Schooling and Environmentalism in Puerto Rico

Federico Cintrón-Moscoso

Departamento de Sociología y Antropología
Universidad de Puerto Rico, Recinto de Río Piedras

RESUMEN

Este artículo discute la relativamente reciente incursión del movimiento ambientalista en las escuelas públicas de Puerto Rico, y sus implicaciones para entender la relación entre los movimientos sociales y las instituciones públicas. El análisis de esta relación se desprende de una perspectiva teórica que ve las escuelas y las comunidades como espacios disputados en donde los procesos educativos y la producción de conocimiento son siempre necesariamente negociados y no absolutos. Estos espacios también resultan de la lucha entre diversos discursos pedagógicos, valores, y experiencias que los distintos agentes sociales en el contexto escolar y comunitario tratan de avanzar. En particular, este artículo presentará datos etnográficos que examinan el papel de una organización ambiental dirigida por jóvenes en el diseño e implementación de un programa de educación ambiental en cuatro escuelas públicas urbanas en Puerto Rico. Este análisis pretende arrojar luz sobre las siguientes interrogantes: Cómo organizaciones ambientalistas ganan acceso a instituciones públicas pese a los conflictos ideológicos que existen entre ellas; cómo estas estructuran dichas colaboraciones; y qué significan estas estrategias locales para los jóvenes involucrados en ellas y para los esfuerzos del movimiento ambientalista en general.
[***Palabras clave:*** Juventud, escolaridad, ambientalismo, antropología, Puerto Rico].

ABSTRACT

This article discusses the relatively recent incursion of the environmental movement into public schools in Puerto Rico, and the significant role of youth in our understanding of the relationship between social movements and public institutions. The analysis of this relationship stems from a theoretical perspective that views schools and communities as contested spaces in which the processes of education, and the production of knowledge, are always necessarily negotiated instead of absolute. These spaces also result from the struggle among the diverse pedagogical discourses, values, and experiences that various social agents in the school and community contexts attempt to advance. In particular, this article will present ethnographic data that examine the role of a youth-led environmental organization in designing and implementing an environmental education program in four urban public schools in Puerto Rico. This analysis attempts to shed light on the following questions: How do environmental organizations gain access to public schools despite their ideological conflicts; how do they structure these partnerships; and what do these local strategies mean for the youth involved in them and the wider efforts of the environmental movement. [***Keywords:*** Youth, schooling, environmentalism, anthropology, Puerto Rico].

Introduction

Recent attempts at developing an environmental education agenda in public schools in Latin America and the Caribbean emphasize the need to foster greater public awareness about environmental rights, issues, and solutions, while producing citizens with the knowledge and skills needed to address the ecological challenges of contemporary society. These initiatives point to the centrality of schools as centers for the accrual and dissemination of new information and their role in socializing the new generations into particular social and cultural values and behaviors that would result in broader public consensus favoring the environment (Morán, 2000). Yet, because of the magnitude of such transformations, it is believed that the development of such an agenda would not be possible under the current organization of centralized public school systems in the region without the support of organized groups outside the school system (Novo, 1996) and the integration of the environmental movement (Princen & Finger, 1994). External support from other sectors of society is deemed necessary for two main purposes: (1) to fill the gap of expert knowledge in this area by circumventing the need for teacher training, and (2) to allocate additional resources (e.g. personnel, supplies) that are not readily available within the school system, especially in underserved neighborhoods. Although this approach recognizes the limits of and disparities between educational systems in addressing the current environmental challenges, it tends to reduce the complexity of the public education project to its content-based and technical elements—e.g. scientific knowledge, and personnel—diminishing the significance of the underlying cultural and social aspects of education. Ideological conflicts, structural constraints and differing perceptions about the urgency of the problem (i.e. climate change and global warming) are some of the cultural and social elements that often affect the ways in which implementation of these new philosophies and practices take place.

Therefore, achieving such integration between the environmental movement and the school system has proven to be significantly challenging and, in many cases, unsuccessful as it brings to the forefront a philosophical and pedagogical conflict between the politically-oriented goals of environmental education and the more passive assimilation practices of conventional schooling (Stevenson, 2007). Moreover, this integration also challenges the more traditional perceptions of the school system as a bounded structure, independent of other sectors of society. In other words, this perceived unproblematic process of knowledge and technical transfer and integration of formal and infor-

mal education has resulted in an ideological struggle between systems of knowledge and practices that challenges the role, goals and capacity of the educational system and the environmental movement in promoting social change, rather than informing and sustaining each other (Departamento de Educación, 2003; Meinardi & Revel-Chion, 1998). As a result, although there seems to be a general consensus among educators, environmental activists, and the public regarding the need for public schools to promote and implement environmental education and to include in this process the different components of the environmental movement, they may not be ready to do so.

This ideological encounter seems particularly pervasive in colonial contexts in which the institution of education becomes a central battleground in the articulation of the colonial experience (Altbach & Kelly, 1984; Windel, 2008). While some analyses of the colonial experience critique public schools as fundamentally serving to promote the values and needs of the colonial power over those of the colonized, opposing discourses are also produced, which present alternative views on the colonial relationship and reflect the complexity of the system (Foley, 1984, 1991; Masemann, 1982; Pels, 1997). The political nature of the colonial relationship necessarily produces competing discourses that manifest not only "at the societal level, but also get enacted in everyday educational settings" (Watson-Gegeo & Gegeo, 1992). Hence, a multiplicity of discourses –including contradictory ones– about land and territoriality, citizenship, economic development and cultural production are negotiated through the development and implementation of curricula, while informing the many educational processes from policy reform to classroom activities.

In this article, I argue that these dynamics at the heart of the school system in Puerto Rico –a colonial territory of the U.S. since 1898– create a certain permeability in the organization of school practices at the community level that has resulted in the local environmental movement gaining privileged, although restricted, access to them. Despite the anti-colonial views of the Puerto Rican environmental movement and its activist-oriented approach to advocacy and education, in recent years we have seen how this movement has increased its presence in public schools by partnering with teachers and administrators in the development of environmental education programs. This article discusses this relatively recent incursion of the environmental movement into public schools in Puerto Rico, and the implications of such articulations in our understanding of schooling and social change in colonial settings. The article also gives emphasis to the critical role that young activists have played in facilitating this access for the environmental movement.

The ethnographic data presented below intend to shed light on these issues by analyzing the work of ***Conuco***[1] a youth-led environmental organization in Río Piedras, Puerto Rico. Although this paper centers on the work of Conuco, additional data will be presented that show the government's attempts at addressing public concerns about environmental education and the analysis of these initiatives by local educators.

Ultimately, the goal of the article is to shed light on how environmental organizations gain access to schools in a colonial context, how they structure these partnerships, and what these local strategies mean for the youth involved and the wider efforts of the environmental movement. This is accomplished by, first, discussing the historical role of the colonial government in advancing colonial policies and developmental strategies that have resulted in discourses and policies detrimental to the environment. This section will address how the Department of Education (DE) in Puerto Rico has been used as a vehicle to legitimize those discourses and promote a sense of dependency on the system for change. Second, I will present the work of Conuco as an example of how the environmental movement is challenging these discourses at the community level and the important role that young people are playing in these efforts. Elsewhere (Cintrón-Moscoso, 2010a, 2010b), I have discussed the personal experiences of the individual members of Conuco as they engage in these activities and what these experiences mean for their social and political development as activists and environmental leaders.

The Colonial State, the Department of Education and the Environment

In an archipelago with limited natural resources and physical space, the colonial government in Puerto Rico has, since early on, prioritized economic initiatives that benefit external capital, such as plantation agriculture, industrialization, mass tourism, and most recently biotechnologies (PRIDCO, 2011). These economic strategies have resulted, for the most part, in the severe alteration of the natural and social landscapes (Berman-Santana, 1996; Gutman, 1987; Muriente-Pérez, 2007). Particularly since the late 1940s, as part of the U.S.-led industrialization process in Puerto Rico known as *Operation Bootstraps* (Dietz, 2003; Pantojas-García, 1990), the natural environment has suffered irreparable damage due primarily to extensive processes of edification, contamination and urbanization of what used to be mostly agrarian zones (Helmer, 2004; Thomlinson, Serrano, López, Aide &

Zimmerman, 1996). Some scholars have described this aspect of the colonial experience as "ecological colonialism" (Morales-Cardona, 1977; Sánchez-Cardona, Morales-Cardona, & Caldari, 1975), emphasizing the effects of political and economic forces in the environment.

Currently, although through somewhat different mechanisms – such as the privatization of governmental assets, the implementation of adjustment policies in favor of foreign capital, and the exploitation of natural resources for mass tourism– similar economic strategies are still in place that legitimize the state's discourse on the environment as a commodity, severing its connections to local living communities and their needs (López, Aide, & Thomlinson, 2001; Thomlinson & Rivera, 2000; Susser, 1985). For example, although the Caribbean region is one of "the world's centers of biodiversity and endemism" (Helmer, Ramos, López, Quiñones, & Díaz, 2002, p. 165), the lack of protection laws, and the rapid land-use changes and undisciplined urbanization in Puerto Rico have brought with them an increasing loss of agricultural land –which has significantly diminished subsistence strategies, including the potential for food production– and the threat to the aesthetic amenities that drove the growth of urbanization (and tourism) in the first place (Thomlinson & Rivera, 2000).

This pattern of unsustainable development has found strong criticism from an array of social sectors in Puerto Rico, especially the environmental movement, but has also marginalized communities directly affected by these changes. Consequently, environmental struggles in Puerto Rico began and have been mainly maintained since the 1960s (Concepción, 1995) through efforts sprouting at the community level, which in turn have produced alternative political and cultural identity discourses focusing predominantly on the importance of political self-determination, preservation and conservation policies, and the advocacy of collective rights to vital resources. The emergence of environmental politics in Puerto Rico, thus, have been central not only in connecting the island struggles to current international environmentalisms, but also in "renewing long-standing social struggles, offering new perspectives on social change, and engaging a broader public" (Concepción, 1995, p. 112). The struggle to stop the U.S. Navy operations in the island of Vieques –a municipality of Puerto Rico– is a clear example of this. By reframing the claims of the Viequenses from material grievances to issues of peace, and human and environmental rights, this grassroots movement successfully generated a stronger national and international solidarity coalition that resulted in the U.S. Navy shutting down its operations in 2003, after more than 40 years of live-fire training on the island (GATP, 2002; McCaffrey, 2002). Broadening

the discourse of justice agglutinated more supporters across different ideological sectors in the island, making it possible for the movement to build a national consensus against a colonial practice never seen before (Ayala, 2003).

Additional efforts from the environmental movement have also concentrated on unmasking and condemning the exploitative behavior of corporations and public agencies over the environment and the poor communities that surround it (Hunter & Arbona, 1995; Massol-González, González, Massol-Deyá, Deyá-Díaz, & Geoghegan, 2006; Susser, 1992). These local struggles have been framed in clear opposition to the developmental discourses of the local government and, more broadly, the subjugated relationship between Puerto Rico and the U.S. Nonetheless, these initiatives have seldom found their way into the school curricula, which historically have been concerned with advancing the government's economic-driven agenda (Solís, 1994).

Compliance between the educational system and the developmental ideology of the colonial government predates the current discussion about environmental education, yet it characterizes the historical role of formal schooling in Puerto Rico since the U.S. took over the island in 1898. As other scholars in Puerto Rico have conclusively documented, the hierarchical structure of the system of education has been central in the promotion of the 'Americanization' of Puerto Rican subjects, and in securing the interests of colonial development and economic exploitation on the island (Montilla-Negrón, 1977; Osuna, 1945; Quintero-Alfaro, 1972; Tirado, 2008; Torres-González, 2002).

For example, the plan to Americanize Puerto Rico through the educational system was based for the most part on the production and legitimization of a discourse of "progress" that was linked, in its initial stages, to the acquisition of the language and customs of the U.S. (Montilla-Negrón, 1977). In its later stages, it was dependent upon the internalization by Puerto Ricans of a 'normalized' state of political, economic and social dependency that accepts U.S. control over the island as natural (Tirado, 2008). This discursive and developmental strategy created a hierarchical structure that is still in place today, and allows for the centralization of decision-making and school reform. Tirado (2008) argues that this vertical organization of the school system assists administrators in securing control over educational practices, which tend to prevent and disfavor any significant initiatives that sprout at the local level. What is more, these ideologies of power have had a tendency to produce within the lower ranks of the educational organization a generalized perception of reliance on the hierarchical system, and a lack of capacity to address educational issues from the

bottom-up (Tirado, 2008). As result, "the language of development, and more specifically the language advancing the reform of educational policies, [was, and still] is predominantly motivated by the exigencies of foreign control. Such exigencies often impede education's contributions to the country's development and instead have as their primary concern the preservation of control" (Solís, 1994, p.18).

The Environmental Movement and the Classroom

Although –and arguably becausex– the environmental movement in Puerto Rico has been central in advocating the protection of the natural environment and linking its deterioration to colonial predatory practices, it has not been until fairly recent that this movement have gained limited access to public schools. Previously, the responsibility of teaching children and adolescents about environmental issues has fallen on individual teachers –particularly science teachers– who have been personally interested in these issues or already participating as activists in the movement at large, or within their particular communities. Nevertheless, none of these efforts have represented an institutional interest in the topic or a concerted attempt to promote environmentalism systemically.

More recently, however, there have been a few initiatives at the local government level to amend the Organic Act of the Department of Education, which would authorize the DE to develop environmental curricula for all grade levels. Yet, none of these legislative projects have received significant support among local politicians or higher-rank administrators in the DE. In fact, during the most recent public hearings on this matter (in 2006), the previous Secretary of Education, the President of the Teachers Association and the President of the General Board of Education, all stated that the science curriculum already includes topics related to the environment and therefore there is no need for creating a separate environmental curricula, especially given the financial constrains of the DE, which have forced the elimination of other electives and programs (Molina-Rodríguez, 2006). Instead, and supporting the individual science-teacher approach mentioned before, the DE created two separate guidelines to assist interested teachers in the integration of these topics into their classes (Departamento de Educación, 2001, 2003). These guidelines –intended to be distributed across all levels of the system– included community activities, lesson plans and bibliographic materials as well as an ambitious introduction that outlines the principles and objectives of environmental education for school-wide reform. Nonetheless, in separate interviews conducted by this author, two of the contributors to the guidelines –María, a

retired high school science teacher and, Rosa, a college environmental education professor– recognized that this topic was not a priority for the DE and, as a result, the material was never extensively distributed to have any significant impact across the system. Also, training in the use of the guidelines was not required, but rather, scarcely offered to assist teachers with its implementation (Cintrón-Moscoso, 2010b).

Moreover, when explaining the difference between environmental sciences and environmental education, Rosa pointed out a deeper philosophical and pedagogical conflict not brought up by any high-ranking administrator in the aforementioned governmental hearings. For her, while the former is a sub-discipline of the natural sciences, concern with the integration of the physical and biological sciences and the technical solution of environmental problems, the latter "represents a long-term personal, social and cultural transformative experience that develops from a [philosophical] vision that integrates science with educational, social and cultural processes [i.e. political]" (Cintrón-Moscoso, 2010b). Rosa's differentiation emphasizes what other educational theorists (Ceballos-Lascurian, 1996; Fien, 1993; Stronza, 2001) have described as an attempt to radicalize passive practices of schooling through the systematization of critical ecological pedagogies (McLaren & Houston, 2004) that promote the production of a new type of ecological citizen (Bozzoli, 2000). This reassessment of the contents and processes of education, in particular, and the lived experience of children and youth, more generally, is embedded in an alternative cultural, social and ecological paradigm that defies, on the one hand, the existing model of "banking education" (Freire, 1970), and, on the other, the colonial system of economic rationalization, unsustainable development and capitalist consumption. Advancing these pedagogical models requires, according to the contributors to the guidelines, new ideological constructs that value simultaneously the principles of ecological sustainability and social justice, allowing children and adolescents to critically evaluate the relationship between issues regarding environmental degradation and economic and social marginalization (Cintrón-Moscoso, 2010b; Departamento de Educación, 2001, 2003). Hence, environmental education is seen not only as a specialized topic within the school curricula, but rather as an organizational set of principles that guide the development of policies and practices akin to sustainable development, community integration, school organization and cultural change (cf. Blum, 2009). For instance, some of the activities included in the guidelines encourage teachers to partner with local communities in the process of designing and implementing environmental education with the objective of questioning conventional power

relationships through the examination of local systems of knowledge (Departamento de Educación, 2001). Thus, according to María and Rosa, adding activities to the science curriculum was nothing more than a partial solution to the problem and did not address concerns of systemic and organizational change, curricula integration and societal transformation. Therefore, the publication of these guidelines, whether purposefully or not, ended up inhibiting the development of a top-down plan with the capacity of achieving structural change through the integration of environmental thoughts and behaviors.

Alternatively, different organizations and individuals within the multifaceted environmental movement have begun to establish community partnerships with particular schools and teachers. In contrast to the previous single-teacher strategy, this community-based approach has been characterized by a regular presence of the environmental movement in schools and classrooms, privileged access to dedicated spaces and time schedules, assistance in the development and implementation of environmental curricula, reorganization of teaching and other educational practices inside and outside the classroom, and their support of initiatives for environmentally-driven education reform. In some cases, these groups and individuals also utilize the guidelines produced by the DE and work with teachers in the adaptation and implementation of them. Conuco, for example, shows the implementation of this new strategy.

Conuco: Movement of Students and Students in Movements

Conuco, a small non-governmental-organization (NGO) based at the University of Puerto Rico's main campus in Río Piedras (UPR-RP), consists mostly of undergraduate students, primarily women between the ages of 17 and 21, majoring in the areas of humanities, anthropology and environmental sciences. Along with individual teachers and librarians in each of the four elementary schools and one high school, Conuco has developed a community-based approach to environmental education in which the college students come to the classrooms or school libraries every two weeks throughout the school year, and teach children and adolescents about environmental issues surrounding their community. Although most of the planning rests in the hands of Conuco, the group's foundation of critical pedagogy (Freire, 1970; Leistyna, Woodrum & Sherblom, 1996) ensures that both the content and scheduling of the activities are always coordinated and negotiated with the teachers in charge of each group. School students also participate in the development of the curriculum as Conuco's members engage with them in dialogical discussions about what they want to

learn and expect to gain from the program.

Conuco's activities integrate art-based workshops and research activities that include, among other projects, painting murals, writing songs, developing a group's image, identify the fauna and flora next to their schools, studying the ecological history of the area, and developing materials for advocacy campaigns in their neighborhoods and nationally. This art-based, action-research pedagogical model attempts to raise children's consciousness about their social and natural environments, while carrying out activities inside and outside the classroom that assist them in voicing their concerns about the environment and joining broader efforts from the environmental movement toward change. To achieve this goal, knowledge and skills are drawn from the members' previous experiences and active participation in other aspects of their student life, such as involvement in student organizations, teacher assistantships in relevant academic areas, and other social justice and political organizations outside the university. Although each individual member joined Conuco following different pathways and individual motivations, they all have expressed a shared desire to effect change through school reform and the education of young children—even though none of them had had teaching experience before joining the group. Conuco's incursion into the public school system reflects not only the members' environmental consciousness, but also their political views against Puerto Rico's neoliberal government and what they perceive as a "dysfunctional" DE.

Formative Stages: Experimentation and Cross-Fertilization

The story of Conuco could be described as one of experimentation and cross-fertilization. Its creation took much iteration and was influenced by multiple interested individual and collective actors concerned with education and environmental change. For instance, Conuco's experimentation with activism and education closely parallels the individual development of its members as environmental leaders and advocates. Conuco's first iteration came in the form of a high school environmental club named Mate Leaf, which initially was concerned with an array of school-based issues, such as recycling, deforestation and lack of environmental education. This is how the founder, Julia, describes the initial goals:

> *The idea was to create an environmental group that could respond to concerns we had in the school. It was us [students] upset with things around the school that we wanted to change, especially environmental stuff. And so, in Mate Leaf, we did a school garden, [field trips, things regarding waste manage-*

ment] and a lot of things[2].

Mate Leaf served as a platform for Julia and her peers to put into practice the skills and knowledge they were informally acquiring through family members involved in the larger social justice movement, teachers with an environmentalist inclination, and their individual curiosity. This first organization also assisted them in expanding their advocacy role, already germinating within the microcosm of their particular school. After completing several successful campaigns, the members of Mate Leaf decided to center their efforts on three main areas: environmental education, ecological research, and advocacy. Accordingly, Mate Leaf developed their first partnership with a neighboring elementary school to teach those children about these issues. The enthusiastic reception from students and teachers at Jasmine Elementary School (JES), confirmed the young activists' beliefs that environmental education was needed in public schools and that accessing these institutions was one important tactic to bring about environmental change. Consequently, their work with JES students became the stimulus and 'pilot' program for all their future school partnerships.

Sharpening Their Skills and Connecting with the Environmental Movement

The experience with Mate Leaf brought to its members a new opportunity to develop their skills and directly connect with the environmental movement through the Sierra Club's Summer Leadership Program (SPROG). Through this program, designed to develop new environmental leaders especially among young people all across the U.S. and Puerto Rico (Sierra Club, 2010b), several members of the group were trained in grassroots organizing, campaign strategy and planning, and communication skills. More importantly, the experience provided them with knowledge about environmental struggles beyond their neighborhood, and connections to other environmental organizations and individuals in Puerto Rico and the U.S.

One concrete result of the SPROG was the creation of a new group of young people, Colectivo Cundeamor (CoCun), which was a short-lived venture between Mate Leaf and the current iteration of Conuco. CoCun was interested in widening the agenda of Mate Leaf by expanding the vision and actions of the organization and, hence, aligning themselves more closely to the goals of the environmental movement. For instance, while only some of CoCun members came out of the Sierra Club's SPROG programs; this coalition extended its network to include other individuals and groups from schools and communi-

ties around San Juan and other municipalities. By bringing together individual people and groups working disjointedly, CoCun centered its efforts toward developing a common youth-led environmental agenda. The central project in this agenda was Conuco, a multi-sited program with the goal of bringing environmental education to elementary public schools in underserved neighborhoods. Yet, Conuco never got off the ground, and CoCun rapidly disintegrated as individuals and groups were not prepared to take on such an ambitious task. Violeta, one of the co-founders of CoCun who later continued to work with Conuco, explains the reasons for CoCun's demise:

> *I thought that CoCun should have stopped for a while, or that we were not prepared for it. Yet, I thought Conuco was a more do-able idea because [after all] we are a student group. The majority [of us] are from the university –from here [Río Piedras], from the University of Puerto Rico– or other schools nearby. Thus, I thought it was more possible for us to meet to do these things. And, you know ... there were already some contacts; we had already talked with the schools we would be working with. I don't know, I thought it was a better idea.*

Violeta's explanation stresses the centrality of already-established networks and contacts with schools, the importance of proximity to each other and the targeted schools, and their shared identity as college students, all elements that seem to have been lacking in CoCun, but that conversely have served as a foundation for Conuco.

Although it would be easy to discard this effort (CoCun) as a failure, given its short life and limited accomplishments, I argue that experimenting with new ways of organizing and conducting social justice work is a critical part of the learning path and socialization process of young activists with a particular interest in political participation and social change (cf. Cintrón-Fiallo, 2008). CoCun was an attempt by several individuals and youth-led organizations to develop a broader coalition of young environmentalists interested in strengthening the voice and the reach of young people regarding ecological issues and environmental education in Puerto Rico. Participation in this coalition not only offered CoCun members the space to discuss new ideas, but also the opportunity to develop and expand their individual networks for future collaborative work. Evidence of this is the fact that some of CoCun members continued working with Conuco, as in the case of Violeta, and others became involved in environmental advocacy elsewhere, both in Puerto Rico and abroad. Violeta summarizes this experience by tying together the broader goals of the environmental

movement, through the Sierra Club, and locally-grounded initiatives like CoCun and Conuco:

> *[SPROGs] are summer programs, workshops on environmental leadership. They are for high school students and even middle school. That's where, more or less, the idea for CoCun came about. […] The workshops are one-week long with different students from across the island. […] I believe that they have [worked], because since the first camp we had, students have moved on to study environmental sciences or participate in the [Sierra Club's] Apprenticeship Program. […] After the second one, a few students became some of the most active members of CoCun, and still go to [environmental] activities like the Festival of the Tinglar [a national campaign to protect the leatherback sea turtle], in Luquillo, [or] they still organize [educational] field trips on their own. They do it themselves on their own, and then keep us [Conuco] informed, but they get the buses, write their own grants and talk to the major [in their towns] and things like that. I like to think that Conuco will [continue to] work, [although] not in the same way [as CoCun].*

Critical Ecology: Connecting the Environment to Poverty and Challenging the DE

Two years later, after CoCun came to a halt and many of the Mate Leaf's members had moved on to college, the project of Conuco regained momentum, this time at the right juncture for it to sprout and become what it is today. This was possible, first, due to the fact that many of the members of CoCun, who used to live scattered through the city, started to meet more often at the Río Piedras campus of the University of Puerto Rico, to which they had been accepted to continue their higher education. Second, this new advantageous context resulted in the growth of the organization in at least two ways: (1) it brought them closer to each other and to a geographically-bounded group of neighborhood schools; and (2) it provided them with structured opportunities –such as service-learning courses– to design and implement their educational strategies.

For instance, on one occasion, while conducting research for a class on Medical Geography in two elementary schools, Julia and another of the members realized that their work could not ignore the difficult reality of marginalized students and needed instead to take into account the children's own experiences and understandings about an urban environment. As the members interviewed the students about their surroundings, those students repeatedly complained about "the amount

of used syringes covering the streets of the community", and "their fear of using public basketball courts and parks because of their precarious condition and the 'dangerous' people hanging in them" (Cintrón-Moscoso, 2010b). Concerns about their safety hindered some of the students' awareness of positive experiences with 'nature' (i.e. flora and fauna). Even when pressed to think about 'natural things' in their communities, most of the children could not recognize their landscape as including natural features, a perception that became clear as children expressed their desires "to one day be able to visit the beach" –only blocks away from their houses. These interviews were both compelling and diagnostic for the members of Conuco: children from both schools revealed an urban scenario engulfed by social marginalization, unhealthy and dangerous environments, and a lack of ecological knowledge. As I have argued elsewhere, it was these "sentiments of empathy and solidarity toward these children and their communities, as well as [Conuco's] socio-political awareness [what became] crucial driving forces behind [the college students'] pro-environmental actions and conceptualization of social and ecological change" (Cintrón-Moscoso, 2010a, p.14).

Bridging Social Movements, Public Schools and the Community

An important aspect of Conuco's intervention in public schools is the special attention they give to the formation of children's group identity. In a way, this process marks the incursion of the environmental movement into the classrooms, but, on a more personal level, it also resembles Conuco's own initiation into the environmental movement. This sometimes slow, 2-6 month-long process includes four stages: brainstorming possible names for the group, democratically choosing one, printing the name onto t-shirts, and finally painting a school mural with pro-environmental messages for others to see. According to Conuco, by allowing the children to choose their own name (e.g. "Ecokids," "Gangsters of the Latin Plant," or "Sprouts"), make their own t-shirts, and paint a school mural, they engage the children in a ritualized initiation that "transforms them into environmental advocates." Until this "rebirth" takes place, the participating children are no different than any other students in the school. Yet, after the name is selected the children develop a new sense of belonging that differentiates them from others outside the group. This sense of uniqueness can be very empowering for some students who are used to being the subjects of mistreatment, hostility and devaluation inside and outside the classroom. Moreover, the process of creating a name represents the

incorporation of the group into the alliance of children's groups across the neighborhood and, accordingly, the children's "first pro-environmental collective action."

Other activities carried out by Conuco are designed to explore current situations in the community with the potential of having important ecological impacts. For example, one of the topics centered on discussions around the mayor's plan to gentrify the zone near the schools. This set of activities included lessons on the history of Río Piedras, mapping resources around the community, identifying healthy and risky areas in the neighborhood, conceptualizing an "ideal" community for children and adolescents, and 'field trips' to a nearby community garden and the University of Rio Piedras. Apart from raising children's awareness about their surroundings, these activities incorporated the different school groups into a larger coalition of residents, private businesses, and grassroots organizations that came together to propose alternatives to the mayor's gentrification plan, *Río 2012*. A key player in this coalition was ENLACE, a federally-funded resident training and skill development program run by the University of Puerto Rico.

Because ENLACE was run by university staff and professors, and because the university viewed this opportunity as a way to increase its presence in the community, this partnership was convenient for both them and Conuco. Furthermore, some of the members of Conuco had existing academic relationships with professors in charge of projects at ENLACE, who in turn saw the opportunity as a way to train and provide experience to the college students. Conuco collaborated with ENLACE in various ways, including providing assistance with workshops, disseminating information through the community, organizing community events and forums, and providing a voice for the needs of children and youth in Río Piedras. ENLACE supported Conuco by providing information and ideas for classroom activities, and training members on organizing strategies and political maneuvering. Participating in this coalition facilitated Conuco's immersion in a struggle for social justice beyond the classroom, while providing the social justice movement access to the schools. Furthermore, it demonstrates the importance of locally situating the dynamics of theses partnerships between the environmental movement and the schools, as Conuco assisted elementary students in understanding and producing ecological knowledge and actions.

Ultimately, Conuco's connection to the environmental and social justice movements expanded its activities far beyond the local setting of Río Piedras, as their members became further involved in differ-

ent initiatives across the island. As mentioned above, Conuco was involved with the Sierra Club and other local environmental organizations in the defense of the Corredor Ecológico del Noreste (CEN), a vast ecological area in the northeast of Puerto Rico that covers more than 3,000 acres of forests, wetlands, beaches, coral communities, fifty endemic species and a bioluminescent bay. As with ENLACE, part of their role was to bring workshops to the children on the ecological importance of the CEN, the endangered species living in the area, the consequences of unsustainable development, and the promotion of the values of solidarity and empathy as essential characteristics of an effective advocate and responsible citizen. These workshops were adapted to the ages of the children and, in some occasions, were combined with cultural celebrations such as Three Kings Day, a Catholic celebration in which children write letters to the Three Kings asking them to bring them a present as a reward for their good behavior during the year. This national celebration in Puerto Rico takes place every year on the 6th of January, the day the children receive their presents. In Conuco's workshop, the school children color a portrait of the leatherback turtle, commonly known in Puerto Rico as *tinglar*[3], and write a message to the governor in which they ask him to protect the sea turtle and the CEN. These cards are then collected and brought to the governor's palace by a group of children and the members of the coalition. The local press usually covers the act and the cards are received by an aid of the governor. Similar campaigns have been organized to send cards to the mayor concerning the gentrification plan.

As in the case of the Sierra Club, the connections with the environmental movement also reach organizations and networks outside Puerto Rico. For instance, those students in Conuco who are studying environmental sciences are also part of another student organization sponsored by the Strategies for Ecology Education, Diversity and Sustainability Program of the Ecological Society of America (ESA-SEEDS). Through the ESA, Conuco members have been granted several travel awards to participate in ecological field-schools in Mexico, as well as travel to present their work in Río Piedras in national and international forums.

Additionally, Conuco receives constant feedback and support from other groups in the U.S. interested in advancing a similar pro-environmental agenda. For example, on October of 2010, the founder of Conuco, along with six other young activists around the U.S., received the Earth Island Institute's 2010 Brower Youth Award. This award is regarded as one of the most prestigious honors for "North America's boldest young environmental leaders […] responsible for some

of North America's most prominent environmental victories" (Earth Island Institute, 2011). The relationship with these wider networks in Puerto Rico and the U.S. also have an impact in the schools, since classroom activities raise children's awareness about the connections between the different sectors of the environmental movement and previously unknown issues taking place at the national and international levels. These resources are also utilized by Conuco to buy equipment and materials to continue with their work in the classrooms.

In this section I wanted, first, to focus on the history of the group's foundation to emphasize the importance of local settings and individual actors' experiences in the articulation of a pro-environmental political strategy to access and impact the educational system from the bottom-up. Second, it is also important to discuss the connection between Conuco and the environmental movement in Puerto Rico and the U.S. to show how these relationships broaden the scope of their work and the vision Conuco has about their role in the movement. The interaction with different aspects of the environmental movement provides Conuco with resources, content and training that help them to be more successful in their work at the community level, but also socializes them into particular discourses of environmentalism, education, and social change. These formative experiences, first with the environmental club and SPROG and, later, with the underserved elementary students, brought to the surface the importance of employing a critical perspective in environmental education, especially in the context of public urban schools where environmental issues intersect with those of social justice, lack of resources and dangerous spaces for children and youth.

Discussion

The work of Conuco is particularly important to the main arguments of this paper in at least two ways. First, it demonstrates the purposeful involvement of the environmental movement within public schools as a concerted strategy to effect community-level change in educational policy and practices. Second, it exemplifies the critical voice of young people around the world who have been particularly outspoken regarding the urgency of environmental change (United Nations, 2007), and have found a niche within the environmental movement to develop their own social, cultural and political work (Agrawal, 2005; Barlett, 2002; Cintrón-Moscoso, 2010b). This later point is fundamental because, as it has been shown, the group's individual and social identity – as young people and university students– and their particular interest in

environmentalism and education have granted them privileged access to schools and classrooms that other groups with opposing views to the government usually do not have –especially politically-oriented organizations. In other words, school administrators' and teachers' perceptions of Conuco's efforts, as formative (i.e. part of their own education) and apolitical, define them as innocuous and 'safe' for the schools and children, which contrast to the group's self-perception as "transformative" and "revolutionary" (Cintrón-Moscoso, 2010a, 2010b).

Consequently, this access to schools and classrooms seems not to be the result of an ideological consensus between the educational system and the environmental movement. Instead, access to schools seems to have resulted from a generalized acceptance by teachers and administrators at the community level of the imperative of addressing issues of global warming and climate change, and a tacit recognition of the environmental movement's expert knowledge in scientific and ecological matters –knowledge that is thought to be beyond the formal training and expertise of, primarily, elementary and middle school teachers.

Moreover, the relative autonomy of school administrators and teachers in regards to daily classroom activities has facilitated this incorporation, allowing the environmental movement a restricted, but significant, platform from which to engage the school community in alternative, and often conflicting, perspectives about education, nature/ecology, community development, social justice and political economy. By designing a critical model of environmental education, these groups of young activists devise a raison d'être: that is, to examine and act upon issues of inequality, marginalization, and health disparities that otherwise might never be discussed inside the classroom. As a result, Conuco's model emerges as a potential challenge to conventional schooling, as it negotiates and redefines at the community level and through the active participation of young people: (1) the organizational structure of formal education; (2) the role of teachers as sole experts on educational curricula and enforcers of educational policy; (3) the meaning and parameters of educational practices inside and outside the classroom; (4) the role of social movements and its organizations as collaborators and co-facilitators of education, and; (5) the meaning of educational ideologies and practices within social movements as strategies for change.

In this sense, Conuco's reformist approach addresses a number of pedagogical concerns at the community level –rather than at the state level– such as improving the quality of education, accessing and partnering with public schools to develop socially and culturally relevant

curricula, assessing the needs of individual schools and classrooms, eliciting children's perspectives about their surroundings, providing a safe and encouraging space for children to learn inside and outside the classroom, and building a supportive network of allies among residents, activists and public and private institutions alike.

Conclusion

Understanding environmental education as an element of cultural and social change is crucial for researchers and others (e.g. educators, activists, and policy-makers) interested in addressing the implications of a world engulfed in debates about climate change, as well as in identifying the needs of children and youth growing up in such a world (Cintrón-Moscoso, 2010; see also, Katz, 2004; Barlett, 2002; Brodkin, 2009). As discussions about the environment become more relevant across local and international settings, it is critical to investigate the ways in which children and youth are being socialized and educated about these issues, how this education relates or not to other efforts from the environmental movement, and how youth are positioning themselves to confront these new challenges. It is important to recognize as well that the environmental movement is multifaceted and, therefore, shapes and is shaped by local dynamics and ecological histories.

Conuco's critical ecological model make visible the permeability of what is otherwise understood as a closed system of schooling, pointing to possible opportunities for social change guided by environmental and social justice groups alongside the educational system. Conuco's pedagogy proposes an alternative discourse of schooling that promotes, among other things, the attainment of ecological "knowledge, attitudes, and skills needed to participate in the reformation of the world's social, political, and economic systems so that peoples from diverse ethnic, cultural, and religious groups will be politically empowered and structurally integrated… to create equitable national societies" (Banks, 1997, pp. 28-9). Accordingly, environmental education is believed to integrate all these elements in an effort to train and prepare youth to be the "future leaders" of tomorrow through positioning them as "present catalysts" of social change.

NOTAS

1. All names are pseudonyms.
2. All quotes were translated from Spanish by the author.
3. The image of the *tinglar* has become the symbol of this struggle, given that this zone serves as one of the three most important nesting areas in the United States for this species.

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