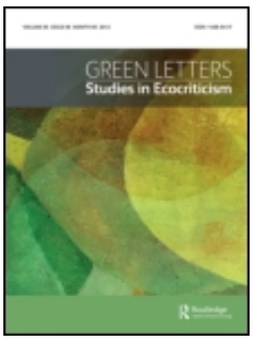

Routledge
Taylor & Francis Group

Green Letters
Studies in Ecocriticism

ISSN: 1468-8417 (Print) 2168-1414 (Online) Journal homepage: https://www.tandfonline.com/loi/rgrl20

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HELENA FEDER

To cite this article: HELENA FEDER (2008) "Biogenetic Intervention" (Or "gardening," Shakespeare, and the future of ecological thought), Green Letters, 9:1, 33-47, DOI: 10.1080/14688417.2008.10589035

To link to this article: https://doi.org/10.1080/14688417.2008.10589035

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> We need the tonic of wilderness ...At the same time that we are earnest to explore and learn all things, we require that all things be mysterious and unexplorable, that land and sea be infinitely wild, unsurveyed and unfathomed by us because unfathomable. ...We need to witness our own limits transgressed, and some life pasturing freely where we never wander.
> ~ Henry David Thoreau

1. "Intervention"

Military action serves as one of the chief mechanisms by which global capitalism struggles to retain a "balance" of key resources, products, and markets; technology makes warfare possible, providing the constant influx of the New necessary to vanquish the "enemy" of the moment, but technology is also the product driving the need for market expansion, the cycle of consumption necessary for systemic stability. The first Bush administration used smart bombs to win their war and their war to market smart bombs, such as the Tomahawk and Cruise missiles and the F117 "Stealth" bomber; technological advances since the Gulf War now allow the current Bush administration and the US military to test and market new products, such as implosion bombs. Bombs, however, are only one of many products on sale now at the "War on Terror." U.S. military use of Humvees in the desert has made Hummers the best-selling large, luxury sports utility vehicle in America. "'When I turn on the TV, I see wall-to-wall Humvees, and I'm proud," said Sam Bernstein, a 51-year-old antiquities dealer who lives in Marin County, California, and drives a Hummer H2. 'They're not out there in Audi A4's,' he said of the troops. 'If I could get an A1 Abrams, I would,' ...referring to the tank, "but I don't know if California would allow it" (Hakim, New York Times). The Hummer gets approximately 11 miles-per-gallon, but don't worry – according to Mike Giovanni, General Motor's marketing manager for the Hummer, G.M. is "focusing on improving fuel economy in high-volume vehicles with new technologies" (Hakim).

And what of the future of warfare? What will we use and market in the next war? The January 2003 issue of National Geographic describes the role of biotechnology in the making of supertextiles, including new fashions for the "Future Warrior," such as a suit that will enable soldiers to become virtually invisible on the battlefield, and "BioSteel," a multipurpose fabric engineered by splicing spider genes into goats (65-7). Jeff Turner, head of the company producing BioSteel, declares, "Civilizations define themselves by the materials they use ...The industrial revolution came about because of steel. Computers came from silicon. We are about to enter the age of bio-mimicry. It's back to nature" (70).

While global capitalism engorges itself on the remaining sources of non-renewable energies, irreversibly damaging or diminishing other so-called

resources in the process (including the human species itself), technological development, as a unified generative force, promises us progressive evolution, beyond our current form and limitations, by positing a paradoxical view of humans as creators inherently superior to creation. This is the heart of the drive to master and surpass Nature; it blends ideologically with the notion of progress that fuels capitalist enterprises, from factory farming to the genetic modification of organisms.

The obvious problem for global capitalism is that it will eventually run out of territory to colonize. However, through biotechnology, or "biogenetic intervention," capitalism hopes to forestall this difficulty with the creation of new products, from BioSteel to made-to-order children and genetically "enhanced" soldiers. While the pharmaceutical industry has long been collecting its profits at the expense of people, certain biotechnologies, such as gene-splicing, nanotechnology, and cybernetics, mark a new phase in colonization of world and the territory of the human body. A critical look in this essay, at recent writing on the ethics of "biogenetic intervention" by Jürgen Habermas, Bill McKibben, and Slavoj Žižek will reveal the problematic concepts of human and non-human nature at the core not only of biogenetic intervention, but also of these analyses rooted in the most basic assumption of Western philosophy. This, in turn, will lead to an examination of "gardening" (and all its connotations: splicing, management, shepherding, stewardship, etc.) in the discourse of nature and art in Shakespeare's The Winter's Tale and in the context of the on-going ecocritical discussion of "gardening" and "wilderness" as models for ecological thought and action.

In The Future of Human Nature, Habermas mourns the "explosive alliance of Darwinism and free trade ideology" fueling globalized neoliberalism. "The issue today," he writes, "is no longer the overgeneralization of biological insights by social Darwinists, but rather the weakening of 'sociomoral restrictions' placed on biotechnological progress for medical as well as economic reasons" (21). Habermas argues that postmetaphysical philosophy must not leave the creation of a substantive, ethical understanding of this brave new world to engineers because certain biotechnologies, genetic interventions in particular, pose a real threat to the foundation of what he calls our "species ethics," our sense of ourselves as moral beings. The self-instrumentalization of the species, according to Habermas, blurs the distinction between "the nature we are and the organic equipment we give ourselves," between the grown and the made, challenging our understanding of ourselves as the authors of our life histories, as morally responsible agents (22). Paraphrasing Hans Jonas, Habermas presents genetic manipulation as part of "a self-destructive dialectics of enlightenment, according to which the species itself reverts from domination of nature to the servitude of nature" (48). He suggests, along with Hannah Arendt, that contingency as origin, or birth as a fact of natural fate, is necessary for our awareness of freedom and for our capacity to be free.

In the London Review of Books, Žižek claims that Habermas' position is "a new version of the old argument that, if we are to retain our moral dignity, it's better not to know certain things" (3). Instead, he argues, "It is not so much that we are losing our dignity and freedom with the advance of biogenetics but that we realize that we never had them in the first place ...the choice is between clinging to the illusion of dignity and accepting the reality of what we are" (3-5). It is "the context of power relations," and not the technology itself, Žižek argues,

which is the problem; he suggests attacking biogenetic reductionism (rather than the actual force of biogenetic intervention), insisting on the "social character of mind" to frame genetic intervention as an opportunity to resist essentialism (5). Unlike Habermas, Žižek welcomes the "objectivization" of the genome.[1]

But what might the search for human subjectivity lose in this objectivization? Habermas suggests that our empathy for organic creatures is "grounded in the sensitivity of our own body and the distinction we make between any kind of subjectivity, however rudimentary, and the world of objects which can merely be manipulated. Biotechnological intervention," says Habermas, "intercepts this correspondence with other living beings" (46-7). Strangely, though, Habermas moves close to Žižek's contrary position when he claims that his criticism "is not rooted in some fundamental mistrust of the analysis and artificial recombination of the components of the human genome as such. In other words," explains Habermas, "the argument doesn't proceed on the assumption that the technicization of 'inner nature' constitutes something like a transgression of natural boundaries" (86-7).

Both Habermas and Žižek seem to argue against biological determinism, to differing degrees. As the title of Habermas' book might suggest, Habermas values the idea of organic nature for the good of the human "species ethic," but fails to give ethical weight to the real plight of nonhuman beings. Žižek's position amounts to much the same thing, overlooking nonhuman others as part of the larger community that shapes human identity. Žižek's eagerness to reconstrue human identity as potentially boundless comes only at the expense of the continued essentialization of nonhuman identities as "nature."

As most biologists know, we are not the only inhabitants of this planet that make tools, learn socially, develop knowledge and tradition, and exhibit region-specific behaviors. There has been much compelling evidence, in publications ranging from Nature to The New York Times Science section, for the existence of culture among a wide range of nonhuman groups, from apes and dolphins to birds and rats. While Žižek and Habermas are willing to explore the question of just what constitutes human identity – from socio-economy to brain chemistry – and are even willing to acknowledge the inherent fluidity of the divide between biology and culture, other beings are still relegated to the realm of static nature, the realm of objects, where every action is explained by the derogatory and tautological use of the term "instinct."

Habermas' presentation of the possibility of the genetic modification of humans as a *wholly new* ethical problem construes humanity as, paradoxically, *wholly* unnatural or superior to the rest of the living world. The "autotransformation of the species" is nothing more than the attempt to transcend, as much as possible, the material conditions of embodiment and embeddedness. This process leads only to the transcendence of the few at the expense of the many. However, in this case, "the many" represents nonhuman beings as well as disenfranchised humans. Habermas' eerie paraphrase of Kierkegaard's moral philosophy seems particularly relevant to the ethical realization of the real world condition of ecological limitation: "finite spirit [must] transcend itself and recognize its

1 In this sense, Žižek welcomes the move to deprive nature of its earth; as he puts it, "Hegel would not have shrunk from the idea of the human genome and biogenetic intervention, preferring ignorance to risk. Instead, he would have rejoiced at the shattering of the old idea [of] ...'Thou art that,' as though our notions of human identity had been definitively fixed. Contrary to Habermas, we should take the objectivisation of the genome fully on board" (5).

dependence on an Other as the *ground* of its own freedom" (9, italics mine).

The wars that global capitalism wages on the land, in the sky, and at sea – and in the soil, air, and water – are *already* inscribed into the very biology of life. In Enough: Genetic Engineering and the End of Human Nature, Bill McKibben initially approaches the problem of biotechnological intervention as the continuation of the economic exploitation of nonhuman nature: "The vision of the would-be genetic engineers," he writes, "is to do to humans what we have already done to salmon and wheat, pine trees and tomatoes," to make people "taller and more muscular, or smarter and less aggressive, maybe handsome and possibly straight" (31). McKibben notes that we have already genetically edited "most of the obvious mammals, except one" – and that experiment is fast approaching ("Designer" 22). Or has it already happened? Just as there was little public awareness of the genetic modification of food crops until many farmers had *already* "planted half the corn and soybean fields in America with transgenic seed" (Enough 15), the process of genetically engineering humans will take place *before* we know it and, as Habermas fears, the fact of this technology in a capitalist economy will steamroll any normative controls. Coming full circle, then, to Habermas' anxiety about the alliance between social Darwinism and free trade ideology, we find in its place McKibben's frightening vision of the future, in which the genetic modification of humans will "benefit the rich far more than the poor ...[it] would take the gap in power, wealth, and education that currently divides our society and the world at large, and write that division into our very biology" (Enough 38).

Unfortunately, McKibben wants it both ways: gene-line therapy crosses the line between human nature and an unnatural future, but humans are also distinctly separate from the rest of the living world. He argues that, unlike other animals, we have meaning that must be safeguarded:

> We are, right now, the animal that knows it will die. The one who has eaten of the apple and is by that knowledge changed. Our understanding that we will die is in some powerful way the essence of who we are – and who we are is a paradox. "Man has a symbolic identity that brings him sharply out of nature," writes Ernest Becker. ... He is dual, up in the stars and yet housed in a heart-pumping, breath-gasping body." The other animals needn't deal with this; neither will the robot-men that spin off into the future. (Enough 163)

Though McKibben states that this technology will mean the "divorce , first of all, between us and the rest of nature" (165), he also insists on human "specialness." In fact, McKibben's counter to the techno-zealot dogma of the necessity of "progress" is simply another dogma, the assertion of human "radical uniqueness" – in effect, of human supremacy. "What makes us unique is that we can restrain ourselves. We can decide not to do something that we are able to do. We can set limits on our desires. We can say 'Enough.'" (Enough 211). Other animals function solely by "instinct" – only we humans, it seems, operate, or are capable of operating, differently:

> These needs have turned into what we call instincts. Strong instincts. If you want to see a beaver, here's all it takes: sneak out to a dam, and pull a couple of logs out (easier said than done – beavers are remarkable builders). The sound of water trickling down the dam will, within a very few minutes, bring

them from their dens. They need to staunch that flow. Now we [humans] all have that beaver drive within us. ...When the engineers say that we are driven constantly to surmount any limit, we know what they are talking about. ...But to say that we wish to surpass limits does not describe us fully. We are also the creature that can say no. (Enough 212)

McKibben maintains the old binaries of nature/culture, animal/human, and even implies that other creatures do not possess consciousness. He writes, "maybe consciousness has another function. Maybe it is the gift – the specialness – that allows us to eventually put a *brake* on this kind of evolution" (Enough 228). In short, McKibben's argument against genetic technology leaves itself open to easy attack by failing to be radical enough, by failing to examine its humanism critically.[2] "Something like cultural evolution clearly exists," he writes, but "to claim that cultural evolution *compels* us is a fishy little intellectual bait-and-switch" (Enough 225). Yes, neither "nature" nor "nurture" are deterministic, as E.O. Wilson and others have pointed out.[3] The problem here, though, is that for McKibben this seems to apply only to humans. Nature is nature, and culture is human. It radically separates us from the rest of nature. "For instance, perhaps we should stop thinking of human beings as a species. As I mentioned, we're not really "evolving" like a species anymore" (Enough 225-6).

In The Parallax View, Žižek comments on Enough as one of many "resistances to disenchantment." Returning again to The Future of Human Nature, grouped in roughly the same territory, he comments,

> It is a rather sad spectacle to see Habermas trying to control the explosive results of biogenetics, to curtail the philosophical consequences of biogenetics – his entire effort betrays his fear that something will actually happen, that a new dimension of the "human" will emerge, that the old image of human dignity and autonomy will not survive unscathed. ...This attitude toward scientific progress amounts to a kind of "temptation of (resisting) temptation": the temptation to be resisted is precisely the pseudo-ethical attitude of presenting scientific exploration as a temptation which can lead us into "going too far" – entering the forbidden territory (of biogenetic manipulation, and so on), and thus endangering the very core of our humanity. (179)

Žižek accuses such humanist thinking of trying to "keep meaning and truth harnessed together" (180). He argues that McKibben' s line between somatic and germ-line biogenetics, the idea of a threshold between the human and posthuman, or human and product, is a fallacy:

> First, as Heidegger would have put it, the survival of the being-human cannot depend on an ontic decision by humans. Even if we try to define the limit of the permissible in this way, *the true catastrophe has already taken place:* we already experience ourselves as in principle manipulable, we just freely

2 This is evident in McKibben's characterization of techno-utopians as proponents of a perverted ecology: "According to the techno-utopians, we will do it [strive for eternal life]. We have no choice; we must push forward. We can't be in control. We aren't special" (211).

3 See Wilson's In Search of Nature (1996) and Sociobiology: the New Synthesis.(25th Anniversary Ed., 2000). Also, Kevin Laland and Gillian Brown's Sense and Nonsense: Evolutionary Perspectives on Human Behavior (2002).

renounce the full deployment of this potential. ...the future of technological self-manipulation appears to be "deprived of meaning" only if it is measured by (or, rather, from within the horizon of) the traditional notion of what a meaningful universe is. Who knows what this "posthuman" universe will reveal itself to be "in itself"? What if there is no singular and simple answer, what if contemporary trends (digitalization, biogenetic self-manipulation) open themselves to a multitude of possible symbolizations? What if both utopia – the perverted dream of the passage from hardware to software of a subjectivity floating freely between different embodiments – and the dystopia – the nightmare of humans voluntarily transforming themselves into programmed beings – are just the positive and negative of the same ideological fantasy? What if it is only and precisely this technological prospect that fully confronts us with the most radical dimension of our finitude? (195-6)

Therefore, Žižek claims that this new technology, and cognitivist self-objectivization as a whole, creates "anxiety because – although, in terms of its enunciated content, it 'objectivizes' us – it has the opposite effect in terms of the implied position of enunciation: it confronts us with the abyss of our freedom, and, simultaneously, the radical contingency of the emergence of consciousness" (198). As Žižek has it, we exist in, quoting Francisco Varela, "an ontology of possibility" (199).[4]

This anxiety (and its obverse excitement) relies on an idea of our separateness, a vision of human consciousness in a sea of freedom and contingency. This "solitude" is, in Žižekian parlance, an ideological fantasy, but it is not merely just another fantasy. It is *the* fantasy, the *mauvaise foi* fueling the most basic assumption of Western thought: human supremacy. Facing existence as part of a larger community of beings, in the context of our lived commonalities and interconnections with other animals (and the rest of nature), could provide a better basis than humanism (and the old dualisms at its core) for fighting the power-relations, context and content, of biogenetic intervention.[5] Perhaps it would suggest a new humanism, an ecohumanism, or an as-yet-unimagined posthumanism.

4 Interestingly, to assert the "radical contingency" of (human) consciousness, Žižek quotes a deeply problematic passage from Nicolas Humphrey's A History of the Mind: "Regardless of the moment and the place where it happened, the evolution of consciousness was not a gradual process. Some philosophers, refusing to acknowledge great distinctions in nature, suggested that consciousness had emerged slowly and by degrees, from "less" conscious animals to "more" conscious ones and so on ...Actually, consciousness could not have arisen unless and until the activity of the retroaction loops had reached the level of reverberating activity, and a property of feed-back loops is "all or nothing": either reverberating activity is supported by a significant life span or it dies at birth ...a threshold was reached beyond which consciousness appeared out of the blue, just like there is a threshold beyond which we go from sleeping to being awake" (199).

5 By way of analogy: Žižek scores points off McKibben with his recognition that Rumspringa is a false choice ...but this does not mean that the Amish aren't "the most technologically sophisticated people in North America, the best at picking and choosing among innovations, deciding which ones make sense and which don't" (Enough 171). McKibben is right that the idea of the inevitability of germ-line genetic engineering of humans is "a ruse, an attempt to preempt democratic debate" (Enough 183). Equally astute is his criticism of the left-academic and libertarian-technologist idea of this engineering as liberating. Any potential liberation would be "unlikely to last more than a single generation. For in its wake came not children who were creating their identity from the pieces they found around them, but children whose identity had been created for them. ...In the end, genetic technologies are no more a route to justice than a route to liberty" (Enough 200-1).

2. "Gardening"

The idea of wilderness has long functioned as a guiding metaphor for ecological thought; yet in roughly the last decade, many critics have challenged wilderness as metaphor or model, and quite rightly so, on the grounds that it reinforces a conception of nature as static and separate from humanity.[6] The idea of wilderness has served countless times to erase human presence from the landscape for economic exploitation, as in the notion of the American West as a "virgin" land. For these and other reasons, some critics of "wilderness" argue that gardening should become the central metaphor of ecology. A principle, and still widely read, work to put forward this idea is Frederick Turner's now canonical essay, "Cultivating the American Garden," in which he interprets the discourse of nature and art in Shakespeare's The Winter's Tale to provide a philosophical framework for his argument about "gardening".[7] While the dangers of the wilderness model for ecological thought have been amply demonstrated, the potential problems of the gardening model still need to be articulated. Turner's reading of Shakespeare opens up space in which to reconsider the idea of the world as a garden and its implications for biotechnology, global capitalism, and war.

In "Cultivating the American Garden," Turner begins with an assertion with which most ecological thinkers agree: conceiving of nature and culture as binary is a cognitive error. However, Turner's critique of this binary becomes an argument against difference altogether. Drawing on what he perceives to be the philosophical discourse of humanism in early Modern literature, Turner quotes from Act IV, Scene IV of Shakespeare's The Winter's Tale, in which the characters of Perdita and Polixenes debate the merit of botanical grafting. In this scene, Perdita puts forward an argument for "purity" that is clearly ironic in context, as she is plotting to marry Polixenes' son, Florizel, thereby "grafting" herself onto the royal household (yet, as we in the audience know, the hidden fact of Perdita's royal birth presents a deeper irony; the marriage that Polixenes so strongly objects to will actually maintain the "purity" of royal bloodlines). Characterizing Perdita as a "nature freak" who "disapproves of the fact that they [carnations or "streak'd gillyvors"] have been bred and hybridized by genetic technology," Turner presents this passage:

6 My use of the phrase "guiding metaphor" is indebted to David Robertson (who, I believe, is one of the first to articulate the shift from wilderness to gardening in such terms).

7 Turner's essay (first published in Harper's Magazine in 1985) is reprinted in The Ecocriticism Reader: Landmarks in Literary Ecology. Much as the title indicates, the essays collected in this volume are still considered essential reading; in The Song of the Earth, Jonathan Bate lists the volume as one of five recommended texts on the American environmental literary tradition. In this context, Turner's work has been thought of as the smarter, more self-aware, postmodern re-conception of our relationship to nonhuman nature; as such, it has been particularly interesting to the newer branches of ecology (such as restoration ecology and bioregionalism). In his essay, "'Sunflower Forest': Ecological Restoration as the Basis for a New Environmental Paradigm," prominent ecologist William R. Jordan III writes, "The essay ['Cultivating the American Garden'] made a profound impression on me, and since then Fred's thinking has contributed immeasurably to my own work ...in particular to my thinking about the process of ecological restoration and its implications for the environment and for our relationship with nature" (17).

Perdita ...There is an art, which in their piedness shares
With great creating Nature.

Polixenes Say there be;
Yet Nature is made better by no mean
But Nature makes that mean; so, o'er that art,
Which you say adds to Nature, is an art
That Nature makes. You see, sweet maid, we marry
A gentler scion to the wildest stock,
And make conceive a bark of baser kind
By bud of nobler race. This is an art
Which does mend Nature, change it rather; but
The art itself is Nature. (41)

After briefly acknowledging a subtext of "lineage, breeding, and social convention," Turner draws the following conclusion:

> Shakespeare's Perdita has already observed what Darwin noticed 200 years later, that changes in species can be brought about by selective breeding and hybridization – those primitive forms of recombinant DNA bioengineering. She doesn't like it, but Shakespeare gives Polixenes a remarkable argument in favor of human tampering with the essence of life itself. He takes up Perdita's snide use of the word "art" and turns it around to include perhaps even the very dramatic medium in which he has his being. He insists that human art is not only a product of nature, but one of the creative instruments of nature in doing what it does. We are *natura naturans,* nature naturing. (42)

Aside from the fact that Turner only considers one side of this argument, he severs the passage from the rest of the play (skipping over the various contexts of the discussion), reductively asserting Polixenes' position as Shakespeare's own. Leaving this problem aside for the moment (to return later to this point and offer a contextualized, alternative reading of the discourse of nature in the play), let us look at where this framework allows Turner to go. The description of humans as *natura naturans* is, in and of itself, sound enough; in an ecological framework, everything – every rock, tree, and mammal – is *natura naturans.* However, Turner cites this principle as if it were unique to humans, using it to assert that humanity exists as the very pinnacle, of nature naturing: "Nature's speciality is reflexiveness, and we are better at it than the rest of nature. The DNA molecule is the reflexiveness of matter, the animal mind is the reflexiveness of instinct; the human mind is the reflexiveness of the animal mind" (44). Turner recreates the Great Chain of Being in the language of scientific reason, eliding any animistic qualities of its medieval ancestor. This evolutionary hierarchy means to privilege rationality over instinct, human over all other animals. "We are," writes Turner, "what nature has provisionally defined itself as being, given the richest field of permutations (terrestrial chemistry) and the longest period of unhindered research; indeed, there may well be a scientific sense in which 'the proper study of mankind is man'"(44). Nature's scientific research has culminated in our creation! In one stroke, Turner justifies anthropocentrism by anthropomorphizing nature itself.

It therefore should come as little surprise that Turner's speciesism (for this is an assertion of human supremacy) lends itself to the justification of other, more specific chauvinisms. Turner's examination of American mythologies of the frontier, and of nature generally, at first seem only to serve as the scenery for an embedded critique of wilderness as metaphor, as he chronicles the national shift from the puritanical distrust of nature to the Thoreauvian use of nature as a means of discovery (of self and national identity). However, it is America itself that interests Turner; his examination of the nature/culture binary in the context of American culture enables a theory of American exceptionalism:

> Europeans have run up against the limit of their own ideas. For Europe, freedom is a choice between alternatives that are finally limited. Culture and nature may be in greater harmony, but they are both constrained by a system that is entropically running down. For Americans, true freedom is not the choice at the ballot box but the opportunity to create a new world out of nothing: a Beverly Hills, a Disneyland, a Dallas, a Tranquility Base. Growth can still happen in Europe, but evolution will happen in America, if its academic discouragers do not prevail – and it will take place in the personal as well as the cosmic sphere. (48, italics mine)

One might assume that Turner intends this characterization of growth (Beverly Hills, Disneyland) to function ironically in the context of an ecological argument. However, this characterization is not only sincere, it grounds Turner's theory of American exceptionalism; American political-economy pilots the teleological evolution of human civilization.

When Turner claims that evolution will not happen in Europe, he implies that European economic models lack the "purity" of American capitalism. Although Turner claims Rousseau's naturalism damaged Europe, he also credits it with providing an ideology that has been essential to American economy:

> To its credit, it has been used to justify the sturdy individualism enshrined in the Constitution; we vote one by one in the privacy of a booth, and this solitary act is at the core of our political system. Likewise, we vote by our choice of purchase in the free market, and our instinctual bias for the individual helps defend the market against pressures of monopoly capitalism, paternalistic government, restrictive trade unions, and puritanical consumer groups. (46)

Although an anthropological critique of Rousseauian individualism bookends this endorsement of the "instinctual bias for the individual," it remains a crucial part of Turner's argument. For this ideology (and the "special promise" of the American family[8]) fuels our axiomatic version of capitalism, the medium through which we "evolve." In Turner's mind, American economy functions like DNA, replicating and mutating exponentially. This theory belies one of the central problems ecologists have with capitalism (and other forms of industrial

8 "On the face of it, the project of an American garden may not look promising. ...Nevertheless, our garden can draw on the unique promise of American developments in the great mediators between nature and culture: cookery, music, and the family. ... As for the American family, its special promise has already been pointed out: our emphasis on the elective aspects of the family puts the human intention of the spouses themselves in charge of family life in a way that is unprecedented among human societies" (Turner 51).

economy[9]): it voraciously feeds on "natural resources" as raw materials. Here, "true freedom" and "evolution" are not only inherently speciesist but also imperialist. For what are other lands, other cultures, and other economies in this model if not raw materials for American "evolution"?

The logic of social Darwinism underpins Turner's desire to "cultivate the American garden." As the garden metaphor expands the importance of human reason and knowledge, human "might" becomes American "right," creating the dangerous illusion that there aren't (and shouldn't be) limits on human power:

> The creation and use of other technologies, even those of steel and glass and oil and electricity, need be no different. It is all gardening, if we see it right. If we distrust our technology, we distrust our own nature, and nature itself. And this distrust makes us helpless and passive before the technical powers of others, and resentful, and disenfranchised. Let us seize our powers to ourselves ...*We must take responsibility for nature.* That ecological modesty which asserts that we are only one species among many, with no special rights, we may now see as the abdication of a trust. We are, whether we like it or not, the lords of creation; true humility consists not in pretending that we aren't, but in living up to the trust that it implies by service to the greater glory and beauty of the world we have been given to look after. It is a bad shepherd who, on democratic principles, deserts his sheep. (50, italics in original)

Turner's rhetorical shift from gardening to shepherding reveals the extent to which he associates human power with godly power, sanctifying not only human but specifically American might. Oh America, good shepherd of the world! Consider this final appeal to heroism:

> Let us consider the sheer scale of America, and the perspective of it as seen from the freeway, the Ferris wheel, the skyscraper, the jet plane. There is enough room to plant gardens for all the citizens of the republic, not just a wealthy aristocracy. Let us make a virtue of the colossal earthworks we have dug for our industrial purposes, and of our capacity for truly heroic alterations of the landscape." (51)

Comparing the gardens of wholesome American citizens with the gardens of European aristocracy "naturalizes" American technology and political economy, leaving no barriers to our god-like alterations of any landscape – American or otherwise, from Monsanto's biotech empire and the U.S. "War on Terror" to "BioSteel" and "enhanced" soldiers for the next invasion. This naturalized nationalism is a logical extension of a speciesist conception of nature.

9 By this I mean industrial socialism and communism. Jonathan Hughes' project to rescue Marxism from charges of ecological insensitivity, Ecology and Historical Materialism, provides a brief but interesting account of ecological critiques (though Hughes' argument is dogmatically anthropocentric and so less successful). For a variety of ecological perspectives on economy (and technology), see Alan S. Miller's Gaia Connections, Vandana Shiva's Earth Democracy, and Val Plumwood's Environmental Culture.

Although Turner positions The Winter's Tale as the philosophical frame of his humanist ecology, his excerpt of a mere twelve lines, only two of which are Perdita's, effectively reduces the play's meaning to Polixenes' ten lines. Yet, if one looks closely at the entire play, these lines may be read quite differently. Nearly every analysis of the play – be it new critical, new historicist, feminist, historical materialist, or any combination thereof – suggests that it functions, on some level, as a commentary on the limits of human knowledge or power.[10] Jealousy propels the action of the play, in which King Leontes wrongly accuses his wife, Queen Hermione, of adultery, thereby killing his son, Mamillus, and casting out his infant daughter, Perdita. Yet, surprisingly, it is not the restoration of reason that rescues the princess, reunites King and Queen, and wins the day. Instead, a combination of the mysterious forces of nature and human wisdom (represented by the figure of Lady Paulina) restores harmony to Sicilia. Aside from what Turner briefly refers to as the subtext of "lineage, breeding, and social convention," there is a broader context in which the discourse of nature and art between Perdita and Polixenes takes on greater and different meanings.

Unlike Turner, most critics find Act IV, Scene IV far more complex than an articulation of a particular ideology. In this scene, King Polixenes attends the Old Shepherd's sheep-shearing festival in disguise to disrupt the amorous pact between Perdita (to the best of her knowledge, the daughter of the Old Shepherd[11]) and his son, Florizel. Again, Perdita greets Polixenes, and the two enter into a conversation about gardening in which Perdita puts forward an argument for botanical "purity" that is clearly ironic in context because she hopes to marry Florizel and "graft" herself onto the royal household (and, again, the hidden truth of Perdita's royal birth presents another layer of irony). Polixenes' retort (lines 88-97) is actually a syllogism, in the following form: art is made by humans, and humans are made by nature; therefore, art is (in a deep sense) made by nature – and so, art is no more than nature mending or changing itself.[12] Polixenes' ecological insight certainly persuades; Perdita responds to Polixenes' final statement, "The art itself is Nature", with the confirmation, "So it is." (line 98). Yet, when Polixenes then entreats her to make her garden "rich in gillyvors" and "not call them bastards" (lines 99-100), she replies "I'll not put/ The dibble in earth to set one slip of them" (lines 101-2). Perdita seems convinced of the truth of Polixenes' argument; why, then, won't she plant gillyvors? Why does she insist that the grafted flowers do not belong in her garden?

While one could argue that Perdita's steadfastness serves to maintain dramatic tension, it clearly serves another purpose as well. In the larger context of the play, forces beyond human control govern Perdita's entire social existence. The "nurture" of her "nature" is Bohemian instead of Sicilian, and rural instead

10 For an account of critical works and performances, see Maurice Hunt's "The Critical Legacy" in The Winter's Tale: Critical Essays.

11 In Act III, after the jealous King casts his infant daughter out of Sicilia, Perdita is brought to the shores of Bohemia, where she is rescued by a shepherd and raised as his daughter. Act IV resumes the plot sixteen years later.

12 In "Nature and Art in Renaissance Literature, Shakespeare's The Winter's Tale," Edward W. Taylor notes the "Aristotelian root" of Polixenes' argument: "Aristotle had argued in the Physics that when we claim that Art perfects Nature we do in fact mean in the last analysis that Nature perfects herself ... Although Polixenes' argument may appear sophistical, it is in fact an orthodox statement of the 'real' significance of the ancient opposition" (131).

of courtly, as the result of an odd chain of events: first her father's sudden, uncontrollable jealousy, then Antigonus' sudden demise *(not insignificantly:* "Exit, pursued by a bear") and the timely appearance of the Old Shepherd. The overly whimsical manifestation of these events calls attention to them as part of the mysterious workings of chance or fate. In this light, Perdita may be seen as symbolically embodying these forces, first as the victim and then heroine of chance and/or fate. In this context it seems that Perdita does not disagree with what Polixenes says; rather, she remains unconvinced by what he does not say. What Polixenes' syllogistic conception of the world lacks are forces beyond human control – chance, fate, God, Gaia, or simply the larger forces of nonhuman nature. Although Polixenes tells us that nature makes humans and humans make art, his conception of nature never asks the question, who "makes" nature? How did nature make itself before humans?

This reading aside, if it weren't for the play's significant detours from and additions to the plot of Robert Greene's Pandosto, The Triumph of Time (the major source for the play[13]), one might assume that the play's conservative ideology (anti-miscegenation, pro-monarchy context and subtext of Act IV, Scene IV) to be Shakespeare's final word on this discourse of nature and art. In fact, the significant differences from Pandosto – the figure of Paulina and the resurrection of Hermione – contextualize this discourse as the philosophical and social problem of the play.[14]

Paulina functions as wisdom incarnate; not only does she tell Leontes the truth and council him well, she also preaches a reverence for nature and all its mysteries. In "'Great Creating Nature': An Essay on The Winter's Tale," G. Wilson Knight even refers to Paulina's triumph in the chapel scene of Act V as "white magic" or "natural magic" (41). This natural magic, her preservation and "resurrection" of Hermione in the final scene, bears directly on the discourse of nature and art in the play. It may be read as the triumph of wisdom and the mysterious forces of nature – the Hellenic oracle, fate, chance, and the future. Hermione's unveiling as a statue reinforces Polixenes' insight that nature and culture are inextricably interconnected, but it does so in the context of forces greater than that of humankind. The spiritual (Christian and pagan) overtones of the play's final scene serve as a reminder of the limits of human knowledge and power. As Knight writes,

> That drama [the play, and the myth of Persephone "beating" within the play], however, by its very enigma, its unsolved and yet uncompromising statement, throws up – as in small compass did the little flower-dialogue too – a vague, numinous, sense of mighty powers, working through both the natural order and man's religious consciousness, that preserve, in spite of all appearance, the good. (45)

In this way, the figure of Paulina and the last acts of the play invite us to reread the opening acts in their context. Paulina's wisdom serves as a foil to

13 In "Shakespeare's Humanist Enterprise," Louis Martz discusses the differences between Greene's novel (1588) and Shakespeare's play in detail.

14 Taylor also asserts that "neither Polixenes nor Perdita may be taken to represent Shakespeare's final word on the division between Nature and Art" (132).

15 Maurice Hunt's "The Critical Legacy" may almost be read as a chronology of this debate (see Frye, Knight, Matchett, Pyle, and Young especially).

Leontes' jealousy. Regardless of whether one reads this jealousy as sudden or premeditated,[15] it may still be viewed as of his own making – his art. Leontes' pathological behavior stems from the cognitive error of mistaking his own art for the world's nature (an error he is later invited to repeat, albeit in a reduced, displaced fashion, when Paulina presents Hermione as a statue). Leontes' speech in Act I, Scene II may be read as the anatomy of this error; speaking of his suspicions to Camillo, Leontes asks:

> Is this nothing?
> Why then the world and all that's in't is nothing,
> The covering sky is nothing, Bohemia nothing,
> My wife is nothing, nor nothing have these nothings,
> If this be nothing. (lines 292-295)

Of these lines Knight writes, "here the nihilistic horror itself assumes validity equal to that of the 'world' and 'covering sky'..." (14). Yet, Leontes' "nothing" seems more rhetorical than actual; it isn't really an expression of nihilistic horror because Leontes doesn't seem – even for a moment – uncertain of anything. Clearly, this "nothing" serves something; namely, Leontes' art, which assumes validity equal to – or surpassing – the world. After all, monarchy is a vehicle through which one person's art may be declared nature.[16] And so even though aspects of the play seem to uphold a conservative view of monarchy, the play also suggests that, by its very nature, monarchic rule invites such error and its results. In this sense, the discourse of nature and art may be read as the central social/natural problem of the play, of which Act IV, Scene IV is but the kernel.

4. And the Future of Ecological Thought ...

We may read the potential dangers of abandoning "wilderness" for "gardening" as guiding metaphor as the very problem dramatized by The Winter's Tale: the gardening model may mask the limits and context of human knowledge and power; it may elide the needs and value of others, human and nonhuman. In certain contexts, the idea of wilderness may have quite the opposite effect: an ethic that insists on the needs of other living beings, ecosystems, and the earth as a whole. We are all on this planet together, but that does not mean that we can all thrive in the very same space. By recognizing that not all beings are compatible in the same niche – that bears, for example, need territory free from human encroachment, *"Exit, pursued by a bear"* – the idea of wilderness may be a way to allow the coexistence of different but connected natures. And, for human beings, wilderness is, as Thoreau has it, a tonic: a reminder of human membership in the larger community of life.

16 In "Shakespeare's Bohemia Revisited: A Caveat," Richard Studing writes: "The tyranny of Polixenes replicates in several ways Leontes' passionate outbursts earlier in the play. ...Polixenes attacks Perdita in the same vindictive, hostile manner Leontes employed against Hermione. Both kings view the female as seductive and promiscuous..." (148). In this light, it might be argued that Polixenes repeats, to some extent, Leontes' error, reinforcing the idea that monarchy (hierarchical power) invites this kind of cognitive/ spiritual mistake (the repetition of which becomes the very engine of the play itself).

In order to begin to theorize a new trajectory for ourselves, we must reexamine the pervasive assumption of human superiority at the core of Western culture. Neither the explicit humanisms of Habermas and McKibben nor the recessive humanism of Žižek is an adequate basis for the ethical consideration of biogenetic intervention or any aspect of global capitalism. The solipsistic fantasy that humans are the only creatures that *really* matter, that really *exist* not only enables global capitalism to commodify anything and everything for the market, it also keeps us from broadening the scope of dialectical analysis to include the full scope of global capitalism itself, the production of nonhumans and humans, perpetual war and hegemony. Turner's extremism is merely an amplification of this tendency, a logical extension of the failure to give significant ethical and philosophical consideration to nonhuman beings, what Val Plumwood calls real *political* relations between human beings and the more-than-human world.

There is not one right model for ecology or one perfect metaphor for ecological thought – as The Winter's Tale suggests, such mastery isn't possible or desirable. And yet, metaphors and models are a necessary part of the imaginative, sympathetic connection we make with the rest of the world, connections ecological health requires now more than ever. For true intervention – not *biogenetic intervention* or *military intervention*, but intervention in the crisis of this historical moment, in which real beings suffer (intervention in the Adornian sense) – we need to broaden the scope of dialectical, materialist critique; we need to change our conceptions of the human and the nonhuman, of nature and culture.

Author Biography

Dr. Helena Feder is currently Assistant Professor of Literature and Environment at East Carolina University, where she teaches courses on American Literature, Ecocriticism, Literature and Science, Gender and Women's Studies, and Critical Theory. Her research interests include the intersection of ecocriticism and science, ecofeminism, and environmental racism.

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