RE-VALUING NATURE: ENVIRONMENTAL JUSTICE PEDAGOGY, ENVIRONMENTAL JUSTICE ECOCRITICISM AND THE TEXTUAL ECONOMIES OF NATURE

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At the September 2004 *Globalization and the Environmental Justice Movement Symposium*, I had the opportunity to be a part of a roundtable called *Environmental Justice as Critical Pedagogy,* together with John Hausdoerffer, Janis Johnson, Jia-Yi Cheng Levine and Paul Vaughn.[1] The objective of the roundtable was to explore the ways in which the literature of the environmental justice movement offers possibilities for teaching the intricate issues of environmental justice in undergraduate settings, as well as the complex and critical theories that academics use to examine these issues. During that discussion, I drew attention to the pedagogical and political importance of bringing perspective to our environmental justice courses about the ways texts produce and allocate value with regard to nature. In this article I expand on this argument while affirming the usefulness of texts and textual analyses as pedagogical tools in exposing students to the history of humans' valuations of nature.

I begin by asserting the political quality of environmental justice pedagogy and the efforts of various educators to animate their students' political imagination with respect to environmental justice issues. Next, while insisting on the pedagogical and political importance of texts in teaching the complex issues of environmental justice, I exhort educators to do so from the perspective of environmental justice ecocriticism. After that, I draw attention to the question of nature's value—specifically to how valuations of nature figure in texts—and its use as a pedagogical tool. Then, I introduce Subramanian Shankar's

[1] Activist Zoppie Lhotte and scholar Timothy Luke were also members of the roundtable but unfortunately were not able to participate in the roundtable discussion.

(13-16) concepts of "textual economics" and "textual economies" while suggesting, through examples, the usefulness of these concepts to introduce students to the ways nature is valued textually.

Environmental Justice Pedagogy and the Process of Conscientization

For various educators, the act of teaching environmental justice should not stray the field from its roots and status as a social movement.[2] Indeed, educators advocate a closer relationship between the environmental justice movement and the academy, especially since the teaching of environmental justice, as rightly noted by Robert Figueroa, brings the teacher to a critical position in the teaching process, a spot from which the teacher must place the classroom and its teaching within the context of the environmental justice movement and the environmental inequalities that characterizes our world today (311).[3] For environmental justice educators the classroom is a "space where citizens can generate and discuss their visions for transforming our social and political world in ways that ameliorate environmental injustices" (Figueroa 311).

Within a politicized classroom, environmental justice teachers aim at what Paulo Freire calls *conscientization*, by which he means the process whereby learners, not as mere receivers, but as meaningful and knowing subjects, accomplish a deepening awareness both of the social and cultural reality that shapes their lives and of their ability to change that reality (27).[4] It means achieving understanding of their existence in and with the world. For students of environmental justice it means achieving a better and deeper understanding of the reality of environmental inequalities and of their ability to ameliorate these inequalities.

This same process of eco-justice conscientization underlies, for example, Figueroa's transformative teaching and his concept

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[2] It is important to note that the environmental justice movement itself encourages environmental education, one that emphasizes social and ecological issues for past and present generations and that promotes cultural diversity (Taylor 539).

[3] The notion of environmental inequality allows focus on the broader dimensions of the relationship between environmental quality and social hierarchies, not just environmental racism, and on the unequal distribution of power and resources in society. For further examination of the notion of environmental inequalities and environmental inequality formations, see Pellow (582).

[4] For more on the process of *conscientization*, see also Freire's *Pedagogy of the Oppressed.*

of “moral imagination” (325-326). Figueroa’s goal in teaching environmental justice is to stretch his students’ moral imagination, their cognitive ability to apprehend the moral experience, feelings, and judgment of others, to recognize environmental inequalities and to envision social and political changes to overcome these inequalities. He describes his radical teaching thus:

> Radical pedagogy may be understood as teaching with attitudes and approaches that politicize the classroom and the curriculum. By identifying the classroom as a place of reproducing institutional processes in a political economy, which in turn generates political actors, we can enliven the student’s political imagination. The academic’s pursuit of environmental justice carries political baggage and obligation that many subjects lack. The study of a contemporary social movement lends itself to the use of pedagogy as a form of activism. The social activism is a consciousness raising that utilizes the moral and political imagination of the student to seriously consider the options for transforming current social conditions. Students feel compelled to ask, “What can we do?” and “What is our responsibility?” By asking these questions, the classroom is transformed into a place where citizens can think these matters through without losing sight that the matters are upon us. (326)

Politicizing the classroom in order to aid his students achieve a deeper awareness and understanding of the actuality of environmental inequalities and of their ability to defeat these inequalities also inspires Steve Chase’s “constructivist pedagogy” (355-357). Two books, *The Human Rights Education Handbook* edited by Nancy Flowers and Jacqueline G. Brooks and Martin G. Brooks’ *In Search of Understanding* inspire Chase’s teaching. Based on the former, Chase’s teaching stresses the concrete experience of his students, active learning activities, student participation, horizontal communication, critical thinking, the expression of feelings, cooperation among students, and the integration of knowledge, action and feelings (356). Furthermore, Chase’s environmental justice education is not just about liberatory knowledge but also about liberatory practices—thus, training students as activists. Finally, the constructivist dimension of Chase’s teaching, based on *In Search of Understanding*, inquires about his students’ understanding of concepts before sharing his own understanding of these concepts; encourages students’ inquiry by asking thoughtful, open-ended questions; and engages students in experiences that might engender contradictions to their initial positions about a particular issue (360-361).

Jia-Yi Cheng Levine also implements this idea of *conscientization* in her classroom, her goal being the production of “critical consciousness,” which in her view is essential to help students “be responsible and responsive world citizens” (371). That is, assisting her students

attain a deeper consciousness and knowledge of environmental inequalities and of their ability to develop alternatives to the structures of environmental inequalities is what motivates Jia-Yi Cheng Levine's educational efforts to form political subjects capable of opposing environmental injustices and inequalities. In her essay "Teaching Literature of Environmental Justice in an Advanced Gender Studies Course," Jia-Yi Cheng Levine refers to a particular course about women and the environment in which she introduced the literature of the environmental justice movement to her students, exposing them to various political, social and ecological issues. As she explains: "By introducing literature of environmental justice to our students, we help form political subjects who would seek to dismantle racism, sexism, classism, and unbridle capitalism, which wreak havoc on our planet and our people" (378). Her teaching is certainly aimed at conscientization, as she makes clear:

> Teaching is more than transmitting knowledge or modes of thinking; it helps form political subjects who will determine the future of this planet we call home. My goal for teaching literature of environmental justice was to foster a literacy of the environment in my students' everyday lives, to call their attention to the power structures of society and the political struggles of the impoverished, as well as to encourage them to examine configurations of knowledge and the dispensation of power. By addressing the interrelated issues of race, gender, class, and the environment, I wanted to bring environmental and social justice education into the class. (368)

Jia-Yi Cheng Levine's teaching then seeks to empower students as critical and conscientious political subjects while asking them to study, question and confront the history, and ideological frameworks that have contributed both to the environmental degradation we experience nowadays and to the production of environmental inequalities. In her particular gender studies course, literature greatly facilitated the process of *conscientization*, thus assigning a significant role to literature as a liberatory pedagogical tool for environmental justice educators. Although perhaps more suitable for literature courses, the study of literature helps students in any course reach a reflective awareness and a thoughtful understanding of the material and ideological character of environmental inequalities and of their ability to transform unequal conditions. The usefulness and effectiveness of literature as a pedagogical tool, I insist, is not limited to literature courses. Rather, literature, and its analysis, is a practical, helpful and constructive tool in a wide variety of courses, especially if we use the word "literature" vaguely to include not just poetry, fictional prose and nature writing but also non-fictional writing and any other kinds of texts in which issues of environmental justice appear, or that might

provide us with the opportunity to address these issues in the classroom.[5] Enabling students to examine how texts produce meaning and value provides them with a larger picture of political, social and cultural processes that shape daily life and various social struggles, including environmental justice struggles.

Integrating Environmental Justice Ecocriticism to the Classroom

The fundamental question behind environmental justice educators integrating texts containing environmental justice issues and its analysis into their classrooms is this: How can texts and textual analysis further our efforts as teachers to help our students achieve a deeper awareness and understanding of the reality of environmental inequities and of their ability to ameliorate these inequalities? Hence, these teachers presuppose, as Jia-Yi Cheng Levine's teaching exemplifies, that the introduction of texts, including environmental justice literature and its study and criticism, into the classroom is useful in helping our students grow to be political subjects who would seek to question and challenge environmental inequalities while proposing alternatives that promote justice, equality and democracy.[6]

Analyzing texts that contain environmental justice issues in

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[5] Reed also points to the importance of addressing not only the body of poetry and fictional prose directly treating environmental justice issues, but also any writing on a given subject, thus keeping a wider meaning of literature to include even the environmental justice movement's manifestos and the documents of the Environmental Protection Agency (153). The importance of analyzing these "other" documents is exemplified by Janis Johnson's (273-280) study of the Wy-Kan-Ush-Mi-Wa-Kish-Wit or "spirit of the Salmon" a salmon recovery and preservation plan prepared by the Columbia River Inter-Tribal Fish Commission and an ad campaign of a coalition of organizations supporting the removal of the four Snake River dams.

[6] One could argue that rather than fostering critical inquiry critical educators might be nurturing propaganda, imposing their values and worldviews on their students. However, as Freire insists, liberating education consists of cognition operations and not transferals of information, thus emphasizing dialogue and communication while simultaneously promoting "problem-posing education." Liberating education attempts from the outset to resolve the teacher-student contradiction typical of banking education. As Freire explains in *Pedagogy of the Oppressed*: "Through dialogue, the teacher-of-the-students and the students-of-the-teacher cease to exist and a new term emerges: teacher-student with students-teachers. The teacher is no longer merely the-one who-teaches, but one who is himself taught in dialogue with the students, who in turn while being taught also teach. They become jointly responsible for a process in which all grow. In this process, arguments based on 'authority' are no longer valid; in order to function, authority must be on the side of freedom, not against it." (61)

undergraduate courses has various purposes for environmental justice educators—uses similar to those that such texts themselves bring to environmental justice studies. First, texts and their analysis offer our students new means of understanding environmental justice, through cultural representations, for example, instead of through traditional perspectives of quantitative methodologies, environmental sociology, public policy, environmental law, environmental ethics and related disciplines and fields. Karen Yamashita's *Tropic of Orange* is a good example. As Sze shows, Yamashita's novel clarifies our understanding of the geography of free trade, the genesis of environmental racism, and the gender politics of environmental justice (173). *Tropic of Orange* makes various linkages between past and present and between global and local struggles for environmental justice. And it makes clear the social and environmental costs of capitalist globalization. But more broadly, it offers a critique of social hierarchies and power, and the particular load they place on the subaltern. Hence, by blending the social, the ecological, the historical, the economical and the cultural, environmental justice literature, as *Tropic of Orange* exemplifies, helps our students understand multiple dimensions of environmental justice and their interrelation.

Besides providing new ways of looking at environmental justice, teaching literature, literary theory, and the various ecocritical schools together with textual analysis allows teachers to expand the ways they engage students in the process of *conscientization*. For instance, using the work of the growing number of scholars concerned with the literature of environmental justice can broaden our students' experiences into textual analysis and environmental justice ecocriticism. A good example is Joni Adamson's *American Indian Literature, Environmental Justice, and Ecocriticism*, which—from the standpoint of environmental justice—explores the writings of Sherman Alexie, Louise Erdrich, Simon Ortiz, Leslie Marmon Silko, and Joy Harjo as examples of ecological criticism regarding Euro-American conceptions of nature. The book also offers a critique of Edward Abbey's *Desert Solitaire* from the viewpoint of the environmental justice movement. Used in the classroom, this book can broaden our students' experiences into areas such as social theory, literary theory, ecological criticism, intellectual history and cultural studies.

Introducing texts and their study into the classroom also offers possibilities for using teaching methods that augment rather than accede to demographic and statistical data, namely textual and narrative analysis. Demographic and statistical tools still dominate environmental justice studies. Yet, as Sze demonstrates, these are not the only way to understand environmental justice, environmental

inequities, the formation of environmental inequalities and environmental justice struggles (165). Textual analysis can also be of help, especially since it provides us with unique ways to understand critically and appreciate the ideological frameworks and cultural representations of the various stakeholders involved in environmental justice struggles.

The literature of environmental justice also offers particular possibilities. First, the literature of environmental justice, to the extent that it contributes to the production of shared meanings with respect to environmental justice issues, while also providing interpretations of these issues, presents us with unique insights into the ideology and interpretative frameworks of the environmental justice movement. Reading the literature of environmental justice is thus important in understanding the movement's responses to environmental justice issues and in informing our understanding of what Taylor calls the "environmental justice paradigm" (533-545). Second, the literature of environmental justice offers possibilities for exposing students to the imaginative and creative ways in which environmental justice writers, activists and scholars enact through writing genuine political alternatives to environmental inequalities and injustices, voice community concerns, and convey the issues at stake in environmental justice struggles. Such experience could trigger our students' political, moral and cultural imagination, perhaps eliciting them to produce creatively their own ways to voice community concerns, suggest political alternatives and convey the issues involved in environmental justice struggles.

The study of texts in the classroom is undeniably a useful educational tool. Nonetheless, helping our students grow to be political subjects who would seek to question and challenge environmental inequalities while proposing alternatives that promote justice, equality and democracy, can be significantly improved if it is founded more deeply on what Reed calls "environmental justice ecocriticism" (149-157). Let me then lay out the essential qualities of environmental justice ecocriticism as conveyed by Reed.

First, this ecocritical school, like other schools, looks at the intricate relationship between literature, nature and society but from the viewpoint of environmental justice. Second, the school also looks at how literature brings to the attention the ways in which environmental degradation unequally affects poor people and other marginalized groups. Third, environmental justice ecocriticism uses textual analysis to look at the intersection between environmental quality and the unequal distribution of power and resources in the context of social

hierarchies and various forms of discrimination, including environmental racism, both locally and globally. Fourth, the school draws attention to different traditions in nature writing by the poor, by ethnic minorities and women, and other marginalized groups. Fifth, environmental justice ecocritics look at how environmental health hazards can be brought more fully to public attention through literature and criticism. Sixth, environmental justice ecocriticism calls attention to the ways by which texts and literary criticism encourage justice and a better use of natural resources around the world. Finally, environmental justice ecocritics examine how other eco-critical schools, namely conservationist ecocriticism, ecological criticism, deep ecological ecocriticism and ecofeminist ecocriticism, have been ethnocentric and insensitive to race, class, and gender hierarchies.

Despite its importance and value, environmental justice ecocriticism is for the most part underdeveloped. Still, Reed outlines some directions to further develop this ecocritical school and identifies three "prime levels of work" for environmental justice ecocritics: identifying images and stereotypes; uncovering and mapping traditions; and theorizing particular approaches within the field (152). This model could also be transferred to environmental justice pedagogy. In the classroom, environmental justice educators and their students can look at the relationship between racist, classist, and sexist stereotypes and environmental stereotypes and biases in various texts. They could also study other than white traditions in nature writing. They could also explore how issues of environmental justice figure in other genres produced by other than Euro-American writers. Finally, environmental justice educators and their students can explore the importance of theory in examining texts and identify possibilities for bringing together diverse theoretical tools to develop environmental justice ecocriticism further.

Besides these three levels of inquiry, there are numerous other levels of work for environmental justice educators to bring into the classroom, such as discussing nature's value in texts and questioning how different valuations of nature are represented in these texts. There are two main reasons to bring the question of nature's value to the classroom. First, if teaching environmental justice should not stray from its roots and status as a social movement, to the extent that valuing nature is part of the movement's ideological framework, then we have no choice but to integrate the question of the movement's valuation of nature into the classroom, together with that of other stakeholders involved in environmental justice struggles. We must acknowledge and bring into our classroom the fact that besides confronting environmental inequalities, eco-justice activists and scholars,

like most environmentalists, advise their supporters to value nature, live in harmony with it, and stop destroying it, which contrasts with the capitalist relation with nature. Ecocritics not only critique that relationship, but also the economic valuation of nature that such a relation entails.

Second, if the goal of environmental justice education is to stimulate our students' moral and political imagination to envision ways to ameliorate environmental inequalities, then we have no choice but to address the question of values, including the long and intricate history of how humans value nature. This is so because as Gayatri Spivak argues: "You take positions in terms not of the discovery of historical or philosophical grounds, but in terms of reversing, displacing, and seizing the apparatus of value-coding" (228), or as David Harvey asserts, "we have no option except to articulate values and stick by them if emancipatory change is to be produced" (12).

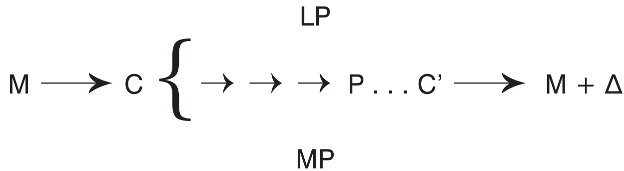
Environmental Justice Pedagogy, Environmental Justice Ecocriticism and the Question of Nature's Value

Today, the dominant valuation of nature is precisely the capitalist valuation, one that stresses nature's exchange-value. As Harvey explains, bourgeois political economy conceives of nature as a resource and is always appealing to the centrality of money as the universal means to measure and assess the diversity of human needs and wants, of use values and of "natural" elements and processes (150-151). Additionally, he identifies four arguments made to legitimate monetary valuations of nature. First, it is argued that money is the means whereby we all value significant aspects of our environment (i.e., money value assigned to natural resources). Second, money is the only "universal yardstick" of value that we currently possess, one that we all use and understand. Third, money is the basic form of social power. Finally, to speak the language of money is to speak the language of those holding positions of power.

The capitalist monetary valuation of nature legitimated by these four arguments is deeply connected to the "capitalist production of nature."[7] The capitalist production of nature is the process by which nature is changed, capitalized, circulated, exchanged and consumed, materially and ideologically, as a commodity from within the abstract framework of exchange-value: the same overarching logic of the

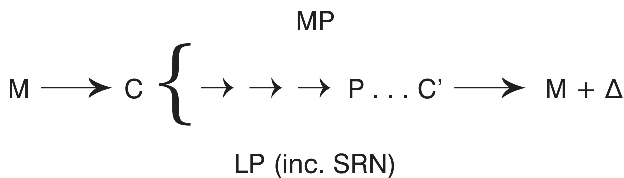
[7] Marxian geographer Neil Smith in his book *Uneven Development* published in 1984 coined the notion of the production of nature (33-65).

production process under the capitalist mode of production. With the capitalist mode of production—today's dominant and wide-reaching economic system—goods are produced according to the following logic:[8]



where M (money) is spent to purchase C (commodities)—namely, MP (means of productions) and LP (labor power)—which are united in the productive process (P) to produce a new product (C'), which is then sold for the original money invested, plus a profit (Δ). The profit is then reinvested to facilitate a new cycle of production to accumulate still more money and profit.

In this system, commodities are not produced for their practical value or use value, but for their exchange value. Within the logic of the capitalist mode of production, nature too becomes part of this system, but in two opposing ways (Castree 195). On the one hand, we have a materially resistant nature, which seemingly cannot, in and of itself, be altered as a means of realizing profits. But, on the other hand, we have scientific research into nature, where scientists are employed by capitalist corporations to investigate how nature can be transformed to become an "accumulation strategy."[9] Castree (195) represents the process as follows:



where SRN denotes scientific research into nature. This schema suggests that capitalism, an inherently expansive mode of production, is also a mode of ordering economic activities in which all manner

[8] The diagram was adapted from Castree (192).

[9] Cindi Katz's concept of nature as an accumulation strategy (46) denotes the fact that faced with the loss of extensive nature, capital regrouped to examine and ransack an everyday more intensive nature, a shift largely propelled by corporate environmentalism, and which is now linked to the privatization of nature and the instrumentalist view of nature as a source of value (48-51).

of things, including nature, are brought together into the same overarching logic and spiral of growth. Thus, capitalism is always not only seeking to control all the lasting and non-capitalized social and symbolic relations to nature in terms of the code of production, but also to transform further already-capitalized nature in the name of profit. For this reason, the capitalist production of nature implies the capitalization of nature, the process by which nature and its resources become reservoirs of capital, and by which these stocks are made property saleable and exchangeable in the marketplace (O'Connor 10-16). That is, capitalism brings nature and concrete labor processes upon it together in an abstract framework of exchange value.

Under capitalism, the socially mediated relation with nature is then determined by the abstract determinations at the level of value that are continually translated into concrete activity in the relation with nature (Smith 54). This relation is therefore a use-value relation only in the greatest subordinate sense. It is, before anything else, an exchange-value relation. Thus, the theory of the production of nature "alerts us to the way that capitalism commodifies whole landscapes, constructs and reconstructs them in particular (profit-motivated) ways—to how it determines particular constellations of 'natural' products in particular places" (Castree 19). As shown by O'Connor, nature becomes "capital incarnate," integrated in a rational computation of time by an equally rational management of investment around the globe, all integrated in a rational calculus of production and exchange through the price system that continues to expand spatially (16).

To empower students as critical beings we must ask them to examine, challenge, and dispute how capitalism produces and reproduces nature in particular profit-motivated ways, namely the capitalist production of nature. Environmental justice teaching is certainly valuable in repealing, challenging, and demystifying the capitalist production of nature and its apparatus of value coding concerning nature. It is also useful, to the degree that it motivates the political imagination of our students, in encouraging the growth and advancement of new valuations of nature, as well as a different production of nature that would challenge the capitalist valuation of nature by stressing the importance of use-values. If capitalism subordinates the use-values of nature to its exchange-value, then any environmental justice intervention seeking the production of alternative natures and the elimination of the structures of environmental inequality, including interventions in the classroom, cannot avoid the reaffirmation of use-values, without the mediation of exchange-value. And the re-establishment of use-values is to insist on cultural diversity, on the cultural, spiritual, and aesthetic uses of nature, uses valued by the

environmental justice movement.

Contesting the capitalist valuation of nature means also challenging the various ideologies, discourses, and representations of nature connected to it. The valuation of nature entails material and ideological developments, meaning that beyond an economic process, the valuation of nature is a cultural practice. And the various ideologies, discourses, and symbolic representations of nature connected to the process, all containing valuations of nature, are often produced and reproduced through texts, which makes texts and textual analysis pedagogically and politically useful for environmental justice educators and their students in the process of scrutinizing the capitalist valuation of nature.

However, revealing to our students the capitalist production of nature and its monetary valuation of nature is not enough. We must also expose them to alternative representations and valuations of nature, especially to the environmental justice movement's depiction and evaluation of nature. In contrast to the "exploitative capitalist paradigm" (Taylor 537-545), environmental justice activists advise their supporters to value nature, live in harmony with it, and stop destroying it. While capitalism values nature monetarily, the environmental justice movement rejects both the 'resourcing' of nature and its transformation into a commodity. That is, it rejects the capitalist production of nature. Moreover, the movement assigns more value to the use-values of nature than to the exchange-values of nature; it assigns more worth to the cultural, spiritual, and aesthetic uses of nature. Finally, the movement rejects the domination of nature characteristic of capitalist practices of extracting and using resources, and favors environmental protection over unchecked economic growth. With regard to the valuation of nature, people embracing the "environmental justice paradigm" are not different from people embracing the "new ecological paradigm" (Taylor 537-545). Table 1 offers a comparison between the three paradigms with respect to their valuation of nature.

Table 1 shows how both the new ecological paradigm and the environmental justice paradigm consign intrinsic values to nature. The benefit of seeing values as being inherent in nature is that it offers a sense of ontological security and durability. From this view, as Harvey explains, nature offers a "rich, variegated, and permanent candidate for induction into the hall of universal and permanent values to inform human action and to give meaning to otherwise ephemeral and fragmented lives" (157). Nevertheless, the environmental justice movement's emphasis on the intrinsic value of nature is not

TABLE 1: Comparison Between the Exploitative Capitalist Paradigm, the New Ecological Paradigm, and the Environmental Justice Paradigm and their Valuation of Nature

Valuation of Nature	*Exploitative Capitalist Paradigm*	*New Environmental Paradigm*	*Environmental Justice Paradigm*
Nature exists to produce resources for humans	Yes	No	No
Humans dominate nature	Yes	No	No
Humans exist in harmony with nature	No	Yes	Yes
Nature has intrinsic value	No	Yes	Yes
Environmental protection precedes economic growth	No	Yes	Yes

* Adapted from Dorceta E. Taylor's article, "The Rise of the Environmental Justice Paradigm," published in *American Behavioral Scientists*, 43.4 (2000): 508-580.

unproblematic. The problem with this view is that we don't know for sure what the values residing in nature really are. All versions of the argument of values residing in nature depend deeply upon human mediations, mediations that Harvey argues can only produce human discourses about the inherent values of nature (158).

The ability to determine intrinsic values depends on the ability of humans endowed with perceptive, reflexive, and practical capacities to become neutral intermediaries of what those values might be. But is this possible? No. We have no way of learning what these values intrinsic to nature are separately from the values contained in the metaphors used in constructing particular lines of inquiry about those values (Harvey 162). So the choice of values lies within us and not in nature. Humans perceive no more than the values that their value-laden images let them envisage in their observations of nature.

To argue that the choice of "intrinsic" values in nature lies within us and not in nature does not mean that the metaphors are purely products of the human imagination. Rather it is to insist these metaphors are not independent of material practices, power, and other social relations, beliefs systems, and social institutions (Harvey

164).[10] Metaphors derive their power precisely from their relationship to material practices, social relations, belief systems, and social institutions. As Harvey shows, concrete conditions constitute our experience and how we create meaning, which refutes any relativist perspective (162-164). Since our metaphors depend on their relationship to other moments in the social process, and since we cannot see beyond our value-laden metaphors, then we have but only one choice, a choice best described by Harvey:

> We can, therefore, only reflect critically upon the dialectical properties (internalizations) of the metaphors in use and watch carefully as human beings amass scientific and other evidence for a particular "naturalized" set of values. And then we find that the values supposedly inherent in nature are properties of the metaphors, of the human imaginary internalizing and working on the multiple effects of other moments in the social process, most conspicuously those of material social practices. "We can never speak about nature," says Capra "without, at the same time, speaking about ourselves." (164)

For environmental justice teachers and students, this does not mean that we must abandon the environmental justice movement's valuation of nature but that we must reflect critically upon both the capitalist valuation of nature and its metaphors, and upon the environmental justice movement's representations and valuations of nature. As such, we must create pedagogical spaces for critical reflection upon diverse valuations of nature, including both the capitalist value system as well as that of the environmental justice movement. In the classroom, we must pose valuations of nature as a problem to address through dialogue and communication. And the study of texts in the classroom is a useful tool in compelling our students to examine critically such diverse valuations of nature, especially if we acknowledge from the outset that texts allocate and distribute value with regard to nature.

Textual Economics, Textual Economies of Nature, and Environmental Justice Pedagogy

Examining textual valuations of nature requires that texts be examined as economies. Shankar's call for a move toward an economic look at texts, for a textual economics, is especially useful in this matter (13-25). For Shankar any text is, essentially, an economy.

[10] Harvey is referring to the six moments of the social process he identified in his cognitive map of the social process, namely discourses, power, social relations, beliefs, values and desires, and social institutions (78).

Such an approach, I propose, is especially useful for teachers and students examining the ways in which texts produce and distribute value with regard to nature. It then seems necessary to lay down the essential qualities of what Shankar calls textual economics and the textual economies (13-16).

Textual economics is concerned with the examination of the particular manner in which a text produces, distributes, and allocates value, namely the evaluative structures of a text.[11] For example, one can examine how narratives of travel, including the movie *Indiana Jones and the Temple of Doom*, realize and assign more value to the traveler and the place from which he began his journey, namely Indiana Jones and the United States, while devaluing the people of the overexploited world: India in this case (Shankar 37-47). Additionally, one can easily demonstrate that American travel texts about Puerto Rico not only mediate between representations of the colonizer and the colonized through different narrative, rhetorical, and discursive strategies but that they also, in effect, code the colonial relationship between the United States and Puerto Rico in evaluative terms. In these narratives, greater value is assigned to the U.S. traveler/writer protagonist and the United States. By contrast, Puerto Ricans and Puerto Rico are devalued, a devaluing that most often takes the form of racial debasement.[12]

Shankar's textual economics goes beyond mere attention to textual economies. His textual economics also engages the relationship between the evaluative structures of a text and its practical and/or historical context. From the vantage point of textual economics, the textual economy is an open system:

> And so it follows that a textual economy is not a closed system. Rather, its currents of meaning—its structures of values—flow into the surrounding sea of human praxis, which is, as Lukács reminds us, history itself. At the same time, currents from the surrounding sea flow into it and determine its structures of value. It is in the realm of praxis, the sea of history, that the evaluative structures and the value that they distribute have their origin. (15).

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[11] Shankar's notion of the value of the text is similar to, yet different from, value in a political economy. However, just as one can explain the latter in terms of labor, an expression of praxis, then one can also explain the former by recourse to praxis (6-9).

[12] Like classification, the rhetorical strategy of debasement constructs a hierarchical order that normalizes, naturalizes and essentializes differences by placing human beings into categories in which they "naturally" belong. But in what Spurr calls debasement, the object of humiliation—the colonized other—provides the negative end of a value system (76-91). Fanon too describes such debasement in *The Wretched of the Earth* (41-43).

Textual economics then draws attention to praxis, with praxis understood as "human sensuous activity" or as a general human social activity that, emanating from the social character of human social existence, finds expression in purposeful social organization and transformational practices (Shankar 16-25).[13] More specifically, praxis is any process of transformation of raw materials into a product, a change produced by a determinate human labor using a determinate means of production (San Juan 77). In consequence, cultural production, including literature, is understood as a distinctive mode of production that transforms raw materials (elements of lived experiences) into a specific product (novel, painting, sculpture and so on) by means of a labor process. This argument implies, of course, that cultural production, in all its forms, is united to material practices and conditions, activities, and circumstances where the textual economy finds its genesis. That is, cultural production does not belong to ghostly places, having nothing to do with the mundane—the historical-practical context. It is actually largely influenced by these ordinary planes of social activity, which is to say that production relations and the sociopolitical order shaped by these relations *overdetermine* the full range of texts and their evaluative structures.

Shankar's textual economics is useful for examining textual economies of nature and their relationship to a particular socio-historical context with our students. Let me then end this section with two brief examples of the kind of analysis that educators and students can bring to bear from their study of texts and their economies of nature in the classroom. I will begin with Robert D. Hall's *Porto Rico: Its History, Products and Possibilities,* a book written shortly after the United States' invasion of Puerto Rico in 1898. Hall certainly treated "Porto

[13] Praxis implies the dialectical relation between humans and nature. In any practice, the determinant instance or element are not the raw materials nor the product, but rather the practice in the narrow sense itself—namely, labor—of changing materials through means of production and knowledge regarding their use (San Juan 77). Shankar supports a shift to matters of praxis. Although he recognizes the importance of praxis as conscious political action, he stresses praxis as a mode of being active in the world—meaning the way in which human beings relate to one another and the environment. In recovering the category of praxis, his textual economics attempt to evade the inadequacy of the "cultural politics of representation" by counter posing it to what he refers to as the "cultural politics of praxis" (19). With the latter, more weight is given to doing and feeling than to speaking and writing, or rather to praxis in its relationship to representations. The goal is to examine how a specific text is the expression of a particular praxis, how that praxis is a theme within a text and the relationship between praxis and the evaluative structures of the text in question. Indeed, raising questions about the textual economy of a specific text will eventually lead to questions of praxis.

Rico" as a repository of use-values available for colonialist-capitalist exploitation. The whole island, conceived as a precious commodity, had a price: "Uncle Sam will certainly find this beautiful and fertile island a most valuable possession, every foot of which he could sell at a large substantial price, if he chose to do so" (7). For Hall, "Porto Rico"—immensely wealthy due to the fertility of its soil—was simply "one of the finest pieces of property on the earth's surface" (43). Of course, only the American presence in the island could increase the value of the island: "The island, without much exaggeration, can really be called the garden spot of the world, and there is no doubt but that when the Stars and Stripes wave permanently over it, and there is an influx of American enterprise and wealth, there will be a marvelous increase in values of all kinds" (7-8).

Hall's *Porto Rico* certainly contains a textual economy of nature, one that attaches value to certain natural resources, especially the land and agricultural resources, while subordinating their use-value to their exchange-value. As such, Hall engaged in the prospecting of Puerto Rico and its resources, in the anticipation of profits: "With the island in the possession of the United States and with the abolishment of the differential duties in favor of the Spanish government, its geographical position will undoubtedly cause most of its commerce to flow to and from the United States" (43). He adds:

> There will be a market furnished for great quantities of food products, textiles, fabrics, iron, steel and coal. From the island to the United States will chiefly be received coffee, tobacco, and sugar. Indeed, it may be said that in the line of coffee cultivation, the greatest development of Porto Rico may be expected in the near future. (43)

Hall also engaged in the "stocking" of the island's natural resources, producing an inventory of profitable resources, as his reference to trees illustrates: "More than five hundred varieties of trees can be found in the forests of the island, many of which are very valuable, and the plains are full of palms, oranges and other fruit-bearing trees" (43). Hall's book shows that, as San Juan reminds us, many hegemonic texts are indeed the textualization of the problem of searching for the universal equivalent form of value, which, not unexpectedly, is often found in the money form (91-120). Hall's text certainly appealed to the centrality of money as the universal means to measure not just the island's natural resources but also the island itself. Hall's book, then affords all students of environmental justice a glimpse into the American-colonialist attempt to delineate and assert a land's economic value.

Textual economics is also pedagogically useful in exposing students to critics of the capitalist valuation of nature, to counter-

hegemonic valuations of nature. Let me illustrate with a poem by Victor Hernández Cruz called "The Land," a poem referring to Puerto Rico (11). In Puerto Rico, colonial capitalism, like capitalism everywhere, cannot function without the exploitation of natural resources, including the land—a point made strongly by Hernández Cruz's poem. The poem, dedicated to Pedro Albizu Campos, the celebrated and legendary nationalist leader, speaks of the U.S. colonization of Puerto Rico, and more specifically, of the ways in which nature, and especially the land, is tainted, capitalized, distributed, traded and consumed as a commodity in the context of colonial capitalism:

> Our blue sea
> now filled with cheap scum-bags
> made in the USA
> the continuous forests
> now interrupted by Coca-Cola signs
> the land something to buy
> the Yankee man touch everything
> touch the sand
> that saw Columbus
> and our grass stepped on by Hush Puppies
> the pueblo of my mother
> of pretty music
> of midnight songs
> now sold in stocks
> the Yankee hand
> touching my land
> the touch of hate
> the touch of death

Hernández Cruz narrates here, poetically, the capitalist-imperialist, deadly and hateful touching of nature, a handling that turns nature into "something to buy," a commodity "sold in stocks." Hernández Cruz's poem is an instance of the fact that artistic expressions—poetry in this case—narrate, communicate, and depict the production of nature. Indeed, the poem's subject matter is largely the process of people altering nature, namely producing nature, and in so doing acting and changing themselves and society under a given mode of production. As Ngũgĩ Wa Thiong'o reminds us: "Art is a way of seeing, or apprehending, the world of man and nature through visual, sound or mental images." (55).

However, the poem does more than simply narrate the capitalist production of nature for us to comprehend our relation to our environment. It is a critique of the capitalist production of nature, one that also summarizes and denounces the effects of such production of nature while also confronting U.S. imperialism. Hernández Cruz uses poetry to help us take a certain view of the capitalist production of nature, an oppositional critical view entailing a different valuation of

the land. Through his poetic images Hernández Cruz uses his art, as Ngũgĩ would argue, to "assault our consciousness to make us take a certain view of the World of Man and Nature." (55). Hernández Cruz tries to make us not only see and understand our relation with nature in the context of United State imperialism, but to see and understand that relationship in a certain way, from what Ngũgĩ calls "the angle of vision of the artist" (57).

Hernández Cruz's poem, as a form of art, presents a different valuation of land—more specifically, Albizu's nationalism, which also contained a critique of the American colonization of Puerto Rican land. In relation to national sovereignty, Albizu framed the protection of land in nationalist terms, where land and, by extension, nature, are perceived as national heritage, a national inheritance that needed to be defended from U.S. capitalist-colonialist interests. From this position, Albizu struggled for national sovereignty and control over Puerto Rico's natural resources by establishing greater autonomy vis-à-vis the more exploitive features of the U.S. capitalist colonialism. Hernández Cruz's poem, then, affords all students of environmental justice one glimpse into the struggle to define and claim a land's—in this case, Puerto Rico's—value.

As the prior examples show, texts are concerned with and thematize valuations of nature, which demonstrates that texts constitute an important tool in teaching environmental justice issues, issues that entail articulations of value. From these examples and my previous exposition, we can discern some propositions regarding the uses of textual economics for the study and teaching of valuations of nature. Textual economics offers, first, an excellent way for students to look at and understand textual valuations of nature in their historical context, especially since texts play a dynamic role in producing and reproducing such valuations. Second, textual economics provides students with powerful means to help them critique, contest and demystify the capitalist monetary valuation of nature. Finally, textual economies provide students with an excellent way of examining the imaginative and creative ways in which environmental justice writers, activists and scholars enact alternative valuations of nature.

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