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“As Lion Rule the Jungle, So Man Rule the Earth”: Perceptions of Nature and the Environment in Two Caribbean Cities

INTRODUCTION

From the establishment of the first sugar plantations to the construction of the latest all-inclusive mega-resort, economic exigencies, often foreign-imposed, have impacted negatively on the Caribbean's fragile island ecosystems. The repercussions of environmental degradation for agriculture and tourism have become progressively more visible to those whose livelihoods depend on these industries. In recent decades, local and international environmental activists have focused attention on the “biodiversity hotspots” found in the Caribbean, while international donors and financing institutions have also begun to pressure governments in the region to take environmental action. Indeed, numerous national policy reports and documents plot routes to sustainable development. As elsewhere, Caribbean governments and activists alike place a strong emphasis on awareness-raising and environmental education. This derives in part from an underlying assumption in much environmental rhetoric that “saving the environment” requires substantial changes in citizens' values, attitudes, and behavior. However, governmental and nongovernmental environmental policy and campaigns often lean heavily on imported perspectives and discourses. This exogenous content and framing can lead to a disengagement with local populations, as perceptions of nature, the environment, and sus-

tainable development are rooted in specific cultural, socioeconomic, and spatial contexts.

While the mismatch between the production and the consumption of environmental policy content does not necessarily derive from an intentional foreign prejudice, it does reflect a certain lack of knowledge regarding Caribbean environmental worldviews and attitudes. Following widespread interest in “traditional” or “indigenous” environmental knowledge, a limited amount of research has been done among fisherfolk and agriculturalists (e.g., García-Quijano 2007; Grant and Berkes 2007; Henfrey 2002; Renard 1979; Sletto 2005). Yet hardly anything is known about the environmental perceptions of urban populations. On most Caribbean islands, the majority of the population is urbanized and many environmental problems are concentrated in or originate in urban areas. These facts make it all the more salient to understand how urban populations perceive and negotiate both their natural and urban environments. Based on the case studies of Kingston, Jamaica, and Willemstad, Curaçao, that use a mix of quantitative and qualitative methods, this article examines perceptions of nature and the environment at the urban grassroots level and explores their philosophical origins.

ENVIRONMENTS AND ENVIRONMENTAL PROBLEMS

From a social science perspective, both environmental problems and natural or man-made environments are socially constructed. Different individuals and social groups can interpret, evaluate, and convey the same landscape—a social product itself—in radically different terms (cf. Ingold 2000; Hirsch 1995). Similarly, environmental problems, like other social problems, do not exist independently from a social context (Burningham and Cooper 1999; Hannigan 1996). These problems are generally caused by people, they are defined by people as being a problem, and the solutions must be formulated and carried out by people. Environmental problems are constructed and understood according to the cultural, socioeconomic, and spatial position from which people negotiate their surroundings and changes to their environments. From this perspective, an “intrinsic knowledge of people’s understanding of certain environmental problems” (Löfstedt 1995, 83) is requisite to achieve effective resolution of these issues. Therefore,

in approaching environmental problems, we must research not only “the tangible, physical environment, but also the way in which different groups and individuals perceive the environment, and the nature of the economically, socially and culturally based perspectives which influence and condition that perception” (Thomas-Hope 1996, 8). In searching for solutions to environmental problems, it is important to realize that the underlying causes of environmental degradation lie in political and economic as well as cultural spheres (Bryant and Bailey 1997; Robbins 2004). Interpretations of the environment, though critical, cannot be seen as the sole explanation for the exploitation and degradation of natural resources. Nonetheless, the larger culture, including religious-cosmological perceptions of human-nature relationships, can be a key in understanding and hopefully, eventually solving environmental problems.

The relations between environmental worldviews, values, attitudes, beliefs, and behavior are complex. Environmental psychology provides a schematic understanding of how worldviews and attitudes translate into environmentally friendly behavior. An individual’s position in the social structure, including socioeconomic background, influences the institutional incentives and constraints he or she will encounter during his or her lifetime, and also the development of his or her worldviews and values. These in turn are causally antecedent to specific attitudes and beliefs that—mediated by knowledge of both a range of appropriate behaviors and specific behavioral commitments and intentions—translate into either resource-using or resource-saving behavior (Gardner and Stern 1996; Stern, Dietz, and Guagnano 1995). New information and ideas—for instance, those disseminated by governments or environmental nongovernmental organizations (NGOs)—are filtered through underlying worldviews and values, affecting beliefs and attitudes and eventually behavior. As noted previously, attention to worldviews, values, and attitudes should not obscure political-economic structural constraints to environmental behavior.

METHODS AND RESEARCH COMMUNITIES

The article draws on a larger research project on the urban environment in Kingston and Willemstad. This project included ethnographic

fieldwork in four lower-income communities in 2003 and 2004, locations selected on the basis of their socioeconomic status and their proximity to environmental problems. In Kingston, the two research neighborhoods were Riverton, a community bordering on a major landfill at the edge of the city, and Rae Town, a downtown fishing community on Kingston's polluted harbor that suffers major sewerage issues. In Willemstad, fieldwork was conducted in Wishi/Marchena, a central neighborhood located downwind from the Isla oil refinery and Seru Fortuna/Seru Papaya, an area on the urban periphery, experiencing a degrading social and physical infrastructure, including sewage and garbage issues. Additional factors in the selection of these research sites were physical accessibility and perceived safety, as well as social accessibility through gatekeepers, such as community leaders and key informants.

Data was obtained through participatory observation and interviewing. In-depth interviews were held with a total of 118 residents (60 in Kingston and 58 in Willemstad), complemented by several unstructured interviews and numerous informal conversations. This paper draws mainly on two interview methods, the New Ecological Paradigm (NEP) scale and the photo elicitation technique. The NEP scale (Dunlap et al. 2000) was created to roughly measure environmental concern and generalized beliefs about human-environment relations. The instrument consists of fifteen statements, and respondents are requested to indicate whether they strongly agree, mildly agree, are unsure, mildly disagree, or strongly disagree with these statements. The scale is designed to measure “five hypothesized facets of an ecological worldview,” each tested by three statements. The facets are those relating to limits to growth, anti-anthropocentrism, balance of nature, rejection of human exemptionalism, and the possibility of an ecocrisis (see table 3.1). Responses to the statements were coded from 1 to 5, so that a higher score denotes a pro-NEP response. With fifteen statements this means that a total score of 75 indicates a total endorsement of the NEP and 15 indicates total rejection. In spite of the usual quantitative limitations, extensive use and comparability of samples make the NEP scale a useful tool. In addition, qualitative clarifying responses to the various statements proved extremely valuable. In my second fieldwork period, I employed a version of the scale adapted to the Caribbean context, with a number of changes including a simplification of the

Table 3.1. Revised New Ecological Paradigm (NEP) Scale

NEP1	limits	We are approaching the limit of the number of people the earth can support.
NEP2	anthro	Humans have the right to modify the natural environment to suit their needs.
NEP3	balance	When humans interfere with nature it often produces disastrous consequences.
NEP4	exempt	Human ingenuity will ensure that we do NOT make the earth unlivable.
NEP5	ecocrisis	Humans are severely abusing the environment.
NEP6	limits	The earth has plenty of natural resources if we just learn how to develop them.
NEP7	anthro	Plants and animals have as much right as humans to exist.
NEP8	balance	The balance of nature is strong enough to cope with the impacts of modern industrial nations.
NEP9	exempt	Despite our special abilities humans are still subject to the laws of nature.
NEP10	ecocrisis	The so-called ecological crisis facing humankind has been greatly exaggerated.
NEP11	limits	The earth is like a spaceship with very limited room and resources.
NEP12	anthro	Humans were meant to rule over the rest of nature.
NEP13	balance	The balance of nature is very delicate and easily upset.
NEP14	exempt	Humans will eventually learn enough about how nature works to be able to control it.
NEP15	ecocrisis	If things continue on their present course, we will soon experience a major ecological catastrophe.

Source: Dunlap et al. 2000.

terminology and the inclusion of a religious dimension (see table 3.2). Combining the data from all communities (including only those items used in both scales) results in larger samples and allows comparisons between Kingston and Willemstad as well as an aggregate “Caribbean” sample combining data from both cities (table 3.3 and figure 3.1).

The second interview method used to elicit environmental perceptions was the photo elicitation technique (Harper 2002; Schwartz 1989), which consisted of displaying photos of “environmental” scenes and asking respondents what they thought about them. Their responses allowed insight into associative thinking on certain aspects of nature and environmental problems. The photos, taken by me during previous research trips, included depictions of mangroves, cacti, and other tropical vegetation; garbage dumps; litter in urban and rural settings; the oil refinery; and polluted gullies, beaches, and bays. Responses to both interview methods facilitated an understanding of low-income,

Table 3.2. Adapted Version of NEP Scale Incorporating Religious Dimension

RNEP1	anthro	Humans have the right to modify the natural environment to suit their needs.
RNEP2	limits	The earth has only limited room and resources.
RNEP3	theo	Humans were created by a higher being to rule over the rest of nature.
RNEP4	ecocrisis	Humans are severely abusing the environment.
RNEP5	exempt	Humans will eventually learn enough about how nature works to be able to control it.
RNEP6	balance	When humans interfere with nature it often results in disaster.
RNEP7	limits	The earth has plenty of natural resources; we just need to learn how to develop them.
RNEP8	ecocrisis	If things continue on their present course, we will soon experience a major environmental catastrophe.
RNEP9	anthro	Plants and animals exist primarily to be used by humans.
RNEP10	exempt	Even though we are different from animals because we can think and talk, humans are part of nature just the same.
RNEP11	balance	Nature is so strong that human activities and lifestyles do not make a large impact.
RNEP12	theo	There is a higher being who determines the relationship between humans and nature.

urban views of human-nature relationships and perceptions of local nature and specific environmental issues. In other words, the methods assessed both worldviews or generalized beliefs about human-nature relationships and specific beliefs and attitudes toward particular environments and environmental issues.

Table 3.3. Means of dimensions of NEP scale (1 = strongly anti-NEP and 5 = strongly pro-NEP)

	<i>Jamaica</i> (<i>n</i> = 60)		<i>Curaçao</i> (<i>n</i> = 56)		<i>Total Caribbean</i> (<i>n</i> = 116)	
	<i>mean</i>	<i>SD</i>	<i>mean</i>	<i>SD</i>	<i>mean</i>	<i>SD</i>
<i>limits to growth</i>	1.81	1.00	2.05	1.04	1.93	1.02
<i>anti-anthropocentrism</i>	2.80	1.11	3.10	1.30	2.94	1.21
<i>human exemptionalism</i>	3.55	1.03	3.58	0.82	3.56	0.93
<i>balance of nature</i>	4.00	1.03	3.75	0.98	3.88	1.01
<i>possibility of an ecocrisis</i>	4.28	0.91	4.46	0.72	4.36	0.83
<i>NEP score total</i>	48.31	8.28	49.22	8.94	48.75	8.58

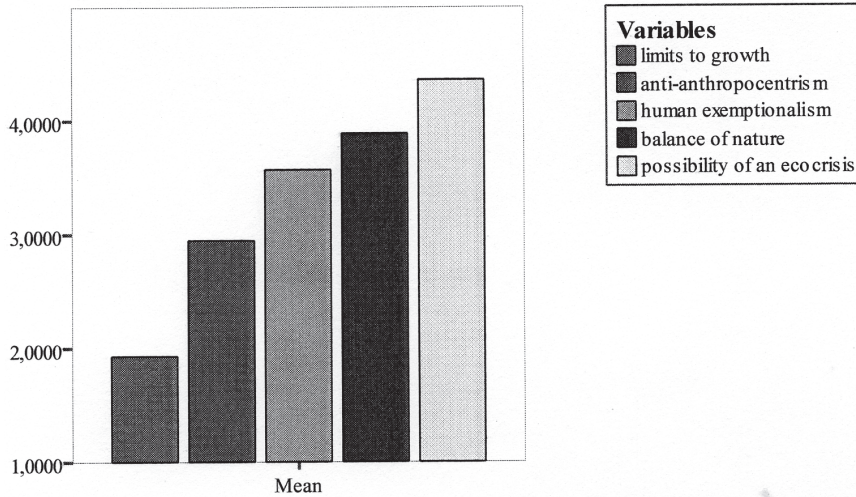


Figure 3.1. Means of Dimensions of NEP Scale (1 = strongly anti-NEP and 5 = strongly pro-NEP)

FOLK ECOLOGIES

Using the NEP scale allowed me to explore different aspects of Jamaican and Curaçaoan “folk ecologies” or “environmental worldviews”: “generalized beliefs about the Earth and human-environment relationships” (Stern et al. 1995, 738). There were remarkable similarities in the responses from both islands and all four research neighborhoods, both quantitatively (see table 3.3) and qualitatively, from which a distinctly Caribbean worldview vis-à-vis nature and humankind’s position in it emerged. This worldview was intimately connected to religious beliefs—whether Catholic (Curaçao) or Protestant and Rastafari (Jamaica)—and to a rather pessimistic, misanthropic view of humanity in general. Respondents generally displayed considerable levels of environmental awareness, though they were quite optimistic regarding limits to growth.

Nearly all respondents were convinced of the earth’s abundance of natural resources. Most viewed the earth as a vast, limitless expanse. Likewise, nature was seen as an endless cornucopia, on which humans relied to provide them with everything. For instance, Marline, a thirty-

seven-year-old housewife from Seru Fortuna, spoke of “its beauty, things to eat and drink.”¹ Nature was generally envisioned as being very strong, stronger than humans, and having a powerful regenerative capacity. The concept of “limits to growth”—restrictions to the earth’s room and resources—was practically absent. Sheik, a forty-two-year-old cook from Rae Town, maintained, for instance, that “father God nah put no limits innit,” while Colette, a twenty-five-year-old unemployed woman from Rae Town, argued that “if it neva nuff wi woulda died long time.” Few respondents envisioned a looming limit to the number of people and surprisingly, considering their location on small, urbanized, and densely populated islands, they did not see overpopulation as an issue. A number of respondents, however, did emphasize that scarcity throughout the world is caused by the unequal distribution of this natural wealth by those in power.

The cosmology that emerged in interviews had a strong anthropocentric component, witnessed through strong beliefs in humans’ right to use and change the natural environment to suit their needs. The view of nature was largely utilitarian; most respondents were convinced that plants and animals existed in the first place to be used by people. Most respondents added, however, that humans need to make use of natural resources in a prudent manner. There was a religious basis to these convictions. Juni, an unemployed thirty-four-year-old man from Seru Papaya, explained, for example, that “God created animals to be eaten, but you need to use them for good things, you can’t just kill them for fun.” The general opinion was that humans were created by God to rule over the rest of nature, though a number of respondents stressed that this entailed a certain responsibility, such as Diego, a twenty-seven-year-old unemployed man from Seru Fortuna who said that “God made it for us to enjoy and share.” Correspondingly, many felt that humans have the right to change the natural environment to suit their needs, but only in a context of stewardship—that is, if these changes are made with consideration. According to Jerry, a sixty-year-old retired civil servant from Seru Fortuna, “not without a good plan, you can’t hurt nature.” A few respondents displayed a minor preservationist streak. For instance, two fishermen from Rae Town, one of whom a Rasta, demurred that “some places haffi remain [untouched]” and that “Father put dem deh so dem nah fi change it” [God made those places so people should not change them].

These anthropocentric beliefs were balanced by more ambiguous stances on humans' exempt status in relation to the rest of nature. On the whole, respondents tended to agree that humans were part of nature in the same manner as plants and animals. Many elucidated their opinion on this by explaining that all were created by and under God or, for Rastafari, Jah. For most, however, there was a hierarchy. According to Ron, a social worker in his late thirties from Seru Papaya, "people are the part of creation God loves most." Some expressed the belief that animals have feelings and thoughts similar to people but lack speech. According to Chanelle, a self-described hustler in her late twenties from Rae Town, "dem come in jus' like wi" [they act just like us]. This endowing of animals with a spirit concurs with Chevannes' statement that the Jamaican view of nature is "concrete rather than abstract, manifesting itself in important animistic beliefs about natural objects and products" (1994, 26). These beliefs do not just apply to animals. According to the Jamaican musician Sizzla, "every flower in the garden, every tree in the forest represents a living person" ("Jah Will Be There," *Ghetto Revolution*, 2002). In Curaçao, several people were quick to provide examples of animals communicating with them, while Marline was emphatic that "trees cry just like us." Respondents also stressed the interconnectedness between humans, animals, and trees. Sonny, a fifty-year-old fisherman/farmer from Rae Town, noted that "if air polluted, they die, we die." Nevertheless, humans were seen as distinct because they can access knowledge and technology to control or exploit the rest of nature. There was much confidence that technology would enable humans to continue to utilize natural resources. Most saw people as powerful and capable of developing all kinds of technology in order to manipulate their surroundings and eventually control nature, though not necessarily for the good. Paul, a seventy-year-old mechanic from Seru Fortuna, for example, felt that people "abuse their knowledge and power."

This belief in the perfidious nature of humans and their abusive tendencies is also apparent in relation to the balance of nature. On the one hand, many saw nature as strong, uncontrollable, and indestructible, specifically because, as Colette, an unemployed twenty-five-year-old from Rae Town, asserted, nature is "God's work." In the case of fishermen on both islands, this reasoning is perhaps the result of frequent interaction with the wild elements out at sea. Some respondents saw

nature as unchangeable. According to Marline, for instance, "only Him up there" can change it. Simultaneously, many were concerned about the negative impact of human activities on the environment, such as the pollution of the harbor, the chopping down of trees, and the indiscriminate building of houses, which they attributed to greed and disregard for nature. According to Iris, an unemployed thirty-year-old woman from Seru Fortuna, "they do it even when they don't have to."

Speaking with strong conviction and sometimes a definite enthusiasm, respondents on both islands expressed a somewhat millenarian expectation of environmental catastrophes, specifically hurricanes, earthquakes, and floods. This certainty that disaster is nigh at hand stems from more general apocalyptic religious beliefs, but is also informed by a pragmatic awareness of the region's history of devastating natural disasters. Natural disasters were seen as indicating divine wrath and punishment for moral failure. Wayne, a thirty-four-year-old fisherman from Rae Town asserted, for example, that "[God] nah like weh wi do," while Graciella, an unemployed thirty-six-year-old from Seru Papaya, explained that "God is angry because of the lack of values, the murders." Visions of apocalypse were likely strengthened by hurricane Ivan, which swept a devastating path through the Caribbean in September 2004 and barely missed Curaçao. In addition to these associations with a reproving deity, most people also actively recognized the direct link between human interference with nature and resulting disaster, without divine intervention. Illustrations of this included the droughts following deforestation, the earthquakes resulting from the extraction of oil and gas from the ground, or the flooding happening after land reclamation. Or as Chella, a cleaning lady in her fifties from Seru Papaya explained: "If you fill up the harbor and so on the water comes back, looking for its old home."

Religion obviously played a strong role in shaping ideas about the relationship between humans and nature. In fact, rather than speaking of a two-sided relationship between humans and the natural environment, in the Caribbean context it might be more useful to think in terms of a trilateral relationship between humans, nature, and God or Jah (see figure 3.2). The way in which these relations were conceptualized appeared to combine misanthropy, anthropocentrism, and animism. God is always superior to both humans and nature, and in this they are both equal elements of his divine creation. Yet humans and nature also stand

in an alternating hierarchical relation to each other, always mediated by God or Jah. On the one hand, nature is seen as wild, dangerous, and untamable. Uncontrollable natural forces, such as the sea or the weather, are understood as spirited in an animist sense or anthropomorphized, as in the case of hurricanes (cf. Barker and Miller 1990). The forces of nature are also animated through the will of a specific deity, when a vengeful God or Jah sends natural disasters as a warning or punishment in reaction to human wickedness.

Conversely, most respondents believed that God created people in order to rule over nature. Quoting the Bible, whether from a Christian or a Rasta perspective, respondents mentioned that God or Jah had granted man dominion over all things. This anthropocentric hierarchy was seen as a natural, logical order. Or as Wayne phrased it poetically: "As lion rule the jungle, so man rule the earth." However, a misanthropic view of humans posits them as wicked, greedy, and envious in relation to each other and the natural environment. This conflict between the human God-given right to rule over nature and the abuse of this right comes to the fore in Bob Marley's "We and Dem": "But in the beginning Jah created everything / giving man dominion over all things / but now it's too late, you see men have lost their faith / eating up all the flesh from off the earth" (*Uprising*, 1980).

CARIBBEAN ENVIRONMENTS AND ENVIRONMENTAL ISSUES

Separate observations, conversations, and the photo elicitation technique made it possible to assess attitudes to specific Jamaican and Curaçaoan environments and environmental issues: solid waste management, industrial pollution, and wild nature. Again, there was a significant measure of agreement in attitudes encountered on the two islands, though there were also a number of major differences related in part to the location of the research neighborhoods within their respective cities. There were different responses in Willemstad between those living under the oil refinery, more toward the heart of the city, and those living on the fringe of the urban area, nearer to the sea and the bush (*mondi* in the local vernacular of Papiamentu). In Kingston, different responses appeared to be related to the extent to which re-

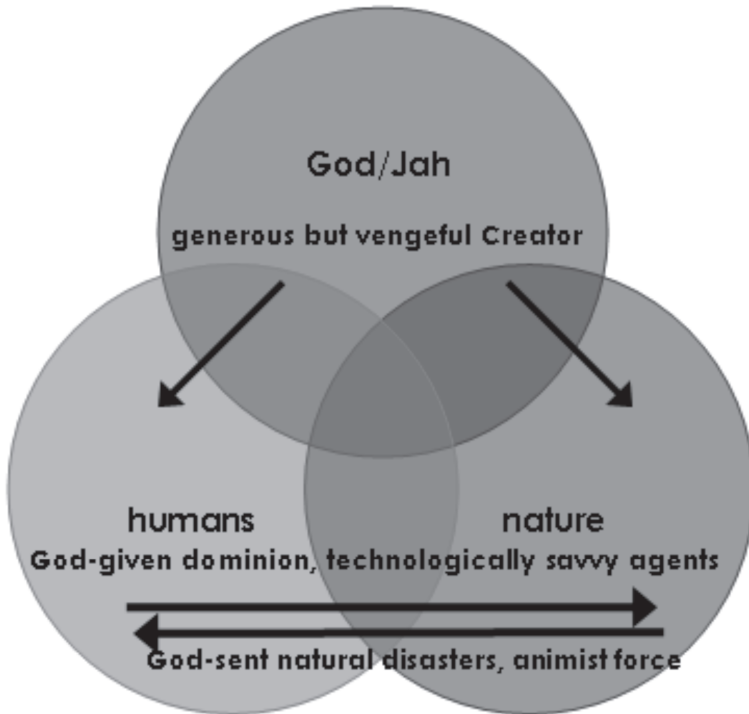


Figure 3.2. Schematic representation of Caribbean environmental worldview

spondents were involved in activities connected to natural resources, such as fishing.

SOLID WASTE MANAGEMENT

Nearly all respondents expressed aesthetic, hygienic, and environmental objections to the omnipresence of litter and garbage, and reacted emotionally to its visibility in both urban and rural areas throughout the island. This attitude was evident across communities, despite the fact that Riverton in Kingston bordered on the dump, where the presence of garbage was noticeable at all times. While garbage and litter were accepted as a part of urban life, they were considered a

visual disturbance due to their ugliness. In Willemstad, respondents also placed a strong emphasis on their impact on the tourist industry, wishing that the people who dump illegally would at least hide their dead dogs and old appliances in the bushes rather than leaving them by the wayside where tourists could see them. More importantly, respondents pointed to garbage as a health hazard: the source of rats, roaches, and disease. Equally, they recognized the ecological impact of litter and garbage, such as untreated sewage that poisoned the fish eaten by the people. According to Dread, a forty-year-old Rasta farmer from Riverton, improper waste management was “wicked to the environment.”

In all neighborhoods, dumping and litter were related to social and economic issues (for a similar account see Dodman 2003, 311). Curaçaoans associated this type of pollution with social decline—crime, drugs, prostitution, and the abandonment of houses following the exodus to the Netherlands—and a bad mentality or neglect and lack of “social attention.” In urban areas, litter was associated with the bad name certain neighborhoods have and blamed on poverty and sometimes Dominican migrants. In less populated areas, where illegal dumping is very common, the blame is placed on “a lack of civic feeling.” Or as Ron, a social worker in his late thirties from Seru Papaya, put it: The people who do this “don’t love their home.” Letitia, a forty-five-year-old social worker from Seru Papaya, added that they “have no respect for their surroundings or for themselves.” Kingston respondents associated litter and illegal dumping with neglect and crime. Greg, a thirty-four-year-old carpenter from Riverton, explained, for example, that “these [rundown urban] places need refurbish, build back, beautify the city. Dis a safe haven for criminals.” Unclean surroundings were linked to poverty, abandonment, and lack of development and, according to Petey, a thirty-year-old fisherman from Rae Town, looked “like it condemn.” A certain resignation toward the omnipresence of garbage in the urban surroundings could be detected in the upset that respondents displayed toward litter and dumping in rural and coastal Jamaica. These respondents from the heart of urban Jamaica placed a strong value on clean, green spaces distinct from the city’s poverty and filth. While garbage was readily associated with the city and accepted as an urban fact of life, dumping did not fit with their view of the countryside. Sonny, a fifty-year-old fisherman/farmer from Rae Town, assumed, for example,

that “same people from Kingston do this,” while Colette, another Rae Town resident, considered it improper “fi a place weh tourist always go.”² Cleanliness was also associated with wealth. It was pointed out, for instance, that the commercial area of downtown Kingston should look better because, according to Colette, “money mek dung deh” [money is made down there]. The strong disapproval of littering and dumping and linking this to social factors seems at odds with the fact that in many locations in the research neighborhoods there were empty spaces functioning as informal garbage dumps. However, the residents placed a strong emphasis on hygiene, as mirrored in the care for their own houses, yards, and personal belongings.

INDUSTRIAL POLLUTION

Striking differences were found in views on industrial pollution, specifically that deriving from the Isla oil refinery in Curaçao. In Jamaica, most respondents took a positive view of such industry and reacted positively to pictures of the refinery because they associated them with jobs and development. Jamaicans such as Pops, a fifty-seven-year-old Rasta shopkeeper from Riverton, for example, deemed it a “progressive, money-making thing” and also thought it aesthetically pleasing. A minority of respondents commented on the negative environmental impact such a refinery might have. Dada, a twenty-three-year-old male “hustler” from Riverton noted that a “whole heap a smoke come out there and mash you up.” In Curaçao, where the oil refinery has been central to the island’s social and spatial development, views were more heated and there were major differences in opinion between those in Wishi/Marchena, downwind of the refinery, and those in the less central neighborhood of Seru Fortuna/Seru Papaya.

The refinery’s impact on the economy was paramount in the discourse of Wishi/Marchena residents, while those in Seru Fortuna and Seru Papaya associated it with social inequity and negative health effects. Employing environmental justice discourse, Seru Fortuna/Seru Papaya residents noted that while the pollution affects Wishi/Marchena and adjacent downwind neighborhoods, the economic benefits accrue elsewhere. It was striking that respondents from Wishi/Marchena, who inhaled the refinery’s emissions day after day, had relatively positive

associations with the oil refinery, emphasizing its economic contributions. Tante, a sixty-eight-year-old housewife whose husband used to work for Shell, remarked, for instance, that “the money is good, the smell is bad,” while Rosita, a thirty-four-year-old community center administrator, said that she did not have “any problems with the oil refinery itself, just with the soot.” Residents exhibited significant optimism regarding attempts to make improvements by either the refinery or government, such as Minor, a thirty-five-year-old unemployed man, who believed that the refinery was “busy changing things, making the smoke go underground into the sea.” Unfortunately these statements were not true, at least not at the time of the interview. A considerable number of residents admitted or insisted that they were not much concerned about the refinery and spoke of the serious air pollution in Wishi/Marchena in such a way as if it did not really affect them.

In Seru Fortuna/Seru Papaya, on the other hand, the Isla refinery and other industries evoked mixed feelings. While many considered the refinery pretty and a “nice view,” they were well aware of its polluting effects and the resulting harm to people and the environment. The economic benefits were recognized, but compared to Wishi/Marchena residents, they were much more cynical about where the money earned ended up. Maria, a sixty-two-year-old housewife from Seru Papaya, explained that “it’s supposed to be good for the economy but it doesn’t make the people rich, just the government.” Ron, a social worker in his late thirties from Seru Papaya, agreed that “it does generate money, but I don’t see the added value. It does bad things to Wishi/Marchena. Other people benefit from the refinery, but not this country.” He continued, explaining that “they should fine Shell, but nobody has the nerve.” Maria and Ron and various other Seru Fortuna/Seru Papaya residents, then, related environmental problems to local and global inequity, and their statements contributed to a local environmental justice discourse.

WILDERNESS

Both similarities and differences between the different research areas were evident in attitudes toward bush (Jamaican) and *mondi* (Curaçaoan)—that is, the local versions of wilderness or untamed,

undeveloped nature. Jamaicans expressed a marked aversion to bush, such as mangroves and cacti, describing such landscapes as “bad” or “dirty” and full of mosquitoes. According to David, a twenty-five-year-old sanitation worker in Riverton, it “jus’ look bad, not clean.” Some respondents, however, suggested that bush could become nice. Pops, the Rasta shopkeeper from Riverton, for example, felt that these places “wan’ develop,” while Keesha, a twenty-seven-year-old teacher from Riverton, believed they “would look good if it clean up.” Similarly in Curaçao, particularly in Wishi/Marchena, residents reacted negatively to the *mondi*, associating it with danger, whether it was the prickly plants, wild animals, or lurking rapists and drug traffickers. It is not surprising, then, that some respondents emphasized that they did not venture outside the urban area, such as Angela, a seventy-one-year-old Dominican shopkeeper in Wishi/Marchena, who mentioned that she did not really go to “these places, with nature” and was “more a city person.”

However, on both islands, numerous people acknowledged and emphasized the instrumental value—rather than any intrinsic value—of undeveloped nature (cf. de Kruijf and Arends 1975). In Curaçao, the *mondi* is “a good place to hunt iguanas” that provide a good source of protein in tasty soups, according to George, a twenty-one-year-old sailor from Wishi/Marchena. It was also seen as a place that provides medicinal products and which is attractive to tourists. In Jamaica, respondents discussed how mangroves could be used to make mats and hats, and cacti to make medicine or wash hair, while trees in the bush were valued for their fruit. Residents valued self-sufficiency highly, and knowing how to make the most of one’s environment is integral to this. People from Rae Town, where many are engaged in fishing, praised the ecological functions of wild nature. Mangroves, for instance, were appreciated for protecting young fish and birds, presumably due to the community’s proximate relationship with the harbor and the sea.

A somewhat contradictory tendency, partly explained by the residents’ central or peripheral location within the city, was evident in the expression of more personal, positive attitudes toward “unspoilt” or “natural” places. Various respondents did speak in positive terms of such landscapes, valuing their beauty, quietness, and cool, fresh air. Some saw natural, green areas as an integral, symbolic part of Jamaica and associated them with “country” and nice, quiet places. Residents

also realized the growing scarcity of wilderness. Zion, a fifty-three-year-old Rasta fisherman from Rae Town, emphasized that “we would like some of our environment to remain like this,” a sentiment reinforced by the lack of wild natural areas in their urban surroundings. In Seru Fortuna/Seru Papaya, in stark contrast to Wishi/Marchena and to a lesser extent the Jamaican research communities, residents displayed a very positive attitude toward bush/*mondi*. They nearly unanimously described it as pretty and nice. Here too, bush was seen as symbolic of Curaçao as a nation. Tom, a thirty-two-year-old unemployed man from Seru Papaya, explained that “when you see it you know you’re in Curaçao.” The *mondi* and its plants were seen to represent Curaçaoan traditions and heritage and like other forms of heritage, in need of conservation. This positive association with bush is probably due to residents’ proximity and interaction with it. Seru Fortuna/Seru Papaya is more or less surrounded by bush, and those who live there interact with it in various ways. Many male residents, for instance, fish along the coast both for fun and to supplement their diet and income.

CARIBBEAN CONTEXTUALIZATIONS

The environmental worldviews, beliefs, and attitudes set out in the foregoing need to be understood in relation to their cultural, socio-spatial, and political-economic situatedness. The remainder of this section provides a brief analysis of the specific underpinnings of these Caribbean perceptions of environment and nature, focusing in particular on religious backgrounds and inequitable projects of development and modernity.

RELIGIOUS ROOTS

As is evident from the folk ecologies presented above, religious beliefs largely shaped the beliefs about human-nature relations. In fact, these worldviews centered on closely entwined relations between humans, nature, and God or Jah, characterized by a combination of misanthropy, anthropocentrism, and animism. The folk ecologies echo Chevannes’ description of the Jamaican view of mankind as dia-

lectual. According to him, humans are seen as actors “capable of mastery over the supernatural, the natural and the human world,” mainly through the acquisition of knowledge, but are simultaneously perceived as passive and subject to supernatural forces and also natural forces that are interpreted as instruments of divine action (Chevannes 1994, 32–33). Similar versions of environmental thought are found in the scarce ethno-ecological literature on the Caribbean (cf. Ringel and Wylie 1979; Bonniol 1979; Verheij 2001; Rauwald and Moore 2002).

It could be argued that the dual, ambiguous attitudes toward nature and the natural environment, which are entangled with religious and other supernatural beliefs, are a creolized Afro-Caribbean cultural expression. On the one hand, nature has a “friendly” face. The natural environment is represented as a horn of plenty, there for the purpose of human utilization and development. This perspective has roots in Judeo-Christian religious thought, notably the biblical notions of dominion or stewardship, as articulated in the book of Genesis (cf. White 1967). On the other hand, however, nature is seen as threatening and unpredictable, a wild force over which humans cannot exert control. Supernatural elements are also a factor in this perspective. The centrality of spiritual elements may be a universal rather than a specifically African perspective, encountered before or alongside dominant rational, scientific perceptions of nature and the environment. However, these holistic, spiritually articulated environmental worldviews can perhaps be traced to what Chevannes (1998) refers to as the “African aquifer” running beneath the surface of Caribbean societies, though obviously there is great variety in African environmental worldviews (Millar 1999; Kelbessa 2005).

PROJECTS OF DEVELOPMENT

Caribbean perceptions of nature and the environment can also be comprehended in the light of modernizing projects of development that have been played out in the region from early colonialism through to today. Such European and later North American projects have been tied closely to the taming of wild nature and exploitation of subjugated groups. For the European colonizers, the ability to master nature was proof of civilization and humanity. Thus the fact that the “natives” had

not managed to alter and subdue the natural landscape proved their inferiority and served simultaneously as a rationale for their colonization. According to the colonizers, the “savage” or “barbarian” natives—labels easily transferred to enslaved Africans in the Caribbean—had not evolved into civilized humans and it was therefore in their interest to remain under colonial tutelage until they were able to “leap across the centuries” into a modernist way of life (Argyrou 2005). The idea that controlling nature and making it productive marks development, progress, and modernity, which fitted neatly with colonial systems of plantation slavery throughout the Caribbean, can also be seen in more recent postcolonial projects of development, especially those focusing on mining, industrialization, and tourism (cf. Ramphall 1994). Such projects arguably conflate development with exploitation of natural resources, regardless of its premise of the exploitation of humans. It needs to be stressed, however, that the colonial project also defined civilization and humanity in terms of cleanliness and hygiene. Victorian perceptions of cleanliness—as next to godliness—were propagated through the church and the state apparatus, fed by racist conceptions of black bodies and their surroundings as polluted, diseased, and uncivilized (cf. Burke 1996; De Barros 2003).

The pervasiveness of such hegemonic modernist, progress-oriented thinking helps to explain the enthusiasm many respondents displayed toward industry, such as the oil refinery. Likewise, it might account for the fervor with which they eschewed wild, undeveloped nature—denounced as “unclean”—and the various utilitarian, instrumental-value positive appraisals of the bush. The respondents’ associations of cleanliness with wealth and dirt with poverty and social disorder also echo colonial preoccupations with social and personal hygiene. It is their unfavorable position within the urban socio-spatial hierarchy, on the other hand, that explains their recourse to environmental justice frames to condemn polluting industries for their effects on the poor. And this position also led them to situate solid waste management in a framework of urban neglect.

The “behind the times” discourse of nature used by the European colonizers is echoed in contemporary Euro-American environmentalist rhetoric. At present, developing countries (the nonwhite Others have replaced the “natives” of the past) are urged to join the program and give up the modernist, nature-conquering mentality that

has proved so detrimental in the North (Argyrou 2005). The fact that inner-city residents have not yet "seen the light" of the limits to growth or the intrinsic value of nature, as environmentalists abroad and Caribbean elites at home have, is seen as evidence of their ignorance and inferiority, and this in turn serves as a rationale for a condescending mandate of "educating the masses," as is evident in many education and awareness-raising programs generated by Caribbean NGOs and governments (Jaffe 2006).

CONCLUSION

This article set out to explore urban Caribbean environmental worldviews and attitudes and beliefs with regard to specific environments and environmental problems. The data presented here points toward religiously anchored environmental worldviews that entail significant levels of environmental awareness, though a "limits to growth" dimension is notably absent. Attitudes toward and beliefs about specific environments and environmental problems were ambiguous, drawing on both modernist notions of development and environmental justice frames. I have suggested that the philosophical origins of these perceptions of environment and nature can be traced to creolized religious roots, on the one hand, and ideologies embedded in colonial and post-colonial projects of development, on the other.

Ideas about nature and the environment held at the grassroots level, such as those examined here, can be used to create more effective environmental education policies, which currently tend to incorporate exogenous environmental discourses. In particular, the intertwining religious and environmental beliefs that emerged from my research are generally absent from Western academic and policy discourses on environmentalism. The data presented here suggests that a more locally grounded policy should include appeals to religion-based environmental worldviews alongside dominant scientific environmentalist discourse. It also seems worthwhile to incorporate existing ideas about the interconnectedness of humans and nature and emphasize the notion of responsibility and care, which derive from religiously inspired ideas of dominion or stewardship over nature. Both religious institutions and popular culture seem to be logical sites for environmental messages. In

the more mainstream environmental education or scientific discourse, the data presented here could be incorporated to make a more persuasive case for the message of “limits to growth,” by for example basing it on practical experiences of floods and other environmental disasters. And working with the instrumental value that many respondents placed on natural resources, the more mainstream environmental education or scientific discourse could highlight the health and developmental impact of environmental degradation, which may be a more efficient route than trying to persuade the population to change its behavior on account of nature’s intrinsic value.

Caribbean countries such as Jamaica and Curaçao have strong economic imperatives to combat environmental degradation. Especially given the scarcity of state and NGO resources, it is critical for environmental professionals to ensure that their policies connect with local concerns, acknowledging and utilizing these perspectives and worldviews. Instead of basing policy and campaigns on foreign, Western concepts of environmentalism, professional environmental actors must actively seek to employ discourse and develop approaches that are relevant to large segments of Caribbean populations.

NOTES

1. All names of respondents are pseudonyms. The quotes in this section are all from research conducted in Rae Town and Seru Fortuna/Seru Papaya. Responses to the NEP scale in Riverton and Wishi/Marchena were only registered quantitatively, an error remedied in following fieldwork.

2. Garbage is only seen as problematic when it is “out of place,” for instance as litter or in rural areas. In other cases, such as in Riverton, garbage is not perceived as a problem but appreciated for its economic value. These situational objections to garbage affirm Mary Douglas’s (2002) well-known categorization of pollution or dirt as “matter out of place.”

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