calculations as Richard Dawkins does, we would likely determine that there is an "optimal" time for chick abandonment, that the most successful reproducers do not abandon their chicks too readily, but neither do they stay so long as to put their own lives at significant risk. Rather than "no choice," then, the fathers *must* "choose" in a sense, must make an abandonment decision based on a trade-off between the chick's chances of survival and their own (and possibly also based on other less "rational"

factors?). And, of course, Dawkins argues that in most cases a being should be expected selfishly to value its own life over that of its offspring. In the case of emperor penguins, where the chances of a chick's survival into reproductive adulthood is fairly low, *and* where if the father dies the chick will inevitably also die, a parent should be expected to value its life *much* more highly than that of any one chick. In other words, if penguin nesting behaviour is in fact all for the sake of reproduction, penguin parents will tolerate only a tiny risk of their own death in order to save their chicks.

I have critiqued Dawkins's rationalized and reductive selfish gene hypothesis in my introduction. However, Dawkins's selfish genetics is useful to keep in mind here as a corrective (though not a replacement) to *Penguins*' sanitized and sentimental reproductive futurism. Dawkins's hypothesis also provides a model by which each parent (or group of parents) benefits by forcing the other parent(s) to do more parenting even at the risk of the chick's life. Within a certain limit, it would be to a parent's individual benefit to "push the envelop" and stay catching fish in the ocean, forcing their partner to assume a greater share of the parenting, increasing their own chances of survival at some risk to that of their offspring. Under certain conditions a parent individually benefits by abandoning its chick. The parent's life would not have to be in imminent danger (as it is in the film's narrative), within Dawkins' selfish gene model, for it to benefit from abandonment—all that is required to make it a good decision is that the "odds" are right. I need to qualify myself here and say (along

with Stengers and Bagemihl) that animal behaviour may very well be too complex to fit into either sentimental narratives of parenthood or genetic models of rationalized efficiency. Furthermore, if we follow George Bataille's theory of General Economy, that the primary challenge of natural economies is to dispense with an overabundance of wealth, then chick abandonment might occur for virtually no reason other than parental whim, indeed might be *required* in the penguin natural economy. On the other hand, if widespread waste is required it would also occur through penguin parents putting their lives too much at risk (within a rationalized, Dawkins model) for the benefit of their chick.

Emperor penguins will sometimes kidnap the chicks of others if their own has died. The "group does not allow" the one attempted kidnapping we see – an "unthinkable" act caused by a mother's "unbearable grief" at losing her chick. "Unbearable grief" provides us with a motive for the crime. But why is it unthinkable and why does the group disallow it? Following his discussion of adoption in monkeys, a "mistake" or "misfiring" of genetic programming, Dawkins discusses the "double mistake" of kidnapping:

> There is one example of a mistake which is so extreme that you may prefer to regard it not as a mistake at all, but as evidence against the selfish gene theory. This is the case of bereaved monkey mothers who have been seen to steal a baby from another female, and look after it. I see this as a double mistake, since the adopter not only wastes her own time; she also releases a rival female from the burden of child-rearing, and frees her to have another child more quickly. (109-110).

The way Dawkins sees it, it is a benefit – genetically speaking – to have one's offspring kidnapped. Kidnapping occurs in Dawkins's model because animals are "gene machines," beings programmed by their genes to behave in ways that benefit an individual being's genes in most situations, but which may not be advantageous in specific situations. In this case the programmed behaviour would be parental attachment. Dawkins is right that kidnapping presents a challenge, perhaps to the point of undermining his selfish gene theory. For one, he stresses at multiple points the idea that a very small increase or decrease in the odds of survival or reproduction will be greatly magnified over generations by the process of natural selection. As such, seeing adoption or kidnapping as "a mistake which happens too seldom for natural selection to have 'bothered' to change the rule by making maternal instincts more selective" seems at odds within the rationalized efficiency of the model, where selfish genes exploit every advantage to make their survival more likely.

In the case of emperor penguins, I am not certain, even given Dawkins's model, that kidnapping is such a poor strategy (genetically or otherwise), or similarly that allowing a kidnapping would be such a benefit to the survival of one's genes. Unlike monkeys, an emperor penguin kidnapper does not free a "rival female" to have another child more quickly, since they both must wait another year to lay another egg. Given a small enough genetic pool, Dawkins's model would suggest that kidnapping may not be a bad strategy if the penguins are very closely related, since the chick and kidnapper would share a close genetic

similarity. In the case of the penguins, I wonder if a stolen chick stands a relatively poorer chance of survival. We are told that penguin parents will only feed their own chicks, so what will happen with a kidnapped chick when its father returns from the ocean? Will the chick's father feed it, or the kidnapper's mate, or will it starve? A female whose chick has died may be less experienced or able to care for a chick; perhaps she gains parenting experience by kidnapping, but perhaps also the stolen chick's life is put at greater risk. This would fit within a selfish gene model, because it would increase the chance of the kidnapper's chicks surviving in later years. To move beyond such a model, though, I have been attempting to queer the penguins here by suggesting that their nesting behaviour might provide them with pleasures and benefits beyond the strictly reproductive. If we acknowledge the world as complex (Stengers), exuberant, wasteful, luxurious, (Bagemihl and Bataille), chaotic (Stengers and Bagemihl), perverse and indeed "queerer than we can suppose" (J.B.S. Haldane, 1928; qtd. in Bagemihl 9) it becomes increasingly difficult to see animal behaviour governed strictly by a mathematical-binary calculation such as the selfish gene theory's perpetual "advantageous to my genes: yes or no."

Dawkins' selfish gene theory relies heavily on Maynard Smith's concept of an *evolutionary stable strategy*: "An evolutionary stable strategy or ESS is defined as a strategy which, if most members of a population adopt it, cannot be bettered by an alternate strategy… the only strategy that persists will be one which, once evolved, cannot be bettered by any deviant individual" (74).

Dawkins uses the example of "hawk"-ish versus "dove"-ish behaviour in a single species, where some members will always fight and others always avoid fighting. By arbitrarily assigning point values to the costs and benefits of fighting, not fighting, winning a fight, being injured, and wasting time, Dawkins is able to produce hypothetical "ESS ratios" in a species, such as 7 : 4 (hawks : doves). But I cannot help but think that such a static fixing of behaviour misses something of the complexity of actual animals – there is something similar to *March of the Penguin*'s simplification of penguin behaviour going on.

Focussing on thermodynamics, Stengers and Ilya Progogine ("The Reenchantment of the World") challenge the scientific ideal of equilibrium or stable states in "systems artificially cut off from the world":

> The thermodynamics of irreversible processes discovered that the fluxes that pass through certain physiochemical systems and keep them away from equilibrium can nourish phenomena of spontaneous self-organization, ruptures of symmetry, evolutions toward a growing complexity and diversity. There, where the general laws of thermodynamics stop, the constructive role of irreversibility can appear; it is the domain where collective behaviours are born and die, or transform themselves into a singular history that weaves together the uncertainty of fluctuations and the necessity of laws. (38)

With regards to Dawkins's model, then, we may not be able to speak of an *evolutionary stable strategy* because such a stable system may not ever clearly exist in the complexity of the natural world. Random, inexplicable, complex, paradoxical and even highly wasteful behaviours exist in animals in part because they are rewarded in a natural world that is itself chaotic and complex. Dawkins

considers living beings as programmed "gene machines," and I cannot help sensing a certain amount of stasis implied in the use of machine, especially in conjunction with the focus on stable evolutionary strategies.[32] To quote Grosz, evolution does not involve the production of stable or fixed forms but "oscillations of difference"; it is "the elaboration of difference" (24). Is Dawkins's selfish gene theory flexible enough to account for the flexibility and instability of actual animal behaviour? Can it account for the myriad ways animals and humans alike continually "push the limits" of the "machine"?

The notion of evolutionary stable ratios of behaviour does not quite capture all of the potential *queerness* of animal behaviour. If a species *were* to find itself divided neatly into "hawks" and "doves" (or any other sort of competing behaviour), surely any stable ratio that developed could be quickly undermined by the development of any number of more elaborate, complex or innovative behaviours or traits or by a singular flux in environmental circumstances. If we can speak of *gene programming* or of beings as having certain sorts of "programmed" scripts perhaps then we can speak along with Judith Butler of a certain inevitable queerness in the reiteration of the script. Whether we see a genetic reiteration, a behavioural or a cultural one (if we can even distinguish among these), there is a variety and complexity in the reiteration that can never fully be captured in the words and numbers of discourse. This is natural perversity.

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[32] It echoes strongly Descartes' notion of animals as essentially unthinking "bête-machines."

**Last Words**

"At last the family is together" refers to one of the brief times a mother, father and hatched chick are in each other's presence; it refers to a narrow conception of the nuclear family. Surely, though, "the family" is together in other sorts of ways, if we take a more expansive notion of *family*. All of the emperor penguins in *March of the Penguins* have returned to the place they were born, and there seem to be only a few hundred of them, in which case many or most are closely related. They are all cousins, siblings, parents and children even before the arrival of the chick or the reunion of the nuclear family unit. If the film were to put it this way, their nesting might seem a bit incestuous to the human audience (more perversions), and the dynamics of the smaller nuclear family unit much less dramatic. I have attempted here to pervert the penguin sexuality and queer the penguin family depicted on-screen. This has been in order to denaturalize the political myth of reproductive futurism the film reiterates.

In *No Future*, Lee Edleman constructs queerness as a negativity opposed to reproduction and childhood, as a negation of the future: "At the heart of my polemetical engagement with the cultural text of politics and the politics of cultural texts lies a simple provocation: that *queerness* names the side of those '*not* fighting for the children,'" which is to say that queerness, "figures… the place of the social order's death drive" (3). But in resisting the logic of

reproductive futurism must we embrace queerness purely as its antithesis? May we not keep some notion of queerness as oddness, not only antithesis? There is a contradiction in the line of Edelman's argument, in which he draws attention to the harmful repercussions a politics of reproductive futurism can have to actual children – queer youth such as Matthew Sheppard, for example – while contending that queerness names the side "not fighting for the children."

I think we need to be wary of Edleman's rather dogmatic negativity, and certainly to situate it in relation to other politically effective models of queerness. Steven Bruhm and Natasha Hurley have posited childhood as a potential site of queerness. In their introduction to the collection *Curiouser: On the Queerness of Children*, Bruhm and Hurley qualify Edelman's opposition of queerness and childhood:

> The very effort to flatten the narrative of the child into a story of innocence has some queer effects. Childhood itself is afforded a modicum of queerness when the people worry more about how the child turns out than about how the child exists as a child. Alice [*in Wonderland*], for instance, can be as queer as she likes in her dreams and in her childhood sorrows and joys, as long as she can be imagined telling her stories to other children around her when she is an adult. The utopian projection of the child into the future actually opens up a space for childhood queerness—creating space for the figure of the child to be queer as long as the queerness can be rationalized as a series of mistakes or misplaced desires. In this sense the figure of the child is not the anti-queer at all. Its queerness inheres instead in innocence run amok. (xiv)

This chapter has attempted to demonstrate some of the "queer effects" narrative flattening and utopian projection into the future has produced in *March of the*

*Penguins*. De Zengotita reminds us along with Bruhm and Hurley that children can see the world in queer ways, through unexpected or naïve insight.

Stengers and Bagemihl insist we need sciences that acknowledge the complexity, paradox and exuberance – basically the essential queerness and perversion – of the natural world. In Bataille's model of *general economy*, both natural and human economies become wasteful, luxurious, decadent: queer and perverse within a logic of rationalized economic efficiency, but with the effect of denaturalizing, perverting that logic. David Suzuki insists that we need to see the global (human) economy as a perversion for the way it ignores all sorts of crucial values to humans and other beings and systems. Perhaps I need to make explicit here how what I have been saying about *March of the Penguins* functions as a posthuman reading. Insisting on the complexity, exuberance, paradox of animal behaviour rather than its rational consistency is to insist that animals do not always behave in the ways our reductive discourses about them would dictate. It is, in effect, to celebrate the potential perversion of natural beings.

## CHAPTER 3. A CYBORG MIX: BOWIE'S POST-HUMAN PERFORMANCE

This chapter argues that the performances of David Bowie introduce significant post-human stances and attitudes into contemporary popular music. Bowie's career in the 1970s constitutes a radical exploration and expansion of the limits of celebrity identity. Rather than preaching in what we might call the "church of man" ("Moonage Daydream," 1972), Bowie rejected the naturalistic humanism—roughly what Philip Auslander calls the "ideology of authenticity"—performed by virtually all celebrities up to that point in favour of identification with the artificial, the alien, the mutant, the cyborg. Bowie's shifting personae anticipate and approximate what Haraway calls a "cyborg subject position," I argue here, involving an "implosion of the technical, textual, organic, mythic, and political": "a cyborg subject position results from and leads to interruption, diffraction, reinvention" (1999, 321 & 362). The next few paragraphs seek to unpack what a *cyborg subject position* can entail, especially as it relates to Bowie's music and celebrity. Following sections constitute a closer critical reading of posthuman elements (or *compounds* perhaps) in specific Bowie songs, albums, images, videos and in his career trajectory as a whole.

A cyborg is already a mix of supposedly opposite or incompatible things, organism machine, human animal, man woman, myth and fact. So "cyborg mix" is an excessive verbal construction… except that the various significances of *mix* can remind us that we can be cyborgs in many ways simultaneously, with varying

degrees of commitment, on multiple levels, including the literal, figurative, mythic, imaginative, and performative. One can quite literally be a cyborg because of corrective lenses, prescription orthotics, a pace maker, artificial joints, or numerous other technologies. I am perhaps more figuratively—though perhaps not less significantly—a cyborg in the way I project my consciousness onto the digital image of a sheet of paper on my computer screen or through pages of cyberspace (though there is a literal element here as well). Transgenderism/trans-sexuality can involve various degrees of commitment, different local-individual iterations or manifestations, various levels of engagement with technology, and literal as well as important symbolic aspects. With implants, hormones, surgery one could quite literally be considered a cyborg, but it is the performative/symbolic elements of a trans-gender performance which are especially *meaningful* in a cultural context. One can be a cyborg through identification and performance, not only literal technological manipulation.

Bowie's performances are cyborg mixes. They are mixes of species, involving identification with and performance of the alien(ated), the mutant, and the machine or computer. The performance personae Bowie adopts are provocative mixes of genders and sexualities. At times his poses are deliberately androgynous, such as on the cover of *Hunky Dory* (1971) where he replicates a glamour shot of Marlene Dietrich. At other times he performs nearly full-out drag, such as on the cover of *The Man Who Sold the World* (1970), where he

reclines on a couch looking swishy in a satin dress[33] or as the singer of "Queen Bitch" who both wants and wants to be like the drag queen in question ("O God, I could do better than that!"). His singing can be histrionic or ironically hyper-masculine, often within the same song.[34] Bowie came out as "gay" in a *Melody Maker* interview in 1972, explaining that he meant "bisexual";[35] at the same time he was married with child, and often appeared to "flaunt" his simultaneous "heterosexuality" and effeminacy/androgyny in photo ops from the period. He can often appear asexual, most notably as Thomas Newton in the film *The Man who Fell to Earth* (1976), an alien whose genitals are revealed to be prosthetic; Bowie used stills from the film for the covers of both his *Station to Station* (1976) and *Low* (1977) albums. The question of sexuality is a constant theme in Bowie's music, although the narrative of his sexuality has never been consistent. His image is thus one of a provocative, polymorphous, excessive, contradictory sexuality with unclear and unfixed boundaries.

The above are some of the ways Bowie's music and celebrity persona demonstrate aspects of Haraway's "ironic political myth" of the cyborg, some of the ways he may be said to be "resolutely committed to partiality, irony, intimacy, and perversity" ("Cyborg Manifesto": 149, 151). "Resolutely committed to partiality" is an irony and paradox, of course. In Haraway's ironic cyborg myth,

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[33] To paraphrase a line from "Queen Bitch"

[34] "Suffragette City" (1972), "Station to Station" (1976) and "Scream Like a Baby" (1980), for example.

[35] Christopher Sandford. *Bowie: Loving The* Alien London: Warner Books, 1996. p. 354.

"irony is about contradictions that do not resolve into larger wholes, even dialectally, about the tension of holding incompatible things together because both or all are necessary and true" (149). This is a reason a *cyborg subject position* involves continual "interruption, diffraction, reinvention"; unresolved and incompatible contradictions suggest a cyborg subject is constantly unsettled. I analyze Bowie's attempts at continual reinvention in my analysis of his signature song "Changes" below, an early song he spends much of his career attempting to demonstrate and embody.

There is another way in which Bowie's celebrity demonstrates an important kind of posthumanism, in that it suggests the importance of performing social roles over their essential reality to human nature; it hints that playing or performing roles may be crucially important to being them. To paraphrase the lyrics of "DJ" (1979), we are what we play. With *Ziggy Stardust* (1972) Bowie created an alien alter-ego for himself and narrated his own stardom before the fact. Bowie and manager Tony DeFries believed that if you acted like a star, everyone would believe you were one, and the fiction would become true (Buckley). Recall that Haraway's *cyborg subject position* involves an implosion of the textual and the technical; a cyborg is "a creature of social reality as well as a creature of fiction," where reality and fiction cannot ultimately be disentangled (1991: 149). Michel Foucault emphasises the power of discourse, or influential language, to make itself true. There is a way that science fiction becomes scientific fact, by prompting certain avenues of inquiry, or providing the

terminology and metaphors by which we understand ourselves in the world. Indeed, the scientific hypothesis starts out as a fiction until it is "proven" (and even so its enduring factuality is not assured). Ziggy Stardust demonstrated that one could become a star by playing the part well enough for others to believe in the performance. By passing as a star Bowie became one.[36] Once enough people believe you are a star, you are one; celebrity is all a matter of perception. Bowie's celebrity performances, however, help to reveal this action at play in many other sorts of performances, of gender, of sexuality, of the human itself.

I would like here to add "performance" to Haraway's list of categories that can implode together in a *cyborg subject position*, or rather to include it as an elaboration of the textual. I am employing Judith Butler's concept of *performativity* which I see as a profoundly posthuman concept because it insists on the importance of performing social roles over essentially "being" them. Butler's primary analysis is of sex and gender performances, but implied in her analysis of these essentialized categories is that other categories central to construction of the human are in some sense performed also, that being a human "being" may be in large part a performance of the human. In Butler's conception, performing and being are effectively the same thing. In many ways Butler's concept of *performativity* is an elaboration of Foucault's *discursivity*, which is why I link performance to the textual here. Powerful discourses (medical,

[36] Similarly, Bowie's first major breakthrough in the U.S. was the song "Fame" (1975), a jaded look at being famous released before he had achieved widespread commercial success.

scientific, judicial) have a way of making themselves true, and performance is a part of this truth-making. Through performance the body becomes textual, and social roles such as gender need to be bodily inscribed and reiterated in order to be reinforced. Of course, vocal utterances (speech, song) and writing itself are themselves other sorts of performances. Bowie's performances are ironic reiterations of forms of gender, of sexuality, of the human and its antitheses – they are akin to the parodic drag and queer performance of gender Butler considers in *Gender Trouble* (1990). "*In imitating gender*," Butler writes, "*drag implicitly reveals the imitative structure of gender itself – as well as its contingency*" (137). As I have suggested, and as I argue here, Bowie's parodies of gender and other essentialized categories work to reveal the imitative structure of the human itself.

In *How We Became Posthuman*, N. Catherine Hayles warns about the fantasy of disembodied virtuality, the notion, for example, that a human consciousness might be "copied" and "uploaded" into a computer yet still maintain its integrity of human spirit, its essential humanity. Such a fantasy is an extension of Cartesian consciousness, of a mind-body dualism that sees the two as separate matters:

> Indeed, one could argue that the erasure of embodiment is a feature common to *both* the liberal humanist subject and the cybernetic posthuman. Identified with the rational mind, the liberal subject *possessed* a body but was not usually represented as *being* a body. Only because the body is not identified with the self is it possible to claim for the liberal subject its notorious universality, a claim that depends on erasing markers of bodily difference, including sex, race, and ethnicity. (4-5)

In contrast, Hayles argues for the need to work towards imagining forms of "embodied virtuality." Haraway similarly calls for "situated knowledges," which is to say a recognition that knowledge and subjectivity are enabled by embodiment and inseparable from it, and so situated, yet nevertheless attempting to imagine responsibly the subjectivity and knowledge enabled by the other's situated-ness. Bart Simon warns along with Hayles of the "popular posthumanist desire for disembodied agency," where "popular posthumanism" functions as "liberal humanist values masquerading as posthuman critique" and is contrasted with a "critical posthumanism" (4-5).

I need to take such warnings seriously here, for while much of this chapter may read as a celebration of Bowie's musical and conceptual achievements, for all the posthuman insights brought out in Bowie's brand of "art pop" (Buckley) there are ways his work reinscribes a liberal humanist subject position. This chapter needs seriously to consider the extent to which Bowie's androgyny and drag performances function as *appropriations* of femininity which may reinscribe masculinist values, or similarly if his "plastic soul" period works as an appropriation of Blackness into a white, middle-class aesthetic and politics. Are Bowie's performances in some sense erasures of embodiment that allow a white, middle-class, "heterosexual" performer to claim an irresponsible and "notorious universality" unavailable to women, people of colour, gay and transgendered people, or other groups inextricably associated with their bodies? Can we see Bowie's performances as *embodied virtualities*, as a responsible imagining,

situating, and complicating of one's own subject position in relation to the other?

My critical reading of Bowie's *oeuvre* (songs, images, concert, television and video appearances) is organized in an imperfect hybrid of chronology and theme. It runs roughly chronologically and is arranged into thematic sections, but cannot stick absolutely to either arrangement. It begins by looking at an early hit, "Space Oddity" from 1969, and identifying key thematic, aesthetic and political-philosophical elements which Bowie would later elaborate into a popular posthumanism. Thematically it is focussed on five kinds of performativity we can see at play in Bowie's work, all of which relate to each other and to the posthuman. Bowie's post-modern performance of celebrity, his becoming a star by acting like one, owes much to Andy Warhol's ideas of constructing celebrity and to his pop art. Bowie visited Warhol's studio, The Factory, in New York in 1971 (Sandford 81). Warhol's own fabricated celebrity persona and those of his coterie inspired Bowie to attempt to construct his own celebrity back in London. My discussion of Bowie's career following "Space Oddity" up to his second hit "Starman" concentrates on these attempts to fabricate a successful celebrity persona. The vehicle of Bowie's celebrity turned out to be the persona of Ziggy Stardust, a sexually provocative, gender-bending alien guitar hero. My discussion of the Ziggy Stardust years (1972 to 1974) looks primarily at Bowie/Ziggy's provocative performances of gender and sexuality. As I suggested above, Ziggy's drag imitation points (in Butler's words) to the imitative and contingent structure of gender itself (137). Although Ziggy is a performance of femininity, we can

read him as a parody of some of the performance conventions of masculinity in rock music, themselves exaggerations of "everyday" gender performances.

Bowie's declarations and performances of sexuality during this period point to the importance of performativity in establishing sexual identity. By declaring himself "gay" and performing homosexuality/bisexuality on record, stage and screen Bowie effectively became gay publically, despite "being" heterosexual in other contexts such as in his domestic life. While the conventional liberal message on gay sexuality has often been that it is alright to *be* gay, Bowie's implicit message is more subversive: that it is alright to look and act gay regardless of what one's sexuality actually "is"; indeed, that sexuality is a matter of declaration and performance over essential "being." I briefly consider Bowie's performance of race, what Dick Hebdige calls the "albino camp" of his glam rock years, his brief "plastic soul" period of 1975 in which he attempted a sort of bi-racial performance (as a complement to Ziggy's bisexuality and an attempt to appeal to an American audience) before he shifted to the Teutonic Thin White Duke persona of 1976. All of these performances involve a performance of the non-human, of the alien, the animal, the cyborg or the mutant at some level. The argument of Bowie's work and career, its meta-narrative, is to suggest that performativity applies even to the extent of *being* human. My conclusion summarizes the most literally cybernetic aspects of Bowie's music and considers their repercussions in envisioning equitable and desirable *cyborg subject positions*.

**1969: A Space Oddity**

In the late 1960s aspiring musician David Robert Jones changed his stage name to "Bowie" to avoid confusion with another musician, Davy Jones of The Monkeys. According to pop music mythology, Bowie patterned his name after Mick Jagger. Since a jagger is a knife in English slang, Jones chose for himself the name of an American style and brand of knife. Named after Texan adventurer Jim Bowie, a Bowie knife is sharpened at both sides. According to David Buckley,

> In the 70s, Bowie proclaimed that the knife signalled a desire to cut through lies to reveal hidden truths (a highly ironic comment given Bowie's capacity for deceit), while in a recent Radio 1 interview he said that he liked the connotations of a blade being sharpened at both sides, a signifier for all sorts of ambiguities. So the name 'Bowie' embodied the quintessence of the man himself: deception, ambivalence, pluralism, with no fixed centre or core belief. (29)

There is perhaps something highly ironic itself in writing of "no fixed centre" as "the quintessence of the man." Buckley does certainly give us a sense of Bowie's shifty/shifting 'nature' here as well as the significance of the name to the celebrity persona he was attempting to present.

At the time of the initial release of Bowie's first hit "Space Oddity" in 1969, however, the name may have seemed to pop music audiences an obvious variation on Dave Bowman, just as the song's title and narrative are variations on Kubrick's *Space Odyssey*. "David Bowie," then, starts out appearing as a

temporary, disposable identity tailored to a queer space song that must have seemed destined for novelty status, likely to become a quaint artefact of the past because of its dependence on a current pop culture reference.

> *"This is Ground Control to Major Tom*
> *You've really made the grade*
> *And the papers want to know whose shirts you wear*
> *Now it's time to leave the capsule if you dare."*
>
> *"This is Major Tom to Ground Control,*
> *I'm stepping through the door*
> *And I'm floating in a most peculiar way*
> *And the stars look very different today*
>
> *For here am I sitting in a tin can, far above the world.*
> *Planet Earth is blue, and there's nothing I can do.*
>
> *Though I'm past one hundred thousand miles,*
> *I'm feeling very still.*
> *And I think my spaceship knows which way to go.*
> *Tell my wife I love her very much."*
> *--"She knows."*
>
> -"Space Oddity," 1969

"Space Oddity" tells the story of an astronaut, Major Tom, who loses himself in the beauty and infinitude of space. Unconcerned with having "made the grade" back home, Major Tom abandons his mission, his wife and his corporate sponsorships to float off into the distance, calm because his "spaceship knows which way to go." One remarkable aspect of the song is that it is sung as a duet, with a "call and response" structure, but with Bowie singing both the parts of Major Tom in space and Ground Control back on earth. The call and response eventually breaks down as Ground Control loses contact with Major Tom and

Major Tom loses himself beyond the moon, much as Dave Bowman loses himself beyond Jupiter.

"Space Oddity" picks up and runs with the cyber- and homo-erotics of the encapsulated spaceman Kubrick depicts in *2001*. The song introduces many of the thematic elements Bowie would return to throughout the 1970s: science fiction, divided identity, dramatic role playing and the adoption of various personae, the erotics of intimate relationships with technology, a homoerotic sensibility that subverts homosocial spaces like the military/space program. Generically the song is hard to pin down. It is perhaps a folk song in its basic structure, or folk rock, built upon strumming acoustic guitar chords, and released when Bowie was trying to fashion himself as a folkie in the style of Dylan or Donovan.[37] The vocals and dramatic musical flourishes may owe more to film soundtracks, especially science fiction films, than anything else. The string and sax flourishes sound very like a sci-fi film soundtrack; they move smoothly in what is mostly an ascent, sometimes hovering in a drone, perhaps to give a floating effect. There are some discordant elements to the music, especially the ascending morse-code-like beeps played on electric guitar near the song's end to signify radio signals being sent into space. The vocals are dramatically delivered and incorporate some of the language of space travel as depicted in sci-fi film. They tell a plot which roughly follows that of Kubrick's in *2001*. Like much of

[37] "Space Oddity" was released on the *Man of Words/Man of Music* album (1969), reissued and (wisely) renamed as *Space Oddity* in 1972 and ever since.

Bowie's work, "Space Oddity" is a multi-genre mix where the genres also intersect among media.

"Space Oddity" tells the story of a man becoming one with the universe, which is to say it tells a sort of 1960s folkie-hippie cliché, but it tells it in a rather perverse way. For one, it seems to involve an exhilarating but unsettling loss of identity, individuality and agency on the part of Major Tom. His is not an organic or holistic merging with nature, but an engagement involving advanced, space-age technologies. The notion of divided identity is introduced almost immediately in the first lines of the vocals. "Ground Control" is in fact sung in two voices, to signal that this singular name implies an organization of multiple individuals. On the first line Bowie sings "Ground Control to Major Tom" with one vocal track, then repeats the line adding a second vocal track an octave higher. Ground Control's voices start to diverge as the song progresses, the original voice continuing to address Major Tom, and the second beginning a countdown to blastoff.

*Ground control to Major Tom...*
*("Ten... nine... eight...")*
*Commencing countdown, engines on*
*("Seven... six five...")*

Not only, does Bowie "divide" himself by singing both parts of this sci-fi duet, both of the characters he adopts are themselves multiple or divided identities. Major Tom is a member of the space agency of which Ground Control is also a component. Blasting off into space, he becomes separated and eventually

alienated from that organization. I suppose we *could* read the song's narrative as representing a liberation of the individual from an organizational leviathan and from militaristic conformity, read it as arguing for a staunch individualism. Major Tom does not exactly become a liberated individual in space, however. Instead, enabled by his intimate relationship with advanced technologies, he gets caught up in the stars. They change his perception and he starts to mimic them, becoming like them: "floating," "still," observing the planets with "nothing" to do. He also cedes agency to his spaceship, which "knows which way to go" (presumably the way it is already going, farther out into space). This intimate relation with technology means that this is not a "natural" merging with the universe, but a technological, a cybernetic one. By the end of the song the boundaries between Major Tom's identity, the stars and his "tin can" have become fairly blurred—his subject position, then, is that of a cyborg.

We *should* read Major Tom's story as a *sort* of liberation. "Space Oddity" shows Major Tom freed from earth-bound rules and limitations, but submitting to other logics, engagements, and ways of seeing. We should keep in mind that cybernetic "liberations" involve mergings, dependencies, other sorts of limitations. Haraway's "Cyborg Manifesto" explores the potential of cybernetic relationships to create both new social forms which may represent a loosening of certain boundaries and binaries and also new forms of social control. Posthumanism is certainly not a philosophy of absolute individual liberation and self-sovereignty. (Perhaps this is why there is ambiguity in the song about

whether Major Tom is choosing to drift off into space or if there is some mechanical malfunction, as Ground Control reads the situation). Interesting, this militaristic situation requires an explicit identification of individual speakers – "This is Major Tom to Ground Control," etc – yet it is this very individualistic identity which becomes complicated by the song.

The cyber-erotics of Major Tom's situation are inter-textually related to *2001*, to the homoerotic relationship between Dave and HAL. Major Tom quickly moves from thinking about his apparently sentient spaceship to saying goodbye to his wife, further suggesting his erotic connection to the ship. His "tell my wife I love her very much" apparently goes without saying: Ground Control replies "she knows" without missing a beat, almost too quickly as if it does not quite understand that he is saying goodbye forever, or as if such words are to be expected. Tom is "married" to the universe and his spaceship now, no longer to his wife and job. His goodbye must be relayed, through a homoerotic and cybernetic relay (the effect of the male-male duet is already suggestively homoerotic). In the next line Ground Control loses touch with Tom:

> *Ground Control to Major Tom*
> *Your circuit's dead, there's something wrong.*
> *Can you hear me Major Tom?*
> *Can you hear me Major Tom?*

We might wonder what his wife thinks of this goodbye; obviously his "very much" is not quite enough, or he would come back to earth. And so Bowie's "Space Oddity" veers very close to a middle-class (and rock 'n' roll)

male fantasy of liberation from social and domestic obligations, specifically job and wife. We should perhaps see "Space Oddity" as suggestively cybernetic and post-human, as pointing towards non-humanist forms of subjectivity and sexuality, though not exactly presenting a fully thought out, viable or desirable vision. As I argue, however, it is the trajectory of Bowie's career as a whole and development of his star persona that make a strongly post-human argument beyond the logic of specific moments.

**"The Man Who Sold The World": Playing Celebrity**

Major Tom became the prototype for a series of androgynous and sexually ambiguous characters and personae who identify themselves with aliens, machines and animals: Ziggy Stardust, Alladin Sane, The Jean Genie, Thomas Newton, The Thin White Duke. After *Man of Words/Man of Music* (1969; now known as *Space Oddity*) Bowie released *The Man Who Sold The World* in 1970. Note the emphasis on "man" in the title of both albums. The latter album presents the "man" with considerable irony, in that Bowie appears in drag, reclining on a couch in a feminine pose, wearing long flowing hair and a long flowing dress and holding a playing card—the Queen of Diamonds—limply between his fingers. The epic, prog-rock, "Width of a Circle," is Bowie's most obviously homoerotic moment up to this point, imagining an erotic encounter with a demonic figure. "Saviour Machine" tells of a future (American) society that cedes all decision

making to a hyper-logical, fascistic computer. "The Supermen" is jumbled Nietzschean mythology.

The title track is the closest thing Bowie comes to manifesto or mission statement on *The Man Who Sold The World* album. The Seattle grunge group Nirvana recorded a live "unplugged" version of the song for MTV shortly before singer Kurt Cobain's suicide in 1994. Like much of Cobain's work, Nirvana's "Man Who Sold The World" is full of self-loathing. It is a scathing confession/fear that the band had fooled the world to undeservedly become the wildly successful face of grunge rock. Released as a single after Cobain's death, the song serves as coda of sorts to Nirvana's career and a reiteration of Cobain's commitment to a notion and impossible standard of musical authenticity. In many ways the significance of Bowie's original version is the opposite of Nirvana's, especially read in the context of what would follow.

Bowie's "Man Who Sold The World" anticipates the post-modern moves that he would more explicitly make on his next album *Hunky Dory* (1971), moves inspired by post-modern visual arts and especially Andy Warhol's "pop art." Instead of a lament for pop music tainted by commercial concerns, the singer of Bowie's version seems resigned to that fact as a condition of music production. If anything, the song is a sly admission that while the singer would not at all mind producing works of musical genius and originality, he will take fame and riches as the consolation prize. Indeed, the song is close to an admission/realization that fame, commercial success and genius may be ultimately impossible to distinguish

from each other.

*I searched for form and land, for years and years I roamed*
*I gazed a gazely stare at all the millions here*
*We must have died alone, a long long time ago*

*Who knows? Not me*
*We never lost control*
*You're face to face*
*With the Man Who Sold The World*

-"The Man Who Sold The World"

The tone of the song is not quite celebratory: sly, slightly ominous, probably ambivalent. In its attention to the question of celebrity it is thematically close to his next album *Hunky Dory*, however, which does indeed serve as an explicit celebration of postmodernism, Andy Warhol, and the idea of pop music as a contemporary commercial art-form.

Bowie's *Hunky Dory* (1971) borrows several ideas from Andy Warhol's post-modern approach to art production, as well as devotes a song to him. Here Bowie addresses the problem or difficulty of originality, the idea that in a post-modern moment wholly new and original forms are impossible to produce, and so the "new" can only be conceived as a reconfiguration of past forms. Warhol's pop art often involved duplication of popular commercial and iconic images – Elvis, Marilyn Monroe, Campbell's Soup Cans, newspaper images – and their mechanical serial reproduction through silkscreening (with variations such as colour). Warhol not only made art out of mass produced products, then, but mass produced the art works themselves. Implicit in Warhol's pop art is the idea of a

beauty or aesthetics of repetition, imitation and duplication, as well as a rejection of the artistic and commercial as necessarily separate spheres. Warhol offers popular objects as *objets d'art*, which conceptually opens the possibility of popular music being presented as art.[38]

Such ideas suited Bowie, because of his commercial aspirations and artistic pretensions, but also because of his lack of a fully distinctive singing or song-writing voice. Bowie's singing voice at the time was, according to Buckley, "a quite brilliant mimic" of singer Anthony Newley's, which many of his colleagues considered a serious handicap (Buckley 30, 39). The imitation of Newley's voice is indicative of Bowie's non-rock influences, including traditions of (particularly British) music hall, light entertainment, cabaret and musical theatre (Buckley 30). As a friend of mine put it in explaining his dislike of Bowie, "he's too Broadway." If *The Man Who Sold The World* downplayed the connection to these traditions in favour of a (not wholly successful) Cream and Led Zeppelin-style hard rock, *Hunky Dory* plays them up. Bowie's song writing, too, can often be seen as derivative, but Bowie actually draws attention to this "handicap" and exploits it to his advantage with *Hunky Dory*. I think it is safe to say that in these non-rock influences of Bowie's, a concern with originality, with attempting to produce original works of artistic "genius," of having an original or distinctive "sound" or voice, was not nearly as great as it was in much of rock music at the time. Indeed, we can see much rock music of the late 1960s and

[38] A possibility we can see realized before Bowie in the music and album cover art of The Beatles.

early 1970s as very much imagining itself in the modernist mode of music production, as very much seeking to produce original expressions of a distinctive voice. We can see Bowie and a few other musicians of the early 70s (Lou Reed, Roxy Music, Brian Eno) as among the first to introduce a distinctively post-modern sensibility into popular music.

There is another idea Bowie borrows from Andy Warhol, the possibility of manufacturing or fabricating fame but also of its limited lifespan. Warhol, "constructed fame and made 'talentless' people into movie stars" (Buckley 107); he mused that in the future, "everyone" would be famous for fifteen minutes. His musings suggest the arbitrariness of fame, that "anyone" can become famous for a time but that fame (like a can of soup) has an eventual expiry date. The notion of the constructed-ness of fame is more fully deployed on *Ziggy Stardust* (1972) and in some of Bowie's later music and image changes. It exists on *Hunky Dory* in a nascent form. With *Ziggy Stardust* Bowie narrates his own stardom into existence; he acted like a star and people believed the act. Later shifts in his sound, image and persona seem a strategy to thwart Warhol's figurative "fifteen minutes" of fame limitation by becoming another star (with another musical style, another name, another look, another personality).

As I have mentioned, while there are many points in his career in which one can see decidedly post-human elements at play in the performance, it is the trajectory or meta-narrative of the career as a whole which makes a strongly post-human argument. The most forceful point Bowie's career trajectory makes is to

demonstrate the argument made in *Hunky Dory*'s opening song "Changes," that a person's identity need not be considered a solid, permanent, or essential foundation, but can be imagined and experienced as something fluid or shifting:

> *Every time I thought I'd got it made*
> *It seemed the taste was not so sweet*
> *So I turned myself to face me*
> *But I've never caught a glimpse*
> *Of how the others must see the faker*
> *I'm much too fast to take that test*
>
> *Ch-ch-ch-ch-changes*
> *Don't want to be a richer man*
> *Just gonna have to be a different man*
>
> -"Changes"

The song is a manifesto of sorts, or became one, for Bowie. Three greatest hits compilations have been named after the song, indicating its importance to the narrative of his career.[39] The title of the first, *Changesonebowie* (1976), is a triple entendre that gives a clue to how the song works with regards to Bowie's oeuvre and persona. The "one" refers to the fact that this is the first Bowie compilation, but we can also read it as a slogan of sorts, "Bowie changes one," that is that the music on the record changes a person, that it changes the listener. There is also the idea that the music "changes one (David) Bowie," that is that the singer has been changed by his song as the listener will be. *Changestwobowie* (1981)

[39] *Changesonebowie* (1976), *Changestwobowie* (1981), and *Changesbowie* (1990).

continues the punning with "changes to Bowie" and "changes two Bowie(s)" (suggesting that there's more than one Bowie).

"Changes" utilizes ideas from postmodern visual arts and Andy Warhol's pop art in the following way: if in a late modern period, it is now impossible to produce original works of art, or to be an original personality for that matter, if artists and individuals are in a sense both "fakers," "Changes" announces that Bowie's "originality" will be in embracing the fakery and changing himself and his art to suit current pop music conditions. The most remarkable thing about the lyrics/vocal delivery of the song is the stuttering "Ch-ch-ch-ch-changes" in the chorus, a key lyrical hook for the song. The almost mechanical stuttering suggests or implies something about identity, but what? It seems to catch the singer in a moment of uncertainty, hesitating at the brink of a transformation where the end results are unclear. The stutter implies a nervous anticipation of change, that it contains the potential for risks as well as pleasures (will the taste of making it be sweet enough this time?) and so is something to be anticipated with both excitement and trepidation. The stutter is an almost mechanical clicking reminiscent of the clicking of a roulette wheel, perhaps suggesting some randomized action at play. If we push this mechanistic notion further, we can see a commentary on the industrial or mass-produced (popular) aspects of identity formation and artistic production.[40] Inconsistency/inconstancy, mutability are

[40] The same sort of commentary suggested by the title of Andy Warhol's studio space, "The Factory."

conventionally figured as sins in Judeo-Christian mythology.[41] As in many other areas, Bowie appears to champion the ostensibly perverse here.

That the singer of "Changes" is "just gonna have to be a different man" can be read two ways: different from what he used to be in the past, but different from other men because of his eagerness for transformation. Both of these differences are contingent, of course; they depend on not being someone else, which is to say they are not "original" differences. Following Warhol's example, Bowie's attempts at originality are highly paradoxical and ironic. This is the album where Bowie "finds his voice," and ironically it turns out to be the voice(s) of others. There is the cover photo where Bowie replicates a glamour shot of Marlene Dietrich, one of the album's several "drag" performances. There is the dramatic, fey, singing highly reminiscent of Anthony Newley. There are three songs written in the style of Bob Dylan, "Song for Bob Dylan" but also I think "Quicksand" and "The Bewlay Brothers." "Life on Mars?" is a re-write of the song "My Way" sung as a parody of Frank Sinatra and poking fun at Paul Anka's lyrics which celebrate an unapologetic individualism. "Queen Bitch" is a tribute to the Velvet Underground and a rewrite of their song "Sweet Jane"; it is another drag performance. The singer of "Changes" and on the *Hunky Dory* album seems no longer limited by what I'll call *modernist* conceptions of identity and identity's "expressive" relationship to creative production, no longer feels compelled to

[41] God is typically figured in Christian mythology as perfect and eternally unchanging, the "unmoved mover" according to Thomas Aquinas.

produce original works of individual genius. From a certain point of view *Hunky Dory* is a derivative album; from another it is richly inter-textual.

"Oh! You Pretty Things" had been a modest U.K. hit for Peter Noon (of Herman's Hermits) before *Hunky Dory*'s release. The song is a flamboyant youth/glam rock anthem with queer overtones (and some possibly Nazi undertones). It imagines the extinction/evolution of *homo sapiens* who must make way for the new pretty young things:

> *They're the start of a coming race*
> *The earth is a bitch*
> *We've finished our news*
> *Homo Sapiens have outgrown their use*
> *All the strangers came today*
> *And it looks as though they're here to stay*
>
> *Oh! You pretty things*
> *Don't you know you're driving your*
> *Mamas and Papas insane*
> *Let me make it plain*
> *Gotta make way for the Homo Superior*
>
> -"Oh! You Pretty Things"

In the context of the emerging glam rock subculture, the "pretty things" are presumably glamorous, androgynous, possibly bisexual, youth. Bowie's vocal delivery is pretty camp, and there is a hint of homo*sexual* in "homo superior." "Homo superior" is also a Nietzsche reference (especially given "The Supermen" from *The Man Who Sold The World*). It is important to note that Bowie is *explicitly* imagining a post-human, post-*homo sapiens*, possibly post-gender identity here, even if it is only a barely coherent hint with some possibly

problematic politics. One interesting element of the song is the idea of the human race as obsolete, as having outgrown its use, and also of the new race being "things": *both* the human and its replacement have become objectified in this posthuman vision.

Along with "Changes" and "Oh! You Pretty Things," "Life on Mars?" may be the third "posthuman mission statement" or "manifesto" on the album. Part of the evidence is the way it responds to Paul Anka's "My Way." In 1966 Bowie was asked to submit English lyrics to the French song "Comme D'Habitude." His version, "Even a Fool Learns To Love," was rejected in favour of Anka's (Buckley 103). According to Bowie in 1993, "There was a sense of revenge in ["Life on Mars"] because I was so angry that Paul Anka had done 'My Way' I thought I'd do my own version. There are clutches of melody in that that were definite parodies" (Bowie, Qtd. in Buckley 103). The melody, chord progressions, and pacing do indeed stay close to "My Way." For both songs the chorus involves a change in melody only, not a change in chord progression. Both songs also have a similar sort of dramatic development. Chorus and song end with a great deal of bombast: Bowie's histrionic and drawn out "is there life on Mars?" is meant to sound like Sinatra's over-the-top and drawn out "I did it my way." These close similarities, parodies really, should draw our attention to the profound philosophical and political differences announced in the lyrics of the two songs.

"My Way" essentially repeats the advice of Polonius in *Hamlet*, that

"above all, to thine own self be true." The statement has become nearly a contemporary mantra to humanist individualism, despite being a tautology bordering on nonsense (and despite Polonius being revealed as a buffoon). "My Way" insists that the well-lived life is the life that follows "one's own" path:

*For what is a man, what has he got?*
*If not himself, then he has naught*
*To say the things he truly feels*
*And not the words of one who kneels*
*The record shows I took the blows*
*And did it my way!*

-"My Way" (1968)

The singer of "My Way" looks back on his life and has "too few [regrets] to mention" because he followed his own path and did it "his way." "Life On Mars?" takes the point of view of a girl who has difficulty distinguishing life from scripted movie scenes, indeed who imagines that she is taking part in a movie being watched by Martians:

*It's a God-awful small affair*
*To the girl with the mousy hair*
*But her mummy is yelling 'no'*
*And her daddy has told her to go*
*But her friend is nowhere to be seen*
*As she walks through her sunken dream*
*To the seat with the clearest view*
*And she's hooked to the silver screen*
*But the film is a saddening bore*
*For she's lived it ten times or more*
*She could spit in the eyes of fools*
*As they ask her to focus on*

*Sailors fighting in the dance hall*
*Oh man! Look at those cavemen go*
*It's the freakiest show*
*Take a look at the Lawman*
*Beating up the wrong guy*
*Wonder if he'll ever know*
*He's in the best selling show*
*Is there life on Mars?*

*It's on America's tortured brow*
*That Mickey Mouse has grown up a cow*
*Now the workers have struck for fame*
*Cause Lennon's on sale again*[42]
*See the mice in their million hoards*
*From Ibiza to the Norfolk Broads*
*Rule Brittania is out of bounds*
*To my mother, my dog and clowns*
*But the film is a saddening bore*
*Cause I wrote it ten times or more*
*It's about to be writ again*
*As I ask her to focus on...*

-"Life on Mars" (1971)

There is deliberate confusion here about whether the images in the song are the girl's dream, a film she is watching, "real life" events she is observing, or a film produced by Martians in which she is a player. A clear distinction does not matter; it is all of the above, since life and film appear to be reflecting each other. After an argument with her parents, the girl apparently escapes to a movie theatre, but yet the film shows her only banal, familiar images *or* she escapes to a dancehall but everyone is behaving as if they are in a film. The female

[42] Or, "Lenin's on sale again." Although the printed lyrics give "Lenon," such printings are often transcriptions of a singer's words.

protagonist here draws attention to the highly masculinist fantasy of freedom deployed in "My Way," a fantasy of unyielding sovereignty and ownership over self (if a man doesn't "have" himself then he has nothing). The girl's position of relative powerlessness due to her youth and gender make it impossible for her to believe in or appreciate such liberal humanist fantasies. Instead, she sees her life and the actions of others as largely determined by familiar gender roles. The song depicts the girl's life as heavily mediated in at least two related ways: gendered roles and behaviours (mommy, daddy, sailor, lawman) are seen and experienced as banal scripts; and, life is experienced as a voyeuristic event, as if on a screen, so the girl watches events (as if) on a screen and imagines she herself is performing on someone else's screen.

Is the situation in "Life on Mars" a teenage pregnancy?[43] It *would* provide a dramatic and familiar situation in which family tension could occur (as in a movie). It would also provide a vantage point from which to critically evaluate a number of gender roles and expectations, including the liberal humanist fantasies of "My Way." In this case, her "friend" seems to have gone "his way," highlighting that myths of absolute individual freedom may be scripts only conceivable for a privileged few, such as young men but not (pregnant) young women. The gendered, scripted, violence of the sailors and lawman connects to the girl's relationship with her parents in that they are all themselves playing

[43] This idea may be supported by the fact that the song is followed on *Hunky Dory* by "Kooks," a song dedicated to Bowie's infant son.

familiar roles, with the mother saying "no" and the father getting angry and banishing her. If the situation *is* a pregnancy, then perhaps we can see the girl's thoughts of Martians as related to the idea of the foetus as an alien body. The girl is connected to her child as she is "hooked to the silver screen" in this case, and indeed foetus and screen become figuratively linked, evoking notions of the mind as *tabula rasa*.

In any case, the idea of absolute freedom and sovereignty over self found on "My Way" doesn't exist here. The girl and the world are hooked to and dependant on the screen, reliving its scenes over and over. "Hooked" can mean both addicted and plugged in; the word suggests a cybernetic relationship with the screen, suggests that social roles such as gender are heavily mediated—"scripted"—by popular images. The implication is that we are not so individualistic as to be able to go "our way" in any clear-cut way. Just as the girl is not exactly an individual because she may have another body growing inside her, she (along with all the other characters in the song) is also not quite an individual because she is acting along the lines of very mediated cultural expectations and cannot escape them. The general argument of "Life on Mars?," then, is to contradict Anka's "My Way" and insist that life is often experienced as a scripted event, that to a great extent certain behaviours such as sailors fighting are determined by things like gender ideals and assumptions. Bowie's critical response to "My Way" draws attention to the highly conventional nature of Sinatra's performance of masculinity: scripted by Anka, paraphrasing Polonius's

now-clichéd sentiment, and displaying quite familiar masculinist notions of freedom without compromise.

The "silver screen" in "Life On Mars?" links it to the chorus of "Andy Warhol," Bowie's tribute to and citation of the artist:

> *Andy Warhol looks a scream*
> *Hang him on my wall*
> *Andy Warhol, Silver Screen*
> *Can't tell them apart at all*

Note that Warhol is clearly objectified here, confused with his art objects and an object of art himself. There is a double entendre in the "silver screen" lines: the singer cannot tell Warhol's silk-screened prints from each other because they are mechanical reproductions, but it is also that Warhol himself is like a film screen onto which things can be projected, such as various performances of gender, sexuality and celebrity. It should be noted that Warhol's mechanically reproduced art *also* implies (along with "Life On Mars?") that ideals of gender and sexuality depend on a mechanical (technological) reproduction. Elvis and Marilyn are two of Warhol's most iconic images, and they are parodic repetitions of gender norms. Elvis is dressed as a cowboy and aggressively looks and points a six-shooter at the viewer, while Marilyn looks orgasmic with her lips parted and her eyelids nearly closed. The obvious artificiality and mechanical reproduction of the images suggest that the gender ideals represented—of masculine aggression and female sexual receptivity—are themselves fabricated and involve a mechanistic reproduction: "mechanistic" in the sense of generally being adopted

and reiterated unconsciously, but also in the sense of involving a high degree of technological engagement (with mass media or guns, for example).

Early lines of "Andy Warhol" suggest the importance of (mass produced, mediated) objects, specifically dress, to building identity. Imagining himself as Warhol, the singer would like to: "Dress my friends up just for show / See them as they really are." Despite being "just" a show, the dress up is also a *make* up; it is what Judith Butler calls *performative* rather than *expressive* (141); that is, it works to *create* an identity not to express a pre-existing one. In the context of Warhol and his entourage at The Factory, the dress up involved performances of gender and celebrity, spectacular transformations of genders (drag and transvestite performances) and into "stars." Barney Hoskins describes the sort of identity creation Bowie saw when he visited Warhol's Factory in New York:

> New York was about drag queens and junkies, small-town freaks transforming themselves into gutter aristocrats as they revolted against America's repressive homophobia. Warhol had made these people "superstars" and [The Velvet Underground – house band at The Factory] hymned them in speed-freak anthems like "Sister Ray." (Qtd. in Auslander, 122)

These examples of identity transformation through performance inspired Bowie to attempt to manufacture his own "superstar" persona. The result was an alien named Ziggy Stardust.

**Performing the Alien**

Ziggy Stardust is a cross-dressing, sexually ambiguous alien who comes to earth, becomes a rock star and is ultimately destroyed by his fame. He appears on *The Rise and Fall of Ziggy Stardust and the Spiders From Mars* (1972), although his narrative develops well beyond the record, in advertisements and promotional photos, stage and television performances, and on a subsequent album, *Alladin Sane* (1973). In many ways the character/persona represents a messy synthesis and extension of the postmodern concepts that had already appeared in Bowie's music. Figuratively, Ziggy is Major Tom returned from the stars and changed by them, now a "star" himself. *Stardust* continues the role-playing of "Space Oddity," but extends the performance of the fictional character to Bowie's record and on-stage "performance persona" (Auslander). Bowie's performance of Ziggy is his most dramatic and explicit demonstration of the sort of self-transformation/self-construction proposed in "Changes," representing what Auslander calls "the development of an explicitly artificial performance persona" (120). He is a fabricated celebrity persona through which Bowie fabricated his own celebrity.

The Ziggy Stardust character is an identification with and performance of the alien, where the alien represents multiple identity positions including youth, forms of gender and sexuality, celebrity identity, and the non-human. This multiplicity of identification is suggested in the song "Moonage Daydream":

*I'm an alligator*
*I'm a mama-papa coming for you*
*I'm the space invader*
*I'll be a rock 'n' rollin' bitch for you*
. . .
*Keep your electric eye on me babe*
*Put your ray gun to my head*
*Press your space face close to mine, love*
*Freak out in a moonage daydream*

Here we have a jumble or bricolage of cybernetic images, a confusion of animals, aliens, sexes, and machines. The singer alternately identifies himself as animal, alien, male and female, moving from descriptive statements ("I'm") to constructive or performative ones ("I'll be"). The object of his attraction is another sort of alien cyborg, with an electric eye and a phallic ray gun. As with "Space Oddity" we see an interrelated cyber- and homo-erotics. It is important to note that the identifications here are ironic and short-lived, shifting and unstable; they are a temporary daydream not a coherent subject position. The contrast between moon and day in the title highlights the paradox of combining supposedly incompatible states of being such as "mama" and "papa," or organic animal and machine—it is a "freak out" to the ideals of a naturalistic humanism. "Moonage" is a bathetic deflation of "Space Age," a deflation enabled by imagining the perspective of an alien from outer space who sees the hubris of humans implying that they have achieved enough mastery over space to name their historical moment after it.

As I mentioned, the alien figures variously in Bowie's music for a number

of abject or alienated categories/identities, including abject sexualities (bi-, homo-, poly- or ambi-, "try-" sexualities), genders (androgyny, effeminacy, cross-dressing), divided or hybrid identities (including intimate relationships with technology), youth, and animals. What these categories have in common generally is a constructed opposition to the ideal of the (white, heterosexual, adult, male) human and to humanist narratives of essential gender and sexuality. Ziggy as alien is also a critique and reconsideration of the notion of the pop star as an authentic representative of a counter-cultural community. He is a re-presentation of the star as an alienated being, not as a "natural" man or woman (to paraphrase Carol King) but as unnatural, alienated and alienating freak, someone who acts as if they were actually from the stars—i.e. who does not conform to the ideals of the human.

Bowie's ironic portrayal of an effeminate, cross-dressing and ambi-sexual rock star is a camp send up of (what I call) the *naturalistic humanism* generally performed by male rock stars, related to what Auslander identifies as "the ideology of authenticity." Bowie's performance of Ziggy reveals that the customary aspects of male rock celebrity—the appearance of authenticity/naturalism, an aggressive hyper-sexual and heterosexual masculinity—are precisely that, customary: they are both custom and obligatory. Ziggy's performance of celebrity relates, then, to the other abject identity categories he embodies, since Ziggy "fails" to perform the ideals of the rock star in the same way that, say, queer youth "fail" to perform the ideals of heterosexual

masculinity. Part of Ziggy's "failure" to meet the ideals of humanism is his obvious artificiality, his opposition to naturalism.

The name "Ziggy Stardust" is a reference and response to Joni Mitchell's "Woodstock" (1969), a song turned into a counter-cultural anthem by Crosby, Stills, Nash and Young:

> *We are stardust, we are golden*
> *And we've got to get ourselves back to the garden.*

Mitchell's "we are stardust" suggests that we are all beings and things made out of the same stuff and therefore we are (in a sense) one with the universe and with each other. That we must get ourselves back to the garden seems to demonstrate a romantic nostalgia, and points to the ideologies of naturalism and authenticity at work in '60s counter-cultural movements (though seeing "Woodstock" as a straightforward endorsement of them is likely a reductive reading). One problem, of course, was that far from a liberation, naturalism and authenticity had become virtually a requirement in rock music by 1972, and therefore a limitation to what rock performances could be. Ziggy Stardust implies that maybe we should not try to get back to the garden, exactly, not try to become more natural, but look up to the stars, that is try to imagine alternate fantastic worlds, even if those worlds must be reached through technological or artificial means or as a fiction. And so Ziggy Stardust was "stardust" in a literal and direct way, as someone who had travelled from the stars. With Ziggy Stardust, Bowie offers a provocative (nearly hostile) challenge to the countercultural ideals of naturalism and authenticity and

to utopian universalisms. His critique may well be setting up Mitchell as a "straw man" or caricature, reading her lyrics as overly literal and earnest; or it may be a challenge to those who would take it as a straightforward anthem, emphasising the fantastic elements of "stardust… golden." Ziggy's insistent otherness, his insistence on difference, tests the limits of claims to universal similarity or oneness.

Ziggy Stardust exists as what Haraway calls a "cyborg subject position," I argue here, an "implosion of the technical, textual, organic, mythic, and political" (1999, 321). Ziggy is a cyborg because he is an explicitly artificial technological construction, a virtual figure who exists as visual image, as recorded voice, as costume and make-up, as television and stage performance, and as mythic mediation between performer and audience. One might object that all popular performance personae are now cyborgs in the above mentioned ways and have been for some time. This is so. The appearance of Ziggy Stardust, however, is a critical moment in the history of popular culture in terms of drawing attention to this fact of the *cybernetics* of popular performances, drawing attention to the ways in which all popular performers become cyborgs within late-modern popular culture. Like Haraway's cyborg Ziggy Stardust is "a creature of social reality as well as a creature of fiction" (1989, 149), by which I mean he is a mythic figure that exists and mediates *between* fiction and reality. Despite being an explicitly fictional character, the performance of Ziggy was often taken as real by Bowie's fans, who had difficulty distinguishing the character from the performer. More

importantly, though, Stardust is a fictional identity who produces "real-world" effects in the identities of fans and performers, in other rock performers and Bowie himself.

Ziggy Stardust builds on Warhol's ideas of the possibility of fabricating fame. By allowing David Bowie to act like a decadent super-star well before he was one, Ziggy worked to narrate Bowie's celebrity into being. Bowie's manager Tony Defries believed that if you acted like a star people would take you for one. Warhol's famous quote about fame is that "in the future, everyone will be famous for fifteen minutes." Of course the future is always figurative of the now, and Warhol's prediction is a hint that fame is already mostly arbitrary. "Anyone" can become famous, but it won't last. If "anyone" can become famous "in the future," with Ziggy Stardust Bowie declared that the future was now, that he was "somebody," should be considered a star, and would promptly start acting so. The indistinct boundary between Bowie and Ziggy meant that Bowie could perform some of the conventional, clichéd, narratives of fame such as a meteoric rise, but attempt to dispense with others: since it was Ziggy who became famous Bowie could kill him off after his star began to fade then change into another persona and attempt another "15 minutes" of fame. We should consider Ziggy Stardust as an example of the *performativity* of celebrity, of becoming and being a star through performing the role – by performing the role of star convincingly, Bowie effectively became one.

As I suggested in the introduction, the performance of Ziggy Stardust, and

Bowie's performance of celebrity more generally, involve drawing attention to other kinds of performativities. Certainly the performance of Ziggy draws attention to the performativity of both gender and sexuality. As a drag performance involving gendered movements and looks, Ziggy is an ironic imitation of gender that, in Butler's words, "implicitly reveals the imitative structure of gender itself" (137). Bowie's final performance as Ziggy in 1973 involved ostentatious make-up, a number of feminine costumes (a short skirt and knee-high boots for the song "Ziggy Stardust"), camp or feminine postures and movements such as hip swaying and "vamp" looks to the audience, and an "ingratiating" smile Auslander identifies as a visual signifier of feminine submissiveness (134).[44] Butler writes of drag performances that,

> Part of the pleasure, the giddiness of the performance is in the recognition of a radical contingency in the relations between sex and gender in the face of cultural configurations of causal unities that are regularly assumed to be natural and necessary. In the place of the law of heterosexual coherence, we see sex and gender denaturalized by means of a performance which avows their distinctness and dramatizes the cultural mechanism of their fabricated unity. (137-8)

Ziggy's feminine moves and looks expresses a somewhat different sort of performativity than his performance of celebrity. He does not effectively become a woman by performing in drag, since the performance is an ironic one dependant on the "fact" of his being a man. He does, however, indicate the distinctness of sex and gender by ironically reiterating elements of the performance through

[44] The performance was released as *Ziggy Stardust: The Motion Picture*.

which one becomes a woman, through which one's sex and gender can be presented as an effective unity. This performance "as a girl" by a man also draws attention to the work and performance involved in presenting oneself as man, in presenting male-ness and masculinity as a unity. Indeed, while Bowie's drag performance thus points to the constructed-ness of femininity, the more radical effect may be in revealing the imitative and fabricated structures of masculinity as it is performed in rock music and popular culture.

Ziggy Stardust draws attention to some of the performance conventions of rock masculinity, to the work required of male rock musicians in order to be seen as suitably masculine for the job. In this work I think there is a certain amount of overcompensation for occupying the feminized position of being presented as spectacle. John Berger argues that in modern Western visual cultural (from oil painting to contemporary advertising) women are defined by their "to-be-looked-at-ness." Looking is conventionally figured as masculine and being looked at as feminine (So Warhol's Elvis looks straight at the viewer, while Marilyn's eyelids droop); women are typically constructed as visual object in popular culture, and beings and objects presented for visual pleasure become feminized by the presentation. This may be one reason for the pronounced "antiocularity" Auslander identifies in much '60s rock (15), but it also accounts for the reason male rock musicians have often performed exaggerated forms of the codes of masculinity on record, stage and film. Along with their misogynist lyrics The Rolling Stones generally look surly and unsmiling and stare insolently at the

camera on their early album covers; Jimmy Hendrix masturbated his guitar on stage, and flashed his cock (as did Jim Morrison and Iggy Pop); The Who trashed stuff.

To get a sense of what Ziggy's drag performances entailed, I look at two iconic images of Bowie in the role: the *Alladin Sane* album cover (figure 1) and the famous photo where Bowie pantomimes performing fellatio on Mick Ronson's guitar, the "electric blowjob" as it is sometime called (figure 2). As Buckley notes, it is the *Alladin Sane* album cover that captures the look most fans associate with Ziggy Stardust, more so than Bowie's appearance on the *Ziggy Stardust* cover. The cover is a head and shoulders shot of Bowie. He wears his hair dyed red in a mullet style (short at the front, long at back), and wears pronounced red make-up including blush, eye shadow and lipstick; there is a red and blue lighting bolt drawn in grease paint across his forehead, left eye and cheek. In the photo, Bowie's eyes are closed and his lips slightly parted; he is bare shouldered, and no clothing is visible. The most startling thing about the photo is that a clear, viscous liquid has been air-brushed onto Bowie's collar bone and threatens to drip down his chest.

Though there are no actual clothes here (so no "dressing"), the *Alladin Sane* cover photo is a *drag* performance because it is an ironic reiteration of the visual codes of femininity.[45] The irony results both because this is a performance by a man, but also because the gendered visual codes are exaggerated. Bowie's

[45] As such, calling himself "a lad" here is also highly ironic, since his appearance is far from "laddish."

eyes are closed, which is an invitation to be looked at which does not place the viewer in the feminized position of being looked at themselves—the viewer, then, is coded male here. Bowie's lips are parted slightly, suggesting sexual receptivity. Ziggy's mullet may be designed to suggest bisexuality or hermaphroditism: he is a "boy" at the front and a "girl" at the back. The lightning bolt is ambiguous: it cuts across his face, perhaps suggesting a divided identity; or we can read it as a phallic symbol plastered across his face, but if so then it is unclear whether the bolt is feminizing or masculinizing, whether Bowie is the source of the bolt or its target. The heavy and overdone blush, eye shadow and lipstick exaggerate the visual codes of femininity, drawing attention to them as codes, that is drawing attention to their fabricated association with femininity.

I think we should read the liquid dripping from Bowie's chest as semen (I cannot think of what else it might be), and as a literalization or concretization of the figurative visual codes at work here. Bowie has presented himself as feminized object available for visual pleasure. Reading the liquid as semen literalises the operation of looking as a virtual fucking, of the gaze as phallic and masculine in its operation. It is as if the implicitly male viewer has masturbated to Bowie's image. This would put Bowie in an even more sexually receptive and vulnerable position. But this concretization of the masculine gaze also suggests a high degree of vulnerability in that gaze's construction as masculine, firstly because it would suggest that the masculinized viewer cannot refrain from looking and desiring Bowie, cannot restrain his desire for another man in a feminized

position. Not only is the viewer's looking assumed, but it is also rendered visible in the most sexually suggestive and spectacular way. His look is now there to be looked at. Because his gaze and desire are now visible, he is placed into an implicitly feminized position, his gender rendered somewhat ambiguous along with Bowie's. This image, and Bowie's appearance as Ziggy generally, make masculine and feminine gendered codes highly visible, and that visibility undermines their naturalization. They become so visible that they perhaps cannot sustain themselves except as an irony.

The Ziggy-era "electric blowjob" photo (figure 2) involves a similar literalization/concretization of a central rock 'n' roll phallic symbol: the electric guitar. In the concert photo, Bowie half-kneels between his guitarist Mick Ronson's legs, clutching his buttocks, pressing his chest into his groin and feigns giving head to Ronson's guitar strings. The image (released as an advertisement in Melody Maker) is Bowie's version of Hendrix burning his guitar or Townsend smashing his. It makes the rock convention of guitar as figurative penis highly visible and literal, and that visibility undermines the possibility of seeing the association as fully natural. As with making the male gaze visible as semen, Bowie's treating the guitar as if it were an actual penis undermines the gendered code by reiterating it as highly literal parody (as Ziggy is a parodic literalization of Mitchell's "we are stardust"). Literalizing the guitar-penis as a visual spectacle threatens it, I think, because it can no longer operate figuratively or suggestively. It makes it harder for a guitarist to "flash" his guitar as a penis in a moment of

pseudo-sexual aggression and then conceal it again, and instead offers the guitar as a spectacular object for visual pleasure. The move is suggestive of the cybernetics of gendered performances, the extent to which a system of gender depends on technologies and technological objects such as make-up, air-brushed photography and guitars.

We should read Bowie's "coming out" in early 1972 as a related example of the performance of sexuality, one that reveals its *performativity* and indeed the performativity of language itself. In *How to Do Things With Words*, J.L. Austin rejects the notion that linguistic statements merely describe or state pre-existing facts (either truly or falsely) and contends that instead all statements are at some level "performative," which is to say that they do or make the facts they purport to describe: "stating is performing an act" (139). Bowie's declaring himself gay, and his homoerotic performances as Ziggy, effectively made it so. Bowie became "gay" then, in the same way he became a star, by declaring it and performing the role convincingly regardless of its pre-existing veracity. While the conventional liberal message on gay sexuality has often been that it is okay to *be* gay, Bowie's implicit message suggests something different: that it is alright to look and act gay (or in gender non-conforming ways), regardless of what one's sexuality actually "is"; indeed, that sexuality is a matter of declaration and performance over essential "being." Bowie "comes out" in a way that perhaps all of us should, as beings who fail to perform fully all of the impossible ideals of gender and sexuality.

**"Making Sure White Stains": Bowie's Performances of Race**

Bowie "killed off" Ziggy and disbanded the Spiders From Mars at the end of the Ziggy Stardust Tour in 1973, so the performance persona of Ziggy died just as the character dies at the end of the *Ziggy Stardust* album. Bowie himself continued to look like Ziggy and make glam rock for a couple more years, and it was not until 1975 when a performance persona clearly distinct from Ziggy Stardust emerged. After the Stardust tour ended Bowie recorded a quicky covers album in the form of *Pin Ups* (1973), borrowing the notion from Bryan Ferry (though getting his album out first). By performing songs by his influences from the '60s London scene (such as Pink Floyd and The Who), Bowie again impersonated and cited his sources, adopting a different musical style and persona with each song as with *Hunky Dory*. The title gives a clue to the project, with Bowie "pinning up" then discarding various musical styles and personae as if they were pin-up images of stars. Bowie next attempted to produce a musical version of George Orwell's *1984*, but could not acquire the rights and adapted it into the *Diamond Dogs* (1974) album which told the story of the distopian "Hunger City." Though Ziggy was "dead," this was very much gender-bending sci-fi glam rock in the Ziggy mode, especially since *Ziggy Stardust* too was originally conceived as a musical. The single "Rebel Rebel" functioned as Bowie's goodbye to the glam rock

movement, with the memorable lines: "You've got your mother in a whirl / She's not sure if you're a boy or a girl."

With *Young Americans* (1975) Bowie downplayed provocative gender performances in an attempt to appeal to an American audience. Though his glam and drag performances had attracted fans in England, which had long had a tradition of male cross-dressing in its popular culture, Bowie's perceived homosexuality made him a hard sell in America and his songs received little airplay outside of urban centres such as New York, Philadelphia and L.A. The theme of *Young Americans* is a complement of sorts to Bowie's earlier performances of bisexuality and androgyny; it is an elaboration of these performances, in a different drag we could say. The record and its televised promotional appearances were an attempt at presenting Bowie in a more traditional and conservative form of masculinity—though Bowie does not quite pull it off and "pass" here. However, the provocative performance of ambiguous genders and sexualities has been (mostly) replaced by a provocative bi-national and "bi-racial" performance. Bowie appears to be attempting an ironic "Black drag" with this album, where the irony results from Bowie playing Black while seeming to embody many of the ideals or stereotypes of whiteness. It may be an attempt on Bowie's part to address the perception that glam rock was an exclusively white phenomenon. Dick Hebdige calls it "albino camp" and writes: "'Glam' rock representing a synthesis of two dead or dying subcultures – the

Underground and the skinheads – began to pursue an exclusively white line away from soul and reggae" (27).

*Young Americans* is Bowie's attempt at American soul music, one of the first for a white British artist. Specifically, it is an attempt at Philadelphia-style soul. That Bowie chose to imitate Philadelphia soul surprised and disappointed some of his fans at the time, since Philly soul was often considered the least authentic and most commercial style of American soul. In retrospect the style seems appropriate for Bowie's approach. He branded his version "plastic soul," a sly admission that both it and he represented an inauthentic voice. Bowie's vocal delivery changed around 1974. Gone was the similarity to Anthony Newley and the melodramatic, camp mannerisms. Bowie's accent was now less obviously English while singing (though not "un-English"). The album performs a sort of bi-nationality in that it is an Englishman's self-conscious attempt to play American – not just to play American music, but to play American-ness. Part of this performance of nationality is an implied performance of Blackness, most strongly suggested by the style of music itself, at the time almost exclusively performed by Black musicians. Auslander describes Bowie's performance persona here as, "as carefully constructed and managed as Ziggy's, yet different from Ziggy in almost all respects. This persona, the white, British soul boy living out a fantasy of being Black, was Bowie's next role" (149).

Despite the obvious differences between this version of Bowie and Ziggy Stardust, Bowie *is* continuing and elaborating the *Ziggy Stardust* narrative with

*Young Americans*. Ziggy was an alien who became a bisexual rock idol in drag; in this version of the star myth, Bowie is the alien coming to America, attempting to become a soul star while performing a hybrid English-American identity and a racial "drag" performance. I consider the performance as a kind of joke or irony, which *may* mitigate some of the problems of appropriation here. Auslander contrasts Bowie's performance of "Young Americans" on *The Dick Cavett Show* (December 4, 1974) with Ziggy Stardust:

> He wore a light brown suit with exaggeratedly padded shoulders and high-waisted trousers from which a long chain looped down, zoot suit style, on his right side; white shoes; a blue shirt; and a tie. His hair was bright orange, but no longer in Ziggy Stardust's overstated mullet.
>
> If Ziggy's voice was a high, somewhat nasal, head voice, this singer's voice was deeper, huskier, throatier. Whereas Ziggy's posture was erect yet relaxed, this singer seemed to carry tension in his shoulders like a vulture's. Ziggy stood simply and easily at the microphone—this singer leaned toward it, sometimes grasping it in the manner of a lounge singer. If Ziggy's countenance was relaxed, often in an easy smile, every muscle in this performer's face seemed tensed, making his sharp features prominent. Whereas Ziggy's movements were often expansive—he would stride from one side of the stage to the other, sometimes lowering himself to the floor—this performer kept his arms locked forcefully by his sides, sometimes raising them in vaguely Latin dance movements, his eyes tightly closed… the singer was accompanied by African-American musicians and a sextet of backup singers. (148-149)

One implication of Auslander's comparison is that this version of Bowie is a more masculine one than Ziggy Stardust. Indeed, Bowie's performance is of different versions of masculinity, but also of Blackness *and* whiteness. In the same way a drag performance signifies and draws attention to the codes of *both* femininity and masculinity, Bowie's "Black drag" here draws attention to the codes of both

Black and white masculinities. Bowie is dressed like an (African-American) urban hipster here, performing a predominately Black genre of music with predominantly Black musicians, and singing in a voice that may be an approximation of an American soul singer. I think we can see Bowie's more masculine performance here as a problematic association between Blackness and hyper-masculinity.

On the other hand, Bowie himself looks unnaturally pale and thin, even more so than usual; his movements are stiff and awkward, studied and self-conscious, as if not "in tune" with his body; he really does look like a white Englishman attempting to get down. Neither Bowie's performance of masculinity nor his performance of Blackness are carried off convincingly here, but that is part of the point—this is "plastic soul." There is an ironic contrast between his masculine posturing and his thin and androgynous body, just as there is an ironic contrast between his attempts at a specifically *Black* posturing, and his whiteness, thinness and androgyny (because Blackness is stereotypically associated with a hyper-masculinity). While Bowie's performance here is a problematic appropriation of Blackness, its irony offers an implicit critical commentary on that appropriation; it differs, then, from the earnest mimicries of, say, Mick Jagger or Elvis Presley.

The commentary on white performances/appropriations of Blackness continues with "Golden Years" (1975) the lead single from *Station to Station* (1976), a song on which Bowie attempts to mimic Elvis's singing voice. "Golden

Years" would have fit well on *Young Americans*; indeed it may be Bowie's most successful attempt at soul music: the rhythm is incredibly tight but Bowie's vocal delivery is relaxed and loose and does not have the stiffness it does on some of the *Young American* tracks. Yet there is another sort of joke and irony here, because "Golden Years" is unlike any other track on *Station to Station*, a record on which Bowie develops his fascistic Thin White Duke persona and performs a sort of hyper-whiteness. It is "as if" the artifice of the pseudo-Black American soul man is stripped away to reveal the European colonialism at its heart. *Or* it is as if those "exaggerated padded shoulders" from the Dick Cavett show meant to signify masculinity, American-ness and Blackness—but which did more to draw attention to Bowie's thinness than anything else—are stripped away and revealed as prosthetic in the same way that Thomas Newton's genitals are stripped away in the film *The Man Who Fell To Earth* (Nicolas Roeg, 1976).

A still of Bowie as Newton from the Roeg film serves as cover art for *Station to Station* and indicates the significance Bowie placed on the character. According to Buckley:

> Bowie commented to journalists… that, after a day's shooting, his face would positively ache, so expressionless and unsmiling was the character he had portrayed…. Not only did Bowie leave with Thomas Newton's frozen demeanour; he also took with him the clothes and the haircut he had devised for the role. The Thin White Duke, Bowie's last and most desensitised *alter ego*, had been born. (232)

A cerebral and emotionless detachment is what links Newton and his close cousin The Thin White Duke (see figure 3), and seems to be what Bowie is identifying as

a primary convention of whiteness and Western European identity. The music here is a form of dance or Disco, but in a mostly cold and "robotic" version. As Buckley notes, "Musically, it shows Bowie filtering Krautrock and the robotic *motorik* of Kraftwerk" (243). Indeed, the album shows Bowie turning away from America towards a decidedly European and specifically German sensibility. The title is a reference to Kraftwerk's synthesiser hit "Autobahn" (1975), and also to Bowie's unsettled changeability. The cover art of *Station to Station* shows Bowie as Newton stepping into a sensory deprivation chamber (though it looks like he could be stepping out of or into a spaceship). Though it is now printed in colour, the original album photo was released in black-and-white, "as this fitted in rather better with the expressionist stage show then in production" (Buckley 249). It also fits rather well, I think, with the stereotypes of Blackness and whiteness Bowie was performing at the time, presenting Black and white "in black and white," as it were.

It is important to note that The Thin White Duke identity does not represent the "truth" of Bowie's race. It is not exactly that Bowie strips away a problematic "blackface" to reveal the essential whiteness underneath, because this too was as managed and choreographed an identity as was Ziggy Stardust. Buckley describes the *Station to Station* or "White Light" tour where Bowie performed as The Thin White Duke:

> During 1976, Bowie was at his most disconnected and *other* on stage, using stiff, jerky, choreographed karate kicks one moment, fumbling

> intentionally for his pack of *Gitanes* during 'Waiting For The Man' the next. At 29, he had reached a new peak as a performer. (252)

According to journalist Michael Watts, Bowie "exposed the stage in a brilliant blare of black and white expressionism that emphasised the harshness of the music and reflected upon his own image as a white-shirted, black-suited creature of Herr Ishyvoo's cabaret" (Qtd. in Buckley, 252). This is whiteness, then, as Bowie had presented masculinity and femininity, as an obviously choreographed set of exaggerated conventions, ironically reiterated as cabaret piece from a fictional past. Now, there may be a problem here if Bowie is positing whiteness specifically as a staid convention and implying that Blackness involves an authentic spontaneity somehow liberated from convention. I am not sure this is the case, but it could be.

I think we should see, however, Bowie's performance of whiteness as part of the larger critique of European humanism developing in his music, a critique that works to reveal race as a set of enforced scripts along with gender and sexuality, enforced scripts which together with others make up the ideal of the human. In the song "Station to Station" Bowie announces, "The return of The Thin White Duke, making sure white stains." The implication is of whiteness not as neutral descriptor, but as ideal that must be enforced or applied, "stained" onto others. The Duke's arrival is always announced as a "return," even at the character's first introduction. The mechanical repetition of the opening beats of the song, built around the chugging of a train, suggest the character as a

mechanistic repetition of some ideal. In general here, the songs are about a lack of agency and loss of distinct identity, to cocaine and "the European canon" ("Station to Station"), religion ("Word on a Wing"), mass media ("TVC15"), or to the force of drives and desires ("Wild is the Wind").

**Conclusion: A Cyborg Mix**

In this chapter I have attempted to demonstrate that Bowie's music, image and celebrity persona constitute a *cyborg subject position* (involving what Haraway calls an "implosion of the technical, textual, organic, mythic, and political"); I appended "performance" to Haraway's list of imploded categories. I have also asked if Bowie's work represents what Bart Simon calls a "popular posthumanist desire for disembodied agency… liberal humanist values masquerading as posthuman critique" (4-5). It is crucial to note that Haraway's cyborg myth (1989) or a cyborg subject position (1999) are not desirable, responsible or equitable social forms *per se*. Haraway's "Cyborg Manifesto" reveals cybernetics and posthuman ways of seeing-thinking-being as containing the potential for more equitable political formations but also for new forms of exploitation, surveillance and social control. While to my mind Bowie's work clearly does involve the performance and presentation of cyborg subject positions, this in itself is not enough to say that it functions as the "embodied virtuality" or "situated" and

"embodied objectivity" that Hayles and Haraway see as conditions for responsible posthuman knowledges.

In Haraway's call for *situated knowledges*, "only partial perspective promises objective vision" (1989: 190). The disembodied gaze that can seem to see from everywhere and nowhere—what Haraway terms the "God trick"—is precisely the sort of erasure of embodiment that allows the liberal humanist subject the "notorious universality" (Hayles 4) which serves to conceal its position as a specific and privileged gender, class, sexuality, race and species. Haraway writes that, "The eyes have been used to signify a perverse capacity to distance the knowing subject from everybody and everything in the interests of unfettered power" (1989: 188). In contrast to "various forms of unlocatable, and so irresponsible, knowledge claims" or "ways of being nowhere while claiming to see comprehensibly" (191), Haraway calls for a "feminist objectivity… about limited location and situated knowledge, not about transcendence and splitting of subject and object" (190). Responsible knowledge for Haraway involves both recognizing one's own situated and partial perspective but also attempting to imagine that of the other, especially "the standpoints of the subjugated": "'Subjugated' standpoints are preferred because they seem to promise more adequate, sustained, objective, transforming accounts of the world" (191). There are great challenges in seeing the other's standpoint in this way, as Haraway notes, among them avoiding irresponsible appropriations. To this end, "Situated knowledges require that the object of knowledge be pictured as an actor and

agent, not a screen or a ground or a resource, never finally as slave to the master that closes off the dialectic in his unique agency and authorship" (198). The sort of responsible and situated objectivity Haraway envisions involves "the joining of partial views and halting voices into a collective subject position that promises a vision of the means of ongoing finite embodiment, of living within limits and contradictions" (196). This vision therefore prefers a tentative "stuttering" (195) to authoritarian truth claims.

So is it possible to see Bowie's work operating to create responsible cybernetic knowledges in these ways? Certainly there are problematic moments and tendencies. "Space Oddity" displays a masculinist rock fantasy of escape from domestic obligation, with Major Tom abandoning his wife for the freedom of outer space, and so implicitly associates women with restrictions on masculine privilege. While glam rock performances may have often put men in roles conventionally filled by women, such as those of back-up singers and album-cover models, in practice the effect was to eliminate a role for women in pop music production. Indeed, virtually all of Bowie's musical collaborators in the 1970s were men (though in part this reflected the conditions of rock music production at the time). There is a way Bowie may have used Black performers to lend credibility ("street cred") to his soul and funk excursions. *Let's Dance* (1983) producer Niles Rogers expressed initial disappointment when he realized he would not be collaborating on an *avant-garde* record but helping to create a commercial pop sound, thus casting him in the stereotyped role of entertainer

instead of serious artistic collaborator. From a gay rights standpoint, Bowie's claims of gayness and bisexuality can seem a convenient way to generate controversy and attention, his distancing himself from these positions during his mid-80s bid for mainstream success a betrayal.

I do not wish to excuse troubling particulars, but I also want to underline the larger metanarrative of Bowie's *oeuvre* which is where we can best see the political value of his cybernetic performances. Bowie's performances *do not* make the sort of disembodied and authoritarian truth claims which would reinforce a liberal humanist subject. Agency and "truth" are achieved through bodily performance, which is to say through an embodied virtuality and situated-ness. The subject positions Bowie performs do not show identity transcending the body, but show it divided among bodies, as invested in the other's subject position. The *Alladin Sane* cover photo shows Bowie's celebrity identity and the viewer's implicated in each other, with Bowie/Ziggy's femininity dependent on the gaze of a masculinized viewer, but that viewer's "masculinity" contingent on Ziggy's ironic femininity and very much complicated by it. "Life On Mars?" is a merging of partial perspectives (girl, Martian, narrator, stereotyped masculinity), no one of which contains the final truth of the situation and so any truth must be approximated as a collective one. "Moonage Daydream" shows a similar blending of partial perspectives (animal, alien, male, female), the effect of which is to deflate the omnipresent and omniscient point of view implied by "Space Age" and instead locate or situate that view as specifically from the moon, from a

specific somewhere. Bowie's "plastic soul" period does not attempt an authentic reproduction of Black music; its appropriation is ironic, and embodies a critical commentary on performances of both Blackness and whiteness. Haraway sees tentative, halting, stuttering voices as making more trustworthy claims to truth than authoritative ones; "Changes" is sung in a stutter that suggests there may be no fixed and absolute truth to identity but only contingent and shifting ones.

Bowie's influence on popular music has been profound. One way of measuring his effectiveness in imagining and performing "the standpoints of the subjugated" may be by considering those artists he influenced most profoundly or directly. In America, the most direct heirs to Bowie's legacy of musical, stylistic and identity transformation were probably Madonna and Prince. Prince narrated his own super-stardom into being before the fact with *Purple Rain* (1984) as Bowie had done with *Ziggy Stardust*, moved at breakneck speed through various musical styles and image changes, played up and exploited his androgyny, and changed his name to an unpronounceable symbol (a combination of the iconic male and female symbols). Madonna also kept pace with changing musical styles, and cultivated a provocatively sexual visual image, sometimes appearing femme, sometimes butch, sometimes flirting with bisexuality. Michael Jackson's radical identity transformations and media manipulations probably owe something to Bowie's example too. In the U.K., gay and effeminate synth-pop performers such as Gary Numan, Depeche Mode, The Human League, New Order, Erasure and The Pet Shop Boys borrowed heavily from Bowie's androgynous looks,

sounds and moves, as did the hyper-sensitive folk rock of Morrisey and The Smiths. In other words, Bowie's model and example of stardom *worked* in various ways for women and Black, effeminate, and gay men seeking to fashion their own stardom. For himself and for others his performance of stardom demonstrated an *embodied agency*, and suggested the possibility of becoming other through performance.

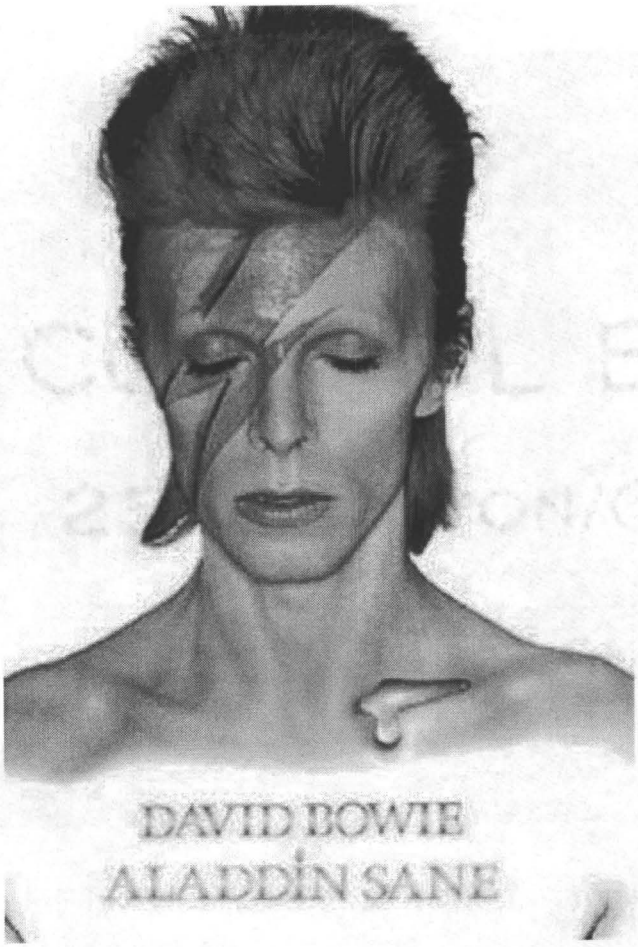


Figure 1: Alladin Sane

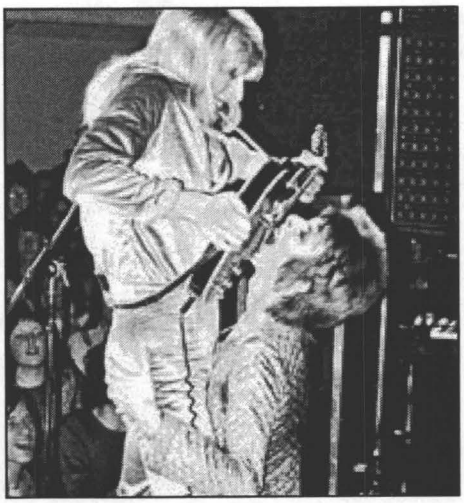

Figure 2: "Electric Blowjob" (Mick Ronson and Bowie)

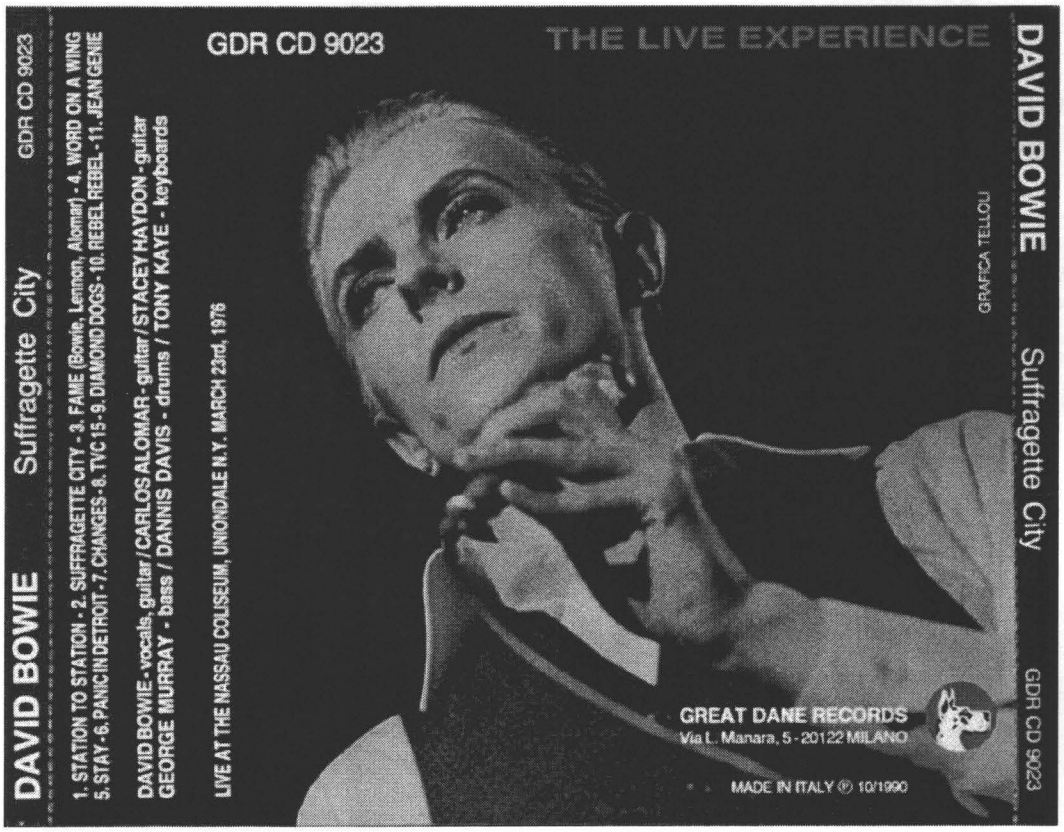


Figure 3: "The Thin White Duke"

## Conclusion

What is at stake in the posthuman? What are its ethical implications? What are its environmental ones? Its potential effects on human economies? What ethical interventions into popular consumer culture does it make possible? How might it alter or transform our relationships to other beings? Our relationships with those animals that function as resources in industries such as farming and meat? Our relationships to the environments in which we live and which sustain our lives, but which are also currently also figured as economic resource? What are its implications for sexual identities? Its implications to how we view natural ("natural"?) economies such as reproduction and evolution? To what extent do popular forms such as film and music shape subjectivities within contemporary culture and to what extent can they be vehicles for the production of posthuman sensibilities or subjectivities?

Although this project has attempted to address these questions, most may be impossible to answer finally or definitively. For one, it may no longer be a matter of choosing between humanism and posthumanism, but of choosing among posthumanisms, of choosing among competing posthuman visions in a historical moment when certain aspects of the human and of humanism may be in flux or up for grabs. "The" posthuman should perhaps not be seen as a singular entity or concept but as multiple ones. As such, its effects may vary, even to the point of contradiction, depending on what posthuman configurations we are able to

envision: as I have noted, Haraway's "Cyborg Manifesto" suggests that posthuman modes of thought have the potential to result in both certain kinds of liberation but also in new methods of control and surveillance. The human ideal has perhaps always contained paradoxical multiplicities. N. Katherine Hayles's contention that "we have always been posthuman" suggests that a coherent consensus on what makes "us" human may never have existed (291). What is at stake in the posthuman may depend on what we are willing to put at stake, on what "sacred" aspects or boundaries of humanity we are willing to interrogate.

Neil Badmington contends that the posthuman should not be seen as the diametric opposite of the human, but as a "working through" of its consequences: "a purely posthuman problematic… is not easy, for tradition is still working, being worked through, worked over, worked out. Or, more precisely, (and this is probably the most difficult point to grasp), it is working through *itself*" (22). I agree, this last point is a difficult one (for me) to grasp. A humanist tradition "working through itself," however, points to some operation within a discourse of humanism that might be called inhuman, to the possibility that discursive constructions such as the human may not be fully within human control, that once set in motion they may have a momentum that carries them to unplanned and unexpected places. Sexuality is a discursive construction that can seem similarly inhuman; it is central to contemporary conceptions of human subjectivity but as Foucault's analysis of its history suggests sexuality cannot be determined or controlled in anything like a straightforward way. Both linguistic and economic

systems can be considered *inhuman* in some sense, despite the privileging of a human subject in the ways they are predominantly envisioned. Human management or stewardship is implied in the word economics itself (from the Greek *oikonomia* or "household management"). As Elizabeth Grosz argues, however, the foundational economic writings of Adam Smith and Thomas Malthus approach "the economic as [a] system… of self-regulating force, where the human is not a sovereign agent, but one site of selective pressure, one point in a broader nonhuman or megahuman system" (35). According to Grosz, linguistic and economic systems provide the model for Darwin's theory of evolution: "These systems are not human products but are *inhuman*: systems functioning beyond or above the control of their participants, systems that, as much as biological processes, form and produce their subjects" (39).

Sexuality, economy, evolution, can each be considered inhuman systems beyond our full control, systems too complex and chaotic to be fully manageable and predictable or to behave exactly as our discourses about them describe. The economies humans have created and set in motion exhibit a luxurious exuberance (Bataille), for example in the form of unforeseen effects such as global warming, which must undermine a faith in their rationalized efficiency. That we often seem unable to prevent unwanted economic effects, to reduce greenhouse gasses or prevent the pollution or destruction of environments, points to an economy functioning in some ways beyond human control. One of the most significant implications of the posthuman may be that it can help us relinquish control, to see

ourselves as not fully the masters of ourselves, our minds and bodies, our environments, the natural systems we are a part of and the systems we have put in place. Posthumanism may cause us to be less certain about what we "know" about forms of knowledge such as economics, evolution and sexuality, less certain about the value of economic productivity, less certain that humans are more highly evolved than other beings, less certain about the value of certain forms of sexuality, less certain about what distinguishes us from other beings and from the natural world.

Being less certain about what distinguishes us is not quite the same as denying that differences exist. I cannot help myself continuing to see a difference between humans and other animals, but I am very reluctant to articulate it in any definitive or final way because I do not know for sure *and* because "certainty" about human difference has produced some dangerous effects for ourselves, for other beings, and for our environments. Are humans qualitatively different than other animals? Kubrick's *2001* suggests that any differences may be quantitative only, that "human" traits such as tool use, society, language, reason, consciousness, or bipedalism are only "human" by a matter of degrees. Considering the possibility of aliens or sentient machines along with Kubrick and Bowie causes us to consider the possibility that another being might demonstrate "human" traits more perfectly than actual humans do. The awkwardness of human legs in the zero gravity of Kubrick's outer space can remind us that our traits are evolutionary adaptations to environment, not absolute markers of

superiority. And we do not need aliens or human-like machines to question whether or not the traits we think of as human are ours alone. Even if we could identify with certainty some trait that clearly distinguishes us from all other beings, a sophisticated understanding of evolutionary theory must remind us that our relationships to other beings are constantly in flux, that what the human is now is a temporary condition and transitory state (as are the states of all other beings).

Being less certain, relinquishing control do not need to mean abdicating responsibility. Sometimes doing nothing, or doing less, or leaving well alone may be the responsible course of action, as in the case of polluted ecosystems that need time and space to heal. "Doing something" about global warming and other economic-environmental crises may often mean doing less: producing less, consuming less, working less. The global warming crisis points to a further limitation of acting in the face of certainty: waiting until global warming seemed all but certain may have meant waiting until it is almost too late. In dealing with others, with other people and other beings on the planet, being less certain about knowing them may be a first step towards engaging with them responsibly. Haraway's concept of "situated knowledges" should be understood as tentative and contingent: a responsible imagining of the other's situation must be one that remains open and not too eager to know definitively. Isabelle Stengers calls for "risky" scientific constructions, for a science that risks engagement with a complex, chaotic and paradoxical world; this would be a science that gives up the

fantasy of achieving total knowledge. One paradox of the posthuman may be that through relinquishing certainty we can come to know the world in a way that is more faithful to its operations.

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