Listening in Order Not to Hear? Darwin, Politics, and Sacrifice

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The great break in the organic chain between man and his nearest allies, which cannot be bridged over by any extinct or living species, has often been advanced as a great objection to the belief that man is descended from some lower form; but this objection will not appear of much weight to those who, from general reasons, believe in the general principle of evolution. Breaks often occur in all parts of the series, some being wide, sharp and defined, others less so in various degrees… *At some future period, not very distant as measured by centuries, the civilised races of man will almost certainly exterminate, and replace, the savage races throughout the world. At the same time the anthropomorphous apes, as Professor Schaffhausen has remarked, will no doubt be exterminated.* [emphasis added] The break between man and his nearest allies will then be wider, for it will intervene between man in a more civilised state, as we may hope, even than the Caucasian, and some ape as low as the baboon, instead of as now between the negro or Australian and the gorilla. (Charles Darwin, *Descent of Man*, pp. 183-184)

There is much to applaud in the renewed interest in the political significance of Charles Darwin's thought, and it behooves us especially now, with the advent of GNR (Genomics, Nanotechnology, and Robotics), to ponder the entwinement of bios and polis as we begin to create new (living?) protagonists in the story of "life on earth." It is particularly important that political theorists assay a more nuanced picture of Darwin, as the recent debate in the April 2013 issue of *Perspectives on Politics* attests. In putting "genopolitics" on the map Hibbing et al. are the latest in a long train of theorists to attempt a politico-biological synthesis, and whether their specific research agenda is promising or misguided, it is clear that political theory

can neither safely ignore nor simply condemn the efforts to unite Darwin with J. S. Mill; Richard Dawkins with John Rawls. While earlier generations of theorists have been rightly suspicious of Darwinian incursions into this territory given the troubling legacies of Social Darwinism and the eugenics movement, political philosophers like Peter Singer, William Connolly, Isabelle Stengers, and Elizabeth Grosz have rightly drawn our attention to an "other" Darwin.[1] For these diverse theorists, Darwin's cooptation by the Right has been a conceptual stumbling block that prevents the Left from adequately acknowledging the significant political insights of Darwin and modern biology, developmental biology in particular. Rather than decrying the attempted dialogue between political science and biology as yet another effort at reductionism, these thinkers have highlighted the complex relationship linking the future of contemporary political institutions to the evolutionary past, a temporal span that covers not just the early days of humanity but also the vast aeons before life had yet created anything with the right to name itself *anthropos*. While Singer looks to more conventional tropes of cooperation's emergence among social beings (drawing on Robert Axelrod among others) as a source of hope for progressives, theorists like Connolly and Grosz have attended to the work of biologists like Margulis, Sagan, Maturana and Varela, and Stuart Kauffman, to argue that life's evolution has hardly followed the determinist path that the critics of reductionism allege. Taking chaos theory as one of their touchstones, these biologists argue that order and organization in living systems is an emergent property, a self-generated process (*autopoiesis*) whose outcome states

[1] Even Hannah Arendt thought it important to mention Adolf Portmann's work in *The Life of the Mind*, which is perhaps surprisingly given what she says about the "animal laborans" in

cannot be predicted from a knowledge of the antecedent conditions (even if one had infinite time to adequately describe the prior state in toto). Biology seen in this light cannot offer a set of marching orders for political philosophy, since it does not claim to provide a knowledge of foundations – no small subset of "causes" or factors can be singled out as the essence of humanity, nor can such a timeless essence be identified since the entire process of life is a dynamic one that is constantly in flux. While there are certain stabilities or patterns of order that recur for a time, the constant emergence of novel entities or novel combinations of existing entities leaves little room for confident pronouncements on how to translate the "is" of this process of becoming into a human "ought" to legislate into being.

Another significant aspect of the "return" to Darwin is that links human and nonhuman worlds of becoming in ways that are more amenable to commodious relations across the species barrier. The human of a Darwinian cosmos in in a very different position from the human of the Christian cosmos into which Darwin himself was born – no longer created specially in the image of God, but instead the descendant of apes, amphibians, fish, and (far enough back) humble protozoa – humans may believe themselves superior to other creatures, but this superiority is merely the artifact of random mutations acted upon by the blind force of natural selection. Humans are now animals plain and simple, not elevated by their immortal soul to sing God's praises in the presence of the angels, but doomed to enact the very same struggle for existence which their ancestors from time immemorial have engaged, and with no hope that life itself is anything but this struggle ad infinitum. If Darwin sees human capacities merely as the slightly more

elaborate version of the capacities of other animals, he thereby allows us to see that those things we value most in ourselves, our reason, social emotions, etc., are also present in those creatures that we formerly looked down upon. If we value courage in the human soldier we can no longer ignore the courage of the chimpanzee, lion, or dog, and we may realize that our ethical boundaries do not necessarily coincide any longer with the limits of the species border.

There is no doubting that many Darwinian-inspired scientists and philosophers have done an enormous amount of good (however you want to parse the definition of the word) in trying to make the human-dominated world better for nonhuman animals, from Jane Goodall's work with the endangered chimpanzees of Gombe to Stephen Jay Gould's public intellectual-cum-nature-propagandist to Peter Singer's crusade against speciesism. The examples are probably numerous enough to satisfy any pragmatist – if the legions of conservation biologists dedicated to habitat preservation and biodiversity aren't some kind of pudding's proof, what is? – yet I cannot shake the nagging feeling that something is amiss underneath the surface of such a pragmatic appraisal of Darwinian thought. I began this paper with the rather longish quotation from Darwin's *Descent of Man* as a way of flagging this concern at the outset. There are a number of disturbing elements to the quote, and while the overt racism is perhaps the most jarring, I would like to focus instead on the human/nonhuman relation that follows as the counterpart to Darwin's racialized hierarchy of civilization. Darwin is addressing (as he does at many points) the lack of "missing links" that many readers expect to find between "lower" and "higher" forms of life (these comparative/progressive locutions are Darwin's),

but he explains that looking for such linkages is precisely what you should *not* do if you understand "the general principle of evolution" (Darwin 2004, 183). You won't look for links because evolution proceeds by way of gaps (though not leaps)[2], as Darwin explains ad nauseam in *The Origin of Species*, and he applies the same logic to humans in *Descent* (*Origin* implied that humans were included but did not explicitly state this): "the very process of natural selection constantly tends, as has been so often remarked, to exterminate the parent-forms and the intermediate links" (Darwin 1982, 211). Put simply, any species will naturally tend to produce descendants that vary slightly – some will mimic their parents almost entirely (hence they are still part of the "parent-species") while others will vary, perhaps in the case of finches some with shorter beaks than their parents while other have beaks slightly longer than their parents (and much longer than their now-short-beaked cousins). Because, in the main, Darwin believes that spaces in "the polity of nature" are generally limited, these three varieties (or sub-species) will compete for the same ecological niche, but only one strain will survive the contest. The lesson is that parricide[3] pays – your branch in the tree of life gets to continue if you exterminate those of your relatives who are not your direct progeny, but who are sufficiently similar to compete for the same scarce resources.

Darwin notes this without batting an eye in *Descent*, and rightly so, since in *Origin* had already spoken at length about the "struggle for existence" that results in

[2] Darwinian nature is not saltationist, as is the Eldredge/Gould version of "punctuated equilibrium."

[3] The term covers both the killing of one's parents (the usual usage) as well as other close relatives. Killing one's cousins (Darwin's "intermediate links") has apparently not been deemed worthy of a distinct term.

continuous massive extermination (of individual animals as well as whole species) – what some have called a kind of "eternal Treblinka." In *Descent* he is merely applying the logical consequences of "the principle of evolution" (really he means "natural selection" at this point, since even in 1871 Darwin allows that Lamarckian use/disuse as well as sexual selection also occur in addition to natural selection) to humans, both in terms of the "subspecies" of homo sapiens (read: different races) as well as our closest kin (and competition) in the primate family: anthropomorphous apes. The careless racism of the passage has attracted a deserved amount of attention, but less noted is the "question of the animal" imbedded therein. What I want to ask here is how this particular feature of the Darwinian universe, the generalized acceptance of natural selection that proceeds by massive extermination, fits in with the return to the "other Darwin" that "new materialists" are carrying out – what does it mean for political theorists today who take up Darwin? I am especially interested in how this issue might inflect (or infect) the questions that philosophers like Elizabeth Grosz asks, particularly as they think about human/nonhuman relations. Grosz is a sophisticated and thoughtful feminist philosopher of a Deleuzean stripe, and her re-appropriation of Darwin is notable in that she explicitly argues Darwin's utility for those political theorists who want to challenge anthropocentrism. She does this via a subtle alembic – distilling Darwin, if you will – that separates the late Darwin's elaboration of sexual selection from his earlier championing of natural selection. Grosz's argument, which I will consider at length below, is that the Darwin of 1871 (in *Descent*) has actually refined sexual selection as a counter-principle to the emphasis on natural selection in *Origin*, in

that sexual selection promotes beauty, excess, exuberance, and costliness, to the detriment of the useful and the functional (the operators of natural selection). Grosz claims that sexual selection, based in sexual difference, forms the basis for *difference* more generally, and that theorists like Irigaray and Deleuze should find Darwin an ally of considerable force. Grosz is probably correct to say that Darwin's elevation of biological difference (indeed Grosz claims that life itself, understood through Darwinian sexual selection, can now characterized as a kind of difference engine – a machine for producing ever greater divergences of form rather than something about species as essences) provides a site for a useful dialogue between feminism and materialism, but it is not clear to me whether this evental-site is one that should be celebrated (without remainder) from the perspective of critical animal studies. I worry that Grosz's distinction between natural and sexual selection is not as firm as she would like, at least so far is Darwin is concerned, in that natural selection may be doing more of the work than acknowledges. More than this, however, I am troubled by a number of anthropocentric themes recur in her work, including the manner in which she *does* allow a place for natural selection to occur. As I will argue below, it seems that natural selection is acceptable for Grosz, as long as it is excluded from operating in the human sphere – humans are now subject solely to sexual selection, while nonhumans are subject to both her preferred difference engine (sexual selection) as well as the more brutal system of natural selection. In this way, an unstated preference for one species (the very thing that is disallowed by the Darwinian approach she endorses) is allowed to subtly but substantially shape her political theory, leaving nonhuman animals in a paradoxical situation:

humans and nonhuman animals are now equalized in the sense the both are under Darwinian logics, but nonhumans end up bearing a disproportionate burden by being the sole focus of natural selection. My worry is that Grosz has in effect created a separate biological system for nonhumans, while ostensibly doing exactly the opposite. Nonhumans receive voice and agency equivalent (or at least analogous) to human voice and agency, but the net effect of natural selection's "creep" in her thinking may leave anthropocentrism in more than a trace form. The upshot is that we may need a different vision of ecology, perhaps less Darwinian, if we are inclined to construe the human/nonhuman relationship in non-sacrificial terms.

Sacrifices

Before I can turn to Grosz and the bifurcation of sexual and natural selection, I need to talk a little more about the problem with Darwinian natural selection from the vantage of critical animal studies. There are, of course, many things about natural selection that one might find troubling, and many critics are inclined to focus on the troubles that accompany "social Darwinism," the application of natural selection as a norm for structuring human social relations. My worry is primarily with the human/nonhuman aspect of natural selection, however, though (as will become clear) this concern is one that certainly applies to the social Darwinists as well. It is, in brief, that natural selection views "nature" as a sacrificial machine, and that this sacrificial engine disproportionately favors humans at expense of nonhumans (though mainly it just punishes nonhumans indiscriminately).

To see this we may first look at what Darwin says about the "struggle for existence" in *Origin*: "every single organic being around us may be said to be striving

to the utmost to increase its numbers; that each lives by a struggle at some period of its life; that heavy destruction inevitably falls either on the young or old, during each generation or at recurrent intervals" (Darwin 1982, 119). Darwin generalized Malthus's claim (about dire relationship between human life's tendency to reproduce geometrically while food production only increased arithmetically) to all living beings (see Bowler 1976).[4] This meant that any perception of stability on the part of the observer of nature had to reconcile this seeming stability with the fact (according to Darwin) that every living thing, left to its own devices, would expand until it was the only living thing visible – not turtles all the way down but turtles all the way 'round, if its turtles you're considering. Given that this is not what we see, Darwin says, we can infer that each species is undergoing constant culling, either by disease, famine, or predation, so that stability's price tag is a constant "battle within battle" (Darwin 1982, 124) *between* species and *within* species for the scarce resources that enable survival (and production of successful offspring). If this sounds wasteful, it is, as Darwin acknowledged in a letter to his friend Joseph Hooker: "What a book a devil's chaplain might write on the clumsy, wasteful, blundering, low, and horribly cruel works of nature!" (Gould 1990, 12). But Darwin could reconcile himself to this wastefulness by concluding that all of this death was, in the end, worth it, as he summed up in the *Origin*: "When we reflect on this struggle, we may console ourselves with the full belief, that the war of nature is not

[4] Reading Malthus came as a revelation to Darwin, and supplied him with the missing piece of the evolutionary puzzle in the 1830s. The relationship between English capitalism [via Malthus (the population bomb) and Adam Smith (the "invisible hand" extended to "nature")] and Darwinian biology has been explored before, though it seems insufficiently appreciated by most biologists. What a felicitous coincidence that the laws of capitalist development happen to track with Nature's own design!

incessant, that no fear is felt, that death is generally prompt, and that the vigorous, the healthy, and the happy survive and multiply" (Darwin 1982, 129).

One initial aside might be to note that Darwin here gives a progressive and hierarchical justification for natural selection – something his new defenders tend to underplay in the service of a radically contingent/nonhierarchical nature (see Grosz 2004) – but the more important point is the way that Darwin justifies these deaths via a kind of cost-benefit story. If this narrative of individual deaths on behalf of the greater good sounds familiar, it should - it is a sacrificial framework that has been a common rhetorical trope since the Homeric Greeks at least. Stephen Jay Gould brings us back to this Greek tradition when he talks about natural selection as a "hecatomb":

> The key to understanding Darwin's third alternative lies with a word, unfortunately almost extinct in English, that deserves a revival--hecatomb. A hecatomb is, literally, a massive sacrifice involving the slaughter of 100 oxen--a reference to ancient Greek and Roman practices. By extension, a hecatomb is any large slaughter perpetrated for a consequent benefit. Natural selection is a long sequence of hecatombs. Individuals vary in no preferred direction about an average form for the population. Natural selection favors a small portion of this spectrum. Lucky individuals in this spectrum leave more surviving offspring; the others die without (or with fewer) issue. The average form moves slowly in the favored direction, bit by bit per generation, through massive elimination of less favored forms… adaptation is not an emblem of God's benevolence, good design, on the contrary, is an indirect result of the horrid system of multiple hecatombs known as natural selection. (Gould 1990, 12-13)

Gould's concept of natural selection as "evolution by hecatomb" is a self-conscious education in the "toughness" that the truth of the world requires of us (Gould 1990, 16), though it is not toughness extended to intrahuman conduct. Unlike social Darwinists (and perhaps even some sociobiologists, if one were to be uncharitable), Gould says that "human beings, as moral agents, cannot bear the hecatomb of such a

system applied without restraint to our own affairs. We therefore never let laissez faire operate without some constraint, some safety net for losers" (Gould 1990, 16).

Now one might fairly reply that while this is an unfortunate truth of the world, since "nature is not a moral agent" (Gould 1990, 16) there is nothing much to be done about it, and no one to blame if this simply "is" so.[5] But matters are not always as simple as they appear, and we should be especially wary of explanations or justifications that serve to justify an existing system of privilege by way of naturalizing or reifying domination (as with the happy coincidence alleged between capitalist economics and natural selection, for instance).[6] In spite of Gould's credulity, however, his attention to the sacrificial aspects of evolution is a useful perspective if we complicate and deepen the definition of sacrifice that informs his notion of "evolution by hecatomb." We might, for instance, also attend to the Greek origins of the term, as does Gould, but if we look a little closer we can see other resonances that Gould does not notice. First, as a caveat, we should note that sacrifice had many valences, many purposes, and that it is difficult to give an all-encompassing definition of sacrifice that does justice to all the phenomena we might possibly label without thereby generalizing to the point of indistinction. Still, there is some truth to Derrida's claim that sacrifice is simply a non-criminal putting-to-

[5] While Gould denies moral agency to nature, it is significant that Darwin is rather cagier on the matter (as in the above quoted passage from the *Origin*). While Darwin decries nature's brutality in the letter to Hooker, he defends it on what seem like fairly conventional moral grounds – it isn't all bad, those who suffer die quickly (generally), and the results are all to the good (the vigorous, healthy, and happy are the survivors). It all begins to sound like a progressive teleology that proceeds by almost-moral means.

[6] Gould, for instance, notes the significant ideological influence of Malthus and Adam Smith on Darwin, though he does not seem disturbed by the relationship. Others have made much of this synergy in uncritical ways (Tullock 1977, Masters 2008, and Arnhart 2013, for example).

death, a killing (for some communal purpose) that does not count as murder (Derrida 1991). But scholars of religion would tell us that sacrifice, the consecrating of animate matter (vegetable or animal) to the gods, could be done for a variety of reasons, among them apotropaics, expiation, gratitude, material gain, gratuitous expenditure, communal bonding, or to display the prestige of a ruler (see Hubert and Mauss 1964 for example). Whatever the purpose of the sacrificer, in the Greek context the ritual included an especially curious feature, dubbed the "comedy of innocence" (*Unschuldkomodie*) by philologist Karl Meuli, whose ideas were developed in turn by classicist Walter Burkert. Burkert argues that all Greek sacrifices ideally required the consent of the animal victim (or that the animal willfully incur guilt through a sacrilege), and that a variety of rituals were constructed in order to facilitate (or better said, simulate) this consent.[7] The details are not all that important (in some rituals the animal's head was sprinkled with water so that it would nod its head as if to say "yes," for example), but I am interested in the way that Gould's invocation of sacrifice as the controlling metaphor for evolution may be related to the Greek "comedy of innocence."

Now Gould does not hesitate to label evolution as a sacrificial practice (as a hecatomb) – but where is the comedy in all this? My tentative version goes something like this: for Gould (and Darwin, and Dawkins, and Dennett, etc.)[8] natural

[7] For the relationship of this practice to Greek political philosophy see Dolgert 2012, or for the locus classicus, see Burkert 1983.

[8] Reading Dennett (1995) you might think that he and Dawkins (1976) are the polar opposite of Gould, in that Gould's preferred version of evolution, through sudden "punctuated equilibria," is opposed to the gradualism preferred by Dawkins et al. While this is a real difference, on the fundamentals I do not consider Gould/Dawkins to be a dichotomy so much as two sides of the same coin.

selection is as much an innocence-producing machine as it is a sacrificial machine (better said, as a sacrificial machine it works via innocence-producing devices). It functions by giving voice to the subjects of natural selection – animals, plants, protozoa – in the form of a "true" account of their agency in the operations of nature, and using this voice to obtain the 'consent' to their own deaths for the greater good of the system. This account, in which "[i]ndividuals are struggling for reproductive success, the natural analogue of profit," represents animals as actors akin to *homo economicus* under capitalism:

> Speaking of an actor in the world of laissez faire, Adam Smith states:
> 'He generally indeed neither intends to promote the public interest, nor knows how much he is promoting it.... He intends only his own gain, and he is in this, as in many other cases, led by an invisible hand to promote an end which was no part of his intention.'
> Such a lovely image. The "invisible hand" that produces order, but doesn't really exist at all, at least in any direct way. Darwin's theory uses the same invisible hand--but formed into a fist as a battering ram to eliminate Paley's God from nature. (Gould 1990, 16)

Gould's "battering ram" combines the individual strivings of animals to form a higher order, intended by none of the animals but somehow created out of the micro-disorder of individuals pursuing their own selfish ends. Gould cheerfully compares this process to an execution squad that kills off most of the animals in any given generation, and which then repeats the executions in every subsequent generation, ad infinitum.

The upshot is that it is not anyone's design (gods or God or Nature) that does this to animals – the hecatomb is their own doing as they go about their daily life eating and reproducing – so no one is responsible for the continuing atrocities carried out through the evolutionary process by the agents themselves. They in

effect consent to their slaughter by their own choices, and we as humans (who, you'll recall Gould saying, try to meliorate or check natural selection when it comes to our own species), have no part in causing this. And in fairness, this does not sound like an unreasonable position, does it? I don't walk out into the forest and look for deer to point out to wolves, parasites, and other competitor-deer, do I? Even allowing for human intervention in the evolutionary paths of some animals and plants (certainly this was happening even before the massive species extinctions that the 20th century witnessed), the 3.5 billion year history of life on earth has seen relatively little in the way of human interference, relatively speaking. So where is the trouble in all this? Gould sees the sacrificial aspects of natural selection, but since neither he nor we design or cause any of this process, what is the difficulty in the animals' voice represented through natural selection (as a hecatomb)? I think that it lies in the cultivation of a sensibility of human separateness from the rest of nature, in spite of what seems to be a general leveling between human and nonhuman. "We" are a product of the economy of generalized cruelty that is natural selection, but we now wall ourselves off from it to the extent we can, while condemning the rest of nature to its sacrificial reign. "We" operate against nature in so far as it runs through natural selection, but at the same time we believe that nature's true voice speaks through the panoply of micro interactions that are tragic in the short term but progressive in the long term. Natural selection is a cruel utility maximizer, though it maximizes utility not for individual creatures (who are merely the means – see Dawkins 1976 and Wilson and Wilson 2007 for contrasting views on whether the gene or the group is the level of selection) but for

micro or macro units. But since it selects for "the vigorous, the healthy, and the happy" and selects against all the rest, based on their 'consent' as they pursue their self-interest, we are left with a system that is in effect justified through a teleology-by-sacrifice.

Sex Against Nature

There is so much that is dreary in this accumulation of violence after violence across billions of years that it might start to get you down – one almost begins to feel like Walter Benjamin's "angel of history" (from the Paul Klee painting) who watches powerlessly in horror as crime multiplies crime across the millennia. Elizabeth Grosz's Deleuzean-inspired intervention into Darwinism comes as a welcome tonic after all of this pain and misery, and though I will be outlining a few of my misgivings a little later on, there is no denying that Grosz's vision is an attractive and nuanced appropriation of Darwin that deserves careful attention. In this section I will set out the compelling version of Darwin that Grosz recuperates from the later Darwin (the *Descent* rather than the *Origin*), a salutary complication of the simplistic utilitarian version of Dawkins and Dennett.

Grosz is well aware of the troubled history of Darwinian thought vis a vis feminism, particularly insofar as the sociobiological synthesis has tended to uncritically adopt certain arguments from the *Descent* – to wit those that accord with the clichéd view of aggressive males battling over choosy females. Grosz draws our attention to the many places in *Descent* where Darwin shows the opposite tendency prevails – particularly among many insect species – revealing an indeterminacy in what many evolutionary psychologists take to be the determinacy

of the EEA (Environment of Evolutionary Adaptedness – usually this refers to the emergence of humans from primates in the Pleistocene era roughly 2.5 million years ago). More generally, though, Grosz is interested in destabilizing not just the patriarchal consensus of sociobiology, but also the anthropocentrism that gives birth to sociobiology's worst manifestations. Grosz sees in Darwin one of the first real levelers (in the species sense), since he disestablishes humans from the center of the cosmos by showing not only our descent from "humbler" forms of life (and thus the echoes of those lower forms still lives in humans), but also how those humbler forms possess many of the very traits that we believe make us special:

> There are as many forms of reason, and thus modes of knowing, and forms of scientific apprehension, as there are modes of perception and modes of efficient action. There are as many modes of ethics or morality as there are bonds that bind together individuals and groups through relations of affection… The human, when situated as one among many, is no longer in the position of speaking for and authorizing the analysis of the animal as other, and no longer takes on the right to name, to categorize, the rest of the world but is now forced, or at least enticed, to listen, to observe, to respond, to become attuned to a nature it was always part of but had only aimed to master and control – not nature as unified whole, but nature as ever-striving, as natural selection, as violence and conflict. (Grosz 2011, 24)

This is a revolutionary position – epistemological, ethical, political, take your pick – and one that moves Grosz into the center of the debates in environmental political theory and critical animal studies over the necessity to challenge anthropocentrism head-on. She sounds a lot like the late Derrida, among others, in her critique of the human proclivity to grant ourselves the exclusive right to name and classify ("the animal – what a word!"),[9] and her invitation to think of ourselves as listeners and responders first (and masters, perhaps not at all), is particularly attractive to me since I have written a little in this vein myself (Dolgert 2010).

[9] See Derrida (2002).

If you have been attending to Grosz's quotation carefully you will have already noted that she specifically mentions natural selection as one the frames by which we should encounter nature, yet I have set up this section by way of contrasting her approach to the usual Darwinian focus on natural selection. Grosz knows her Darwin, and she does not shy away from acknowledging some place for natural selection in her non-anthropocentric (she even calls it inhuman) vision of nature. But while she concedes natural selection's presence, she reduces it from the central position it holds for Dawkins, Dennett, Wilson, et al., and instead elevates Darwin's other intellectual contribution, the principle of sexual selection. Sexual selection, roughly speaking, is the selection of characteristics in a single sex of one species due to differential success in sexual reproduction, either because males succeed in defeating their rivals through the adaptation (say, larger antlers), or because females find the adaptation more attractive (say, colorful plumage). Darwin's *Descent* is devoted primarily to the explication of sexual selection as the cause for the origin of different races of humans, though much of the text describes nonhuman sexual selection in order to justify the main conclusion of the text.

For Grosz something much more radical is going on here, however – Darwin has in effect created a second principle of selection to rival the main principle of the *Origin*: "Darwin's conception of sexual selection is irreducible to natural selection, and thus is relatively independent of the principles of fitness or survival…[it] complicates and compromises natural selection" (Grosz 2011, 118). It is a principle of "excess" and "intensification" that "unhinges the rationality of fitness that governs natural selection…selecting according to terms other than those related to fitness"

(Grosz 2011, 132), and Grosz goes so far as to say that it and not natural selection is "productive of all of the richness and complexity of life" (Grosz 2011, 143). She contends that Darwin himself thought it "more powerful" than natural selection, especially when it comes to the origins of that which is most "human-like" in us, as she quotes him at length:

> He who admits the principle of sexual selection will be led to the remarkable conclusion that the cerebral system not only regulates most of the existing functions of the body, but has indirectly influenced the progressive development…of certain mental qualities…pugnacity, perseverance, strength and size of body, weapons of all kinds, musical organs, both vocal and instrumental…have all been indirectly gained by the one sex or the other, through the influence of love and jealousy, through the appreciation of the beautiful in sound, colour or form, and through the exertion of a choice; and these powers of the mind manifestly depend on the development of the cerebral system. (Darwin, quoted in Grosz 2011, 136).

Grosz gives us good reasons indeed to return to Darwin: his non-anthropocentric cosmology not only brings human and nonhuman into a relation of equality and possible reciprocity, but it does so without reductionism, and with a subtle appreciation of the way that difference, contingency, flux, and creativity are not just the ideology of postmodern thinkers, but the grammar of life itself.

Animal Spirits

I have already noted some of my concerns (stemming from "critical animal studies") with Grosz's return to Darwin, in spite of the very attractive features of her analysis. I should say that I do not take these concerns to be antithetical to the motivation for Grosz's project, at least to the extent that I understand it. In what follows I offer some tentative critical remarks that are designed, as much as anything, to elucidate some underlying tensions within Grosz's work, in the hope that additional clarification may be elicited that more directly addresses the place of

nonhumans within her philosophy. Given that her own trajectory has moved primarily within the ambit of feminism (and has focused the relation of Deleuze, Bergson, and Darwin to feminism and aesthetics), it may be that Grosz has not considered nonhuman animal bodies to be a central issue to date. While she has had much to say about the interpenetration and mutual constitution of the "inhuman" and the "human," as well as the essential continuity between human and nonhuman animals, it strikes me that she has been more concerned with the conceptual rearticulation of "the human" rather than the specific treatment meted out by humans to nonhumans.

One marginal comment she makes can illustrate this point, though I do not want to claim too much significance for it. She is discussing the felicitous miscegenation between human and nonhuman in aesthetics when she explains, somewhat offhandedly, that "[t]hese animal arts are the conditions under which the resources of nature, plucked or dragged away from their given context, become the raw materials of the human arts. The feathers the bird uses to appeal to other birds are those used by milliners in their design of hats… Art is the human capitalization on these inhuman, animal qualities, the submission of these materials to other requirements than the instinctive (Grosz 2011, 185-186). The first thing to remark here is that like Gould, Grosz too is drawn to capitalist imagery in discussing the human/nonhuman relation ('resources of nature,' 'capitalization'). The second is the rather infelicitous pun Grosz makes, linking the resources 'plucked' away to the milliners of the following sentence (surely intentionally?). Whether Grosz is aware of it I do not know, but the process of plucking feathers from birds is a pleasure that

is decidedly one-sided, since the birds do not live through the experience. The history of mass killing of birds specifically for their bright plumage is a sad one – estimates are that in the late 1880s as many as five million migratory birds per year were killed for the hat trade just in the United States – with denuded bird corpses simply left to rot across the Florida wetlands. Not until 1918, with the enactment of the Migratory Bird Treaty Act (between the United States and United Kingdom on behalf of Canada) was this annual slaughter checked, and over 800 species are now on the protected list (the treaty is still in effect and was updated in 1994 and 2005).[10]

I am not sure exactly what to make of Grosz's oblique reference to such practices, since while she does not endorse the bird-kills directly she certainly does not note the massive cruelty implicit in the kind of millinery she highlights. Regardless, one might ask, is she not troubled that the sexual allure of birds is coopted by humans in a culture of conspicuous consumption (feathered hats are many things to many people, but they are surely consumerist if nothing else)? Is it too much to connect her insensitivity (at the very least) to her ready-use of the images of humans 'capitalizing' on 'resources' (i.e. bird-feathers robbed from living birds) in order to 'submit' them to non-instinctive purposes?[11] An uncharitable reading of this passage would be that Grosz's inhuman-human looks much the same

[10] For example, see the history detailed at: http://www.palmbeachpost.com/news/news/how-floridas-baby-birds-survived-hat-fashion/nLpFb/

[11] Her distinction between 'instinct' and the 'capitalization' and 'submission' of those instincts is also somewhat at odds with her general inclination to break down the normally rigid barriers between human and nonhuman practices. Again, this sounds a lot like the old humanism creeping back in.

as the 'old' anthropocentric human she hopes to overcome. But is there more going on here?

I suspect that this blasé attitude toward millinery cruelty (etc.) may be the unintended consequence of natural selection's quiet presence, even in Grosz's revised Darwin. Put simply, to extent that one buys into the reality of "evolution by hecatomb" may determine how much sympathy one is likely to muster for nonhuman species. I don't mean this in as a statement of apodictic causality, but instead to mark out a possible trajectory imparted to our capacity for extended feeling – if you think of life's 3.5 billion year history as a series of holocausts it might induce in you a kind of "meh" approach – what are a few million flying birds in the scheme of life, anyway?[12] I've already noted how Grosz tries to include natural selection in her assessment without conceding it too much, granting it the power to create sexual selection, especially, but her account seems more under natural selection's sway than she completely acknowledges. Her return to Darwin (instead of moving to non- or semi-Darwinian versions of evolution) lets the genie back in, since, while she is correct to note Darwin's fulsome praise of sexual selection, he does not make the move that she attributes to him, whereby sexual selection comes

[12] I recognize, of course, that this goes against our general tendency to equate those who discuss evolution professionally – biologists of all sorts primarily – with "nature-lovers." Doesn't Gould talk of "wonderful life"? Yes, he certainly does. And while I would hardly deny that Gould and many others do indeed evince a deep concern for "nature," I think it is important to see that the "tough" view that even optimists like Gould truck in may have unforeseen affective results. One may find oneself thinking of animal death as Augustine is reputed to have thought of human mortality, upon his deathbed: "'In the midst of these evils, he was comforted by the saying of a certain wise man: "He is no great man who thinks it a great thing that sticks and stones should fall, and that men, who must die, should die."' (Possidius, quoted in Peter Brown's *Augustine of Hippo*, Berkeley, CA: University of California Press, 1967).

to take the place of natural selection in human life.

Grosz at times treats the relationship between the two principles almost as if they are polar opposites, but there is no indication that Darwin thought this (and certainly sociobiologists like Wilson & Wilson [2007] see a tension, but not a contradiction).[13] Darwin always considered sexual selection to be a secondary phenomenon, important to be sure (as the quotation Grosz cites attests), but one still subject to natural selection's ultimate reign. In the quotation I cite at the beginning of this paper (but which Grosz does not note), for instance, it is natural selection that determines the "extermination" of less civilized humans and the anthropomorphous apes. Grosz does cite Darwin favorably on the evolution of language (Grosz 2011, 19-22), but she fails to see that again it is natural selection rather than sexual selection that determines which languages die and which survive. She also gives primacy to natural selection rather than sexual selection when she relies on biologist Jacob von Uexküll in her discussion of animals and art. Uexküll attends to the *Umwelt*[14] that an animal lives within, the "soap bubble" that all creatures are naturally attuned to – the physical environment, prey and predators, competitors, sunlight and air currents, etc. – and Grosz finds Uexküll's use of musical imagery to describe the textures of the *Umwelt* a productive way of thinking about human/nonhuman aesthetic resonances (Grosz 2011, 173-186). But while Uexküll's

[13] You could fairly respond: well, so what if Darwin still granted priority to natural selection? And that is a reasonable response – one can say that Darwin got evolution wrong – but it is difficult for Grosz to avail herself of this rejoinder. She is not independently assessing biological data to make her case, but rather relying on finding the resources for her argument primarily in Darwin's texts. In part she's right to amend the sociobiological Darwin, as I have indicated in the third section of the paper, but she does not have enough to make her case purely from within Darwin's corpus.

[14] Roughly "environment" or "surroundings" – the world around the subject.

appeal on this score is understandable enough, Grosz again underemphasizes the role of natural selection, in spite of referencing Uexküll on exactly this issue. She notes that it is "crucial" that "we need to understand that the units of evolution are neither individuals nor species; rather the living creature, individual and species, is fully immersed in an Umwelt. It is this particular tune, which the living creature plays and which its Umwelt composes, that survives or becomes extinct, that is the object of natural selection…[t]he organism and its Umwelt taken together are the units of survival" (Grosz 2011, 177; 182).[15] This gives natural selection as much influence as any panadaptationist might want, yet when Grosz talks about sexual selection and the production of difference as expenditure, waste, or profligacy, she shifts away from Uexküll (and Darwin) without explaining how the two principles exactly relate (Grosz 2011, 136, for instance).

In fairness to Grosz, there may be yet more to say on the weight we should attribute to evolution's form (natural selection of surplus individuals) versus its substance (natural variation, or 'difference' for Grosz). Modern biologists like Motoo Kimura (and Gould following on him) have argued that adaptations normally attributed to natural selection (by Dawkins, et al.) have more to do with "neutral" molecular mechanisms in cell development (the 'natural variation' side of the equation).[16] It may turn out that evolution may have less to do with natural selection than is currently surmised, though this would require not a "return to

[15] Interesting, neither Dawkins nor Dennett would disagree with much in Grosz's statement, though they might emphasize that genes need to be included in the relational Umwelt if we are to gain a complete picture. For all three, individuals and species are not relevant units of selection.

[16] See Kimura's 1983 *The Neutral Theory of Molecular Evolution* (Cambridge, UK: Cambridge University Press).

Darwin" but more of an overcoming of (or becoming other than-) Darwin.

If Grosz (through Darwin) is subtly influenced by the continuing presence of natural selection, there is also a sense in which she is also impinged by a sacrificial framework independently of the sacrifices Gould and I attribute to natural selection, also unrecognized. Grosz contrasts natural and sexual selection by way of George Bataille's concept of the general economy: "[i]f natural selection functions, in the terms provided by George Bataille, according to a restricted economy, according to determinable rules and procedures, then sexual selection functions according to a general economy, without order, without striations or organization. The laws of sexual selection are the principles of aesthetics…the activity of spontaneous beings who operate according to their (sometimes) irrational desires and tastes" (Grosz 2011, 131). Now while this is not the place for an extended exegesis of Bataille's theory of religion, I find it troubling that Grosz can cite Bataille without any mention of the status that Bataille grants to sacrificial violence in his system. Bataille is a complex thinker, to be sure, and it is not a case of being 'for' or 'against' him in any simple sense, but crucial to the operation of his general economy is the expenditure of excess energy through destruction (often via blood sacrifice). Animal sacrifice is in principle secondary, to Bataille, to human sacrifice, since in a human death the subject is given over entirely to being consumed (wasted) with nothing left in return, but we could still say of Bataille that he is broadly sympathetic to the motivation behind animal sacrifice (Elmer 2012). I cannot say what Grosz thinks about this with any certainty, of course, given the brief nature of the reference to Bataille, but given the analogies between her offhand remarks on millinery, the

submission of the natural to the artificial, and the sacrificial machinery underlying natural selection, I wonder whether her 'undoing' of the human leaves much space open for ethical concerns regarding the deaths of nonhumans.

Conclusion

It seems to me that there are two natural alternatives from which our path of inquiry might now diverge. The first, not my favored alternative, would be: "well, so you don't like natural selection since you don't care for how it comports us, affectively and perhaps strategically, vis a vis our fellow creatures, but this is the only game in town. The biological consensus has spoken, and there is as little point in opposing it as opposing the heliocentric theory of the solar system." This alternative I would term "tragic" (rather than Gould's "tough"), since it counsels that knowledge can come only through suffering – a biological rendering of Aeschylus' *pathei mathos* if you will – as it is only through the hecatombs over billions of years that we, the universe's unique knowers, have emerged. Given this fact, a tragic perspective might tell us that while we are born amidst a cosmos of suffering, that need not have anything to say about how we live our lives. As Gould and many others have argued, nature's rules should not impel us in any particular direction because they are not moral rules at all. If, for instance, the thesis of "man the hunter" turned out to be true, and that human evolution had been specifically abetted by the turn to organized violence, this would not tell us the first thing about whether to support or oppose intra-group or inter-group violence today. On this view, humans, in spite of being the products of natural evolution, are almost as much outside nature as they are in Kantian theories of freedom.

I said that I do not care for this alternative, primarily because it sunders us from a potentially valuable source of self-knowledge (biology and her disciplinary descendants), and also because I am not yet entirely convinced by the just-so sacrificial story of natural selection (and its peculiar relation/derivation from Malthus and Smith). So a second path of inquiry might be to leave Darwin at some distance as we explore questions regarding life's variegated operations. It may be that some version of molecular biology (Connolly 2013, Kauffman 1993, Kimura 1983, Stengers 2011) may find a fruitful way of creating a tensional space of dialogue between (pre-human) evolution and human purposes, though I must admit that Dennett's ability to enlist Kauffman in the ranks of the pan-selectionists gives me pause. There are also off-kilter approaches to evolution that intersect human meaning with the history of nonhuman species, without engaging in either biological reductionism or retreating to Kantianism (Flusser and Bec 2012), though the promise of such approaches is yet unclear. I hope it is not too precious to end on a note of perplexity, but perhaps there are ways forward through Grosz that are less tainted with sacrifice and which I have not discerned. Perhaps there is also yet another "other-Darwin" whose day is yet to come.

WORKS CITED

Arnhart, Larry. 1994. "The Darwinian Biology of Aristotle's Political Animals." *American Journal of Political Science* 38(2): 464-485.

Arnhart, Larry. 1995. "The New Darwinian Naturalism in Political Theory." *American Political Science Review* 89(2): 389-400.

Arnhart, Larry. 2013. "The Grandeur of Biopolitical Science." *Perspectives on Politics* 11(2): 500-503.

Bowler, Peter. 1976. "Darwin, Malthus, and the Concept of Struggle." *Journal of the History of Ideas* 37(4): 631-650.

Burkert, Walter. 1983. *Homo Necans: The Anthropology of Ancient Greek Sacrificial Ritual and Myth*, translated by Peter Bing. Berkeley, CA: University of California Press.

Charney, Evan, and William English. 2013. "Genopolitics and the Science of Genetics." *American Political Science Review* 107(2): 382-395.

Connolly, William. 2013. "Biology, Politics, Creativity." *Perspectives on Politics* 11(2): 508-511.

Darwin, Charles. 1982. *The Origin of Species*. Hammondsworth, UK: Penguin e Books.

Darwin, Charles. 2004. *The Descent of Man*. London, UK: Penguin Books.

Dawkins, Richard. 1976. *The Selfish Gene*. Oxford, UK: Oxford University Press.

Dennett, Daniel. 1995. *Darwin's Dangerous Idea: Evolution and the Meanings of Life*. New York, NY: Simon & Schuster.

Derrida, Jacques. 1991. "Eating Well," in *Who Comes After the Subject*, ed. Eduardo Cadava. London, UK: Routledge.

Derrida, Jacques. 2002. "The Animal That Therefore I Am (More to Follow)." *Critical Inquiry* 28: 365-405.

Dolgert, Stefan. 2010. "Species of Disability: Response to Arneil." Political Theory 38(6): 859-865.

Dolgert, Stefan. 2012. "Sacrificing Justice: Suffering Animals, the Oresteia, and the Masks of Consent." *Political Theory* 40(3): 263-289.

Elmer, Simon. 2012. *The Colour of the Sacred: Georges Bataille and the Image of Sacrifice*. London, UK: The Sorcerer's Apprentice.

Flusser, Vilem, and Louis Bec. 2012. *Vampyroteuthis Infernalis: A Treatise, with a Report by Institut Scientifique de Recherche Paranaturaliste*, translated by Valentine Pakis. Minneapolis, MN: University of Minnesota Press.

Fowler, James, and Christopher Dawes. 2013. "In Defense of Genopolitics." *American Political Science Review* 107(2): 362-374.

Gangle, Rocco. 2007. "Collective Self-Organization in General Biology: Gilles Deleuze, Charles S. Peirce, and Stuart Kauffman." *Zygon* 42(1): 223-239.

Gould, Stephen. 1980. "Is a New and General Theory of Evolution Emerging?" *Paleobiology* 6(1): 119-130.

Gould, Stephen. 1990. "Darwin and Paley Meet the Invisible Hand." *Natural History* 99: 8-16.

Gould, Stephen. 1998. "Gulliver's Further Travels: The Necessity and Difficulty of a Hierarchical Theory of Selection." *Philosophical Transactions of the Royal Society of London B* 353: 307-314.

Gould, Stephen and Richard Lewontin. 1979. "The Spandrels of San Marco and the Panglossian Paradigm: A Critique of the Adaptationist Programme." *Proceedings of the Royal Society of London B* 205: 581-598.

Grene, Marjorie, and Daniel Depew. 2004. *The Philosophy of Biology: An Episodic History.* Cambridge, UK: Cambridge University Press.

Grosz, Elizabeth. 2004. *The Nick of Time: Politics, Evolution, and the Untimely*. Durham, NC: Duke University Press.

Grosz, Elizabeth. 2005. *Time Travels: Feminism, Nature, Power*. Durham, NC: Duke University Press.

Grosz, Elizabeth. 2011. *Becoming Undone: Darwinian Reflections on Life, Politics, and Art.* Durham, NC: Duke University Press.

Haraway, Donna. 1989. *Primate Visions: Gender, Race, and Nature in the World of Modern Science.* New York, NY: Routledge, Chapman, & Hall.

Hibbing, John. 2013. "Ten Misconceptions Concerning Neurobiology and Politics." *Perspectives on Politics* 11(2): 475-489.

Hoquet, Thierry. 2010. "Is Sociobiology Amendable? Feminist and Darwinian Women Biologists Confront the Paradigm of Sexual Selection." *Diogenes* 225: 113-126.

Kauffman, Stuart. 1993. *The Origins of Order*. Oxford, UK: Oxford University Press.

Kauffman, Stuart. 2007. "Beyond Reductionism: Reinventing the Sacred." *Zygon* 42(4): 903-914.

Kimura, Motoo. 1983. *The Neutral Theory of Molecular Evolution*. Cambridge, UK: Cambridge University Press.

Losco, Joseph. 2011. "From Outrage to Orthodoxy? Sociobiology and Political Science at 35." *Politics and the Life Sciences* 30(1): 80-84.

Masters, Roger. 1982. "Is Sociobiology Reactionary? The Political Implications of Inclusive Fitness Theory." *Quarterly Review of Biology* 57(3): 275-292.

Masters, Roger. 1990. "Evolutionary Biology and Political Theory." *American Political Science Review* 84(1): 195-210.

Master, Roger. 2008. "Historical Change and Evolutionary Theory: From Hunter-Gatherer Bands to States and Empires." *Politics and the Life Sciences* 26(2): 46-74.

Hubert, Henri, and Marcel Mauss. 1964. *Sacrifice: Its Nature and Functions.* Chicago, IL: University of Chicago Press.

McNeil, Maureen. 2010. "Post-Millennial Feminist Theory: Encounters with Humanism, Materialism, Critique, Nature, Biology and Darwin." *Journal for Cultural Research* 14(4): 227-237.

Rachels, James. 1990. *Created from Animals: The Moral Implications of Darwinism. Oxford, UK: Oxford University Press.*

Roughgarden, Joan, and Meeko Oishi and Erol Akcay. 2006. "Reproductive Social Behavior: Cooperative Games to Replace Sexual Selection." *Science* 311: 965-969.

Rue, Loyal. 2007. "Emergence: Nature's Mode of Creativity. A Guide to Thinking About Emergence." *Zygon* 42(4): 829-835.

Schweber, Silvan. 1977. "The Origin of the *Origin* Revisited." *Journal of the History of Biology* 10(2): 229-316.

Stengers, Isabelle. 2010. "Including Nonhumans in Political Theory: Opening Pandora's Box?" in *Political Matter: Technoscience, Democracy, and Public Life,* edited by Bruce Braun and Sarah Whatmore. Minneapolis, MN: University of Minnesota Press.

Stengers, Isabelle. 2011. *Cosmopolitics II*, translated by Robert Bononno. Minneapolis, MN: University of Minnesota Press.

Tullock, Gordon. 1977. "Economics and Sociobiology: A Comment." *Journal of Economic Literature* 15(2): 502-506.

Tyler, Tom. 2012. *Ciferae: A Bestiary in Five Fingers*. Minneapolis: University of Minnesota Press.

Wilson, Edward O. 1984. *Biophilia*. Cambridge, MA: Harvard University Press.

Wilson, David, and Edward O. Wilson. 2007. "Rethinking the Theoretical Foundation of Sociobiology." *Quarterly Review of Biology* 82(4): 327-348.

Wolfe, Cary. 2013. *Before the Law: Humans and Other Animals in a Biopolitical Frame.* Chicago, IL: University of Chicago Press.

Yusoff, Kathryn, and Elizabeth Grosz, Nigel Clark, Arun Saldanha, and Catherine Nash. 2012. "Geopower: A Panel on Elizabeth Grosz's Chaos, Territory, Art: Deleuze and the Framing of the Earth." *Environment and Planning D: Society and Space* 30: 971-988.