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Toward Multicultural Environmental Education: The Case of the Arab and Ultraorthodox Sectors in Israel

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Recent thinking in multicultural education can contribute to environmental education (EE) in culturally diverse societies. This article uses case studies of two minorities in Israel to illustrate the potential for bringing together these two areas of educational research that have developed significantly in recent years. After introducing the topics of EE and multicultural education, we discuss some compelling intersections between them. We then introduce the Arab and ultraorthodox sectors, and describe the ways in which issues of educational contents, representation, resources, and infrastructure affect EE in these sectors. We show how policies and concrete measures for forwarding EE in these groups in a multicultural manner can draw on their specific culture, education systems, and environmental situations.

**Keywords** Arabs, education for sustainability, environmental education policy, Israel society, multiculturalism, multicultural education, ultraorthodox

**BACKGROUND**

In this article we consider the relevance of multicultural education to environmental education. Multicultural perspectives have been applied to education since the 1960s, touching on a range of issues including teaching about key associated topics (such as citizenship, equality, and discrimination), presenting the histories of diverse groups making up society, and providing avenues for valorizing diverse cultures and heritages (Banks & Banks, 1995). For example, individuals might be seen as having two sets of values: universal values and particular group values, both
of which constitute important parts of identity that should be preserved, and even combined (Singh, 1995). The political theorist Kymlicka (1998) offers a useful tripartite division of what multicultural education might consist of, suggesting that each group in the population needs to study the following: (a) core national subjects (sometimes employing methods that stem from the group’s values); (b) heritage of their own group; and (c) heritage of other groups.

Early uncritical formulations of multicultural education were criticized as not addressing underlying and potentially contentious issues of oppression, inequality, power relations, racism, and discrimination, both in the education system and generally in society (May & Sleeter, 2010). More critical multicultural formulations aim to transform the political, social, cultural, and institutional agenda and advance social justice (McLaren, 1995). These do not merely celebrate diverse cultures but examine the conflicts between cultures, and situate cultural identities and the differences between them in their broader political and ideological contexts. Critical multiculturalism engages with the unequal distribution of natural resources and decision-making positions and with the implications for the underprivileged: life circumstances of poverty and violence. It perceives education as a transformative and even subversive process whose mandate is to question oppressive social structures and the ways in which these structure racial, class, and gender identities, perception, and relations (Kincheloe & Steinberg, 1997). Postcolonial theory deepens this search for a more critical approach to multiculturalism, looking at the fundamental hostility to difference embedded in Western/Enlightenment humanism, colonial projects and the global political economy, and seeking to forge a non-coercive alternative that does not exoticize, barbarize, or domesticate Otherness (Andreotti, 2011). Clearly multiculturalism must be radically deepened to reflect these more critical currents—an effort still in its infancy.

Environmental education (EE) evolved over a similar timeframe to multicultural education, i.e., since the 1960s. There are multiple definitions of EE, but it is generally accepted that alongside a knowledge and understanding component, it also focuses on developing competencies and dispositions such as attitudes and values (Hollweg et al., 2011; Stevenson, Wals, Dillon, & Brody, 2013). EE pedagogy typically includes student-centered learning, minds-on and hands-on learning, and active participation (Eilam & Trop, 2010). According to the North American Association for Environmental Education, environmental education’s goal is to develop environmental literacy, defining an environmentally literate person as “someone who, both individually and together with others, makes informed decisions concerning the environment; is willing to act on these decisions to improve the well being of other individuals, societies, and the global environment; and participates in civic life” (Hollweg et al., 2011, p. 2–3).1

Multiculturalism and critical multiculturalism concepts have been applied to EE. For example, Lewis and James (1995) argued that EE should address the environmental issues faced by diverse communities, and include multiple voices in understanding these issues, and in planning and implementing EE. Agyeman (2002) argued that the diversity of cultural perceptions and understandings is an underrepresented resource in EE pedagogy and research. Multicultural approaches have also been applied to EE programs (e.g., Koul & Zandvliet, 2009; Tal & Alkaher, 2010), and to EE research methods, arguing that these should be diversified too in order to reflect the multiplicity of cultures (Zandvliet et al., 2009). Multiculturalism has similarly been applied to science education, suggesting a local approach to science, and the acknowledgment that cognition of nature and science is inevitably constructed in cultural and social contexts (Stanley & Brickhouse, 2001).

Two notable examples of the interface between multicultural education and EE that have been developed in the literature and in practice are environmental justice (EJ) and the contribution of
traditional ecological knowledge (TEK) to the knowledge component of EE. Environmental justice focuses on a fair distribution of natural resources, environmental hazards, and environmental policy enforcement among groups in the population (Environmental Protection Agency [EPA], 2013). EJ developed in response to the discrimination of disadvantaged groups and argues that these receive a disproportionately lesser share of natural resources and environmental protection, and a greater share of environmental hazards. More recently, the focus has been on the societal mechanisms that lead to and maintain this inequality and the means to challenge it (Schlosberg, 2007). EE that addresses environmental justice engages with topics of power, race, politics, and distribution as they relate to the environment (Cole, 2007). On the practical level, a focus on environmental justice equips students with tools to engage in decision making and promote institutional transparency, as participation in decision making is one of the basic conditions for creating environmental justice (EPA, 2013; Gutkowski, forthcoming).

Knowledge is a central component of EE; one prominent strand of multicultural effort is the inclusion of TEK. Alongside scientific knowledge, TEK is knowledge about the environment developed and passed on informally over generations, shaping attitudes and behaviors, knowledge that is important also to contemporary resource management, sustainable agriculture, and conservation² (Berkes, Colding, & Folke, 2000; Moller, Berkes, Lyver, & Kislalioglu, 2004). TEK research has been criticized by Aboriginal people as a study of their knowledge that does not go further to consider, also, their communities' interests or fully include them as partners in decision making (McGregor, 2008). Similarly, there have been suggestions that the valorization of TEK be tempered with caution about romanticizing it and/or ignoring the political contexts in which it is constructed, re-constructed, and circulated (Garb, 1997; Tsering, 2008). Recently, there have been suggestions in the EE literature that aboriginal epistemology can be a meaningful component of EE, including aboriginal perspectives on the environment and the human-environment relationship, morality, and behaviors (Beckford, Jacobs, Williams, & Nahdee, 2010).

Multicultural approaches have been influential in advancing the field of EE regarding contents, practice, and research methods. This article attempts to contribute to this trend as follows: first, we juxtapose multiculturalism and EE and explore existing similarities between the two and possible additional contributions multiculturalism can make to EE. Then, we explore the implications in a qualitative case study in two different populations in Israel. Finally, we sketch some potential comprehensive policy implications for advancing multicultural EE.

BETWEEN MULTICULTURAL AND ENVIRONMENTAL EDUCATIONS

There have been some attempts to map out what multicultural EE might consist of. For example, Marouli (2002) proposes seven components: a culturally diverse group; “culturally diverse education materials and activities”; usage of diverse pedagogies; “respect of cultural diversity”; participants’ empowerment and activism against social inequalities; examining the environment through a cultural lens; and incorporation of multiculturalism in the mainstream EE. Vargas (2000, p. 377) suggests that multicultural EE should incorporate TEK and modern knowledge, and proposes a “culture sensitive model” including: “an interdisciplinary approach; teacher-training, pre- and in-service; curricula based on the three pillars of sustainable development; social and environmental justice; meaningful political participation; and respect for local and indigenous cultures.” Both Marouli (2002) and Vargas (2000) note the importance of environmental justice
in multicultural EE, which was highlighted also in an empirical cross-cultural EE program in Israel (Tal & Alkaher, 2010).

Our own attempt to conceptualize current and possible meeting points between multicultural education and EE appears in Figure 1. The first two points exist today as elements shared by both multicultural education and EE: acknowledging the importance of diverse epistemologies and lifestyles and theoretical work on the policies and approaches that maintain and allow the expression of this diversity in a heterogeneous society. The two points below these are not currently comprehensive efforts in EE. The first of these (Box 3) is at a practical level, creating ways for representatives of the different groups to be engaged in designing and implementing educational plans and policies, while the second (Box 4) is at a more theoretical level, and relates to the content of education. Here we suggest that Kymlika’s (1998) tri-partite framework for multicultural educational content can usefully be mapped onto EE. In the remainder of this section we focus on these two latter areas, where cross-fertilization is needed.

The first proposed contribution of multiculturalism (Box 3) to EE, namely policy planning and implementation that involves representatives of this diversity, has parallels in other domains of social intervention such as health, planning, and communication. In recent decades, failures of interventions in fields such as health, planning, and social marketing have led to recognition of the importance of involving the subjects of the interventions and other diverse stakeholders in order to achieve change (Innes & Booher, 2004; Minkler & Wallerstein, 2008; Negev, 2012; Smith, 2000). Whereas environmental justice-oriented EE does call for broadened participation in decision making, expanding the role of representation in EE policy making and implementation could be a multicultural contribution to the field of EE generally. The second proposed contribution

FIGURE 1 Two existing similarities between EE and multiculturalism, and two features EE can adopt from multiculturalism (designated by arrows).
of the multicultural approach to EE (Box 4) addresses how the contents of EE would reflect a multicultural framework. Kymlicka’s (1998) scheme, discussed previously, would suggest that multicultural EE would include three kinds of contents:

1. core generic topics in EE (perhaps adapted for particular groups, as necessary);
2. environmental topics unique to the group in question—rooted in specific situations and sociocultural worlds; and
3. environmental epistemologies and topics unique to groups other than the group in question.

The first content component maps well onto existing EE. In a global era all populations cope with a common core of severe environmental problems, and may benefit from a shared conceptual vocabulary for understanding these. Yet some populations, often economically deprived, suffer more from environmental problems. In light of critical multiculturalism, we suggest emphasis on environmental justice both regarding the group at stake and generally. A multicultural approach that adapts such materials to various segments of a society would be more effective in transmitting knowledge and increasing engagement regarding these issues (Banks & Banks, 1995). The “adaptation” of core topics for particular audiences shades into the second kind of content, namely treatment of environmental topics in terms of the particular subpopulation’s values and situation, alongside blind spots of the group regarding the environment, and implications of its lifestyle on environmental justice issues that other groups face. At some point, however, the links between consensual perspectives and partisan ones become tenuous, as discussed in the following text. And, even within a group, there may be tensions regarding how its values might be reconciled with environmental ones.

The third content component refers to the ways in which groups can learn from one another and larger national programs can learn from the epistemologies of particular groups, for example with respect to human-nature interaction, and sustainable usage of natural resources. An additional cross-group dimension is that of resource distribution and environmental justice issues that other groups face. There are limits to this kind of inter-group openness as different groups have different levels of readiness to interact with others (Singh, 1995). Therefore our research focuses on promoting the first two components, with the third component as a longer-term goal.

With these broad suggestions for a multicultural EE in mind, we turn to our case study of how they play out in a society whose socially diverse nature raises particularly complex issues. From these particulars, we will extract themes with implications for diverse societies elsewhere.

The Local Context: The Ultraorthodox and Arab Populations in Israel

The ultraorthodox community is about 10% of the Israeli population, with high birthrate and an annual growth of 6% (Gottlieb & Kushnir, 2009). The group is characterized by its deep commitment to a Jewish religious lifestyle, and despite the conception of it as a unitary community by many outsiders, it is, in fact, divided into a multitude of small communities, each led by a particular rabbi (Comenetz, 2006), and with somewhat divergent orientations toward Israeli society, including political views, education, dress code, etc.

The Arab (Palestinian) citizens represented 20.6% of Israel’s population in 2012 (Central Bureau of Statistics, 2012), containing populations diverse in terms of religion (a Muslim majority alongside Christian and Druze), type of settlement, geographic location, and identity (e.g.,
Bedouin). Though most of the Arabic-speaking population in Israel is from families that lived in Israel prior to the State’s establishment, they now constitute a minority with a troubled relation to the state. For example, the Arab population is marginalized in allocation of government budgets in many sectors, including education, housing, infrastructure, transportation, and is under-represented in the public sector with 6% of the positions (Abu Raya, 2012; Humphries, 2009). The Arab population has also had a history of marginalization with respect to land resources and the planning system (Keidar, 2001).

Despite the obvious differences between them, the Arab and Ultraorthodox share similarities. In Israeli society, both groups are spatially segregated whether by choice or exclusion (Baum, 2007), and positioned as marginal to the national Jewish-Zionist agenda: the Arabs because they are not Jewish and the Ultraorthodox because they are not Zionist (Yona & Shenhav, 2005). Also, both groups are characterized by low participation in the labor market (Hemmings, 2010), which has prompted considerable concern and large government investments, as these two populations will constitute 50% of the population by 2059 (Habib et al., 2010; Organisation for Economic Co-Operation and Development, 2013). On the family level, both groups have a patriarchal culture, larger than average secular families, and close extended family structures. 4

Ultraorthodox and Arabs are just two of the larger social sectors that comprise Israel’s deeply divided society, which have a shifting and sometimes uneasy relation to the state and its institutions (Ben-Zadok, 1990). This could be an important underlying factor shaping the current and likely future depth of environmental engagement of these communities. Their disenfranchisement from the State and the (non-religious) Jewish majority it represents could color or possibly even undermine pro-environmental attitudes to the degree that the environment is seen as a “common good” in a commons they do not share, and which is advocated for by dominant sociopolitical and cultural institutions to which they do not feel alliance or even regard as hostile.

This kind of alienation has been reported among Arab and ultraorthodox adults and youth (Smooha, 1988), though the picture is not simple. Not only does citizenship comprise various dimensions (Peled, 1992), but the spectrum of stances within these two groups may run from accommodation to dissident, with cleavages and contradictions even within the identity of a single person. In addition, even the less-accommodating sectors within these minorities employ creative bricolage (Stadler, 2002) that can weave seemingly “foreign” influences (employment, army service, etc.) into their worldviews. Thus, a lot depends on the framing of environmental issues. Environmental organizations within each minority have evolved framings that pose the environment as relatively unlinked from the “common good” of a Zionist and secular state, or, indeed, as part and parcel of worldviews that are critical of this. This includes framings of “environment” as reflecting humility and protection of God’s handiwork, or part of an embrace of indigenous land-based traditions threatened by secular (or Zionist) modernization.

EE in Diverse Sectors in Israel

In Israel, some attention was directed to the relation of various subpopulations to environmental issues (Benstein, 2004; Shilhav & Kaplan, 2003). An evaluation of environmental literacy in Israel (Negev et al., 2008, 2010) was conducted along sectoral lines: the religious-Jewish, secular-Jewish, and Arab. While a general multicultural approach to EE is lacking in Israel, the notion of a “shared environment” is growingly recognized by environmental and educational bodies as a ground for multicultural EE. In two such programs, developed for a joint
group of Arab and secular Jewish schools around real mutual socio-environmental problems, the students exemplified positive and active participation, and reported that their views of both the environment and co-existence were improved. Yet the Arabs reported a greater influence by the programs, maybe because the Jews initially possessed more positive environmental attitudes. A baseline difference in attitudes was that although both groups cared about the region in question, Arabs were more emotionally attached to it and acquainted with it, yet this meant that they felt they had higher right to exploit it. Another difference was that Jews saw the environmental problems as rooted in individual behavior, while the Arabs related them to an alienated “they,” referring to the Israeli authorities (Tal, 2009; Tal & Alkaher, 2010). Similarly, many of the Arab adult educators who were involved said that they are culturally and historically deeply connected to the region at stake and that the authorities’ land management marginalizes the Arab population. While the participants of these Jewish-Arab joint projects had generally positive experiences, the need for multicultural teacher training in order to address the social, political, and cultural context in EE in general was highlighted (Alkaher & Tal, 2011).

Our research focuses on EE in the Arab and Ultraorthodox sectors for several reasons. These two populations mapped cleanly into two of the four main education streams of the Israeli educational system listed previously. Each stream has a separate infrastructure, including pedagogic centers, teacher-training, materials, and inspectors. While most streams are state funded, and their curricula is determined by the Ministry of Education, the Ultraorthodox stream is partly state and partly private funded, and its schools practice various degrees of autonomy regarding the curricula. Almost half the children are in the streams associated with these two “minority” populations. Thus, 28% of the students in primary schools in Israel are Arab and 20% Ultraorthodox (Ben David, 2011). The two sectors are considered “less environmental” in Israeli perception (Shilhav & Kaplan, 2003; Shtern, 2008); though their ecological footprint is probably considerably lower (Garb, 2002; Garb & Horne, 2012). Ultraorthodox and Arab sectors are marginalized, on the whole, with lower income levels and high poverty rates (Flug & Kasir, 2003), and less representation among decision makers. In addition, since EE is often funded by parents and local authorities, children in these sectors with lower income and poorer local authorities have less such opportunities. Nevertheless, our initial research identified environmentally oriented activities in these sectors, and unique sustainable traditions, religious sources and lifestyles that could serve a nascent multicultural approach to EE.

METHODS

Our research was based on a mixed methods approach to explore the dynamics and parameters of EE in each sector, and especially those aspects specific to the particular social world of each, and to identify barriers to and opportunities for further promoting EE. This research drew on 40 semi-structured interviews with diverse stakeholders in the environmental, educational, and EE sectors, including non-governmental organizations (NGOs), governmental authorities, and academic, and, in addition, 10 observations of school and teacher-training activities. As we proceeded in these, we drew up a qualitative description (Sandelowski, 2000), and, in a manner akin to a grounded theory approach (though not formally adopting this), we noted recurring themes, and continued until we had “saturated” these categories. As a form of member validation (Emerson & Pollner, 1988) or review (Locke & Velamuri, 2009), the results of this process and
initial policy recommendations based on these were then given for feedback and consultation with diverse interviewees, as presented in the last part of this article.

The advantages and limitations of these empirical materials and the context of their elicitation and analysis must be considered. First, the research was done following a call for research by the Ministry of Environmental Protection, and funded by this ministry. This demonstrates that the topic had relevance for an agency in a position to make the needed reforms, and boosts the chances that recommendations would be taken up. At the same time, the research approach was more pragmatic in orientation than a purely academic project might have allowed, and it emphasized the kinds of changes the ministry could implement. Second, the research did not take on a more radical stance that would cast Israel’s environmental problems in predominantly political terms, emphasizing issues of environmental and distributional justice. While we were attentive to the possibilities that such themes would emerge, especially among Arabs, the EE envisioned by the many of the Arab educators we interviewed did not, in fact, place these questions at the center of attention. One might argue that this was due to selection bias in the interviewees or reticence to voice such opinions to researchers in a government-funded project. But it may also be that this dimension, indeed, does not figure as an EE important dimension for them, or, conversely, that it constituted such an obvious background assumption for them that it did not merit much explicit mention. Finally, the analysis necessarily reflects the social location of the principal researchers (the authors), both secular Jews, but, at the same time, was conducted in part by both a religious Jew and an Arab research assistant, and shaped, also, by their perspectives, and the research report from the project received unsolicited endorsement from Arab and Ultraorthodox experts (both the stakeholders interviewed for the research, and external reviewers: an Arab scholar in a senior position in the Ministry of Education, and an Ultraorthodox scholar from academia). This indicates a robust degree of shared language and perception, despite the varied social worlds of researchers and stakeholders.

FINDINGS

This section gives a brief descriptive overview of the findings on the EE situation in each of the two sectors, and then discusses in more detail the current barriers and potential future opportunities for promoting EE in a diverse society. The final section presents the multicultural solutions suggested by the study.

Arab Schools

Traditional Arab lifestyles and cultural frameworks are rich in resources for EE: TEK, sustainable agriculture, water use, consumption of local products, medicinal herbs, deep familiarity with the local environment and place connectedness, and a repertoire of landscape-related symbols and sensibilities. The Quran and Islamic laws and the classic Islamic writers deal extensively with topics that would now be called “environmental,” emphasizing the sensible usage of natural resources as a common inheritance, pollution prevention, and flora preservation (Dien & 'Izz al-Dīn, 2000). The traditions of non-Muslim Arabs in Israel contain similar aspects as well.

Nevertheless, the Arab sector in Israel is considered both by its members and the general public to have a lower environmental awareness (Shtern, 2008) due, perhaps, to substandard
infrastructure and services (sewage, waste collection, a lack of quality open spaces). Poor quality infrastructure is also seen as a barrier to EE. In the words of an Arab environmental educator:

The problem in our villages is of infrastructure . . . no transfer stations for garbage, no solutions for construction waste and solid waste. Whole towns are still not connected to the sewage system. . . . I can educate and educate and at the end they tell me OK, we want a solution, what is your solution? Where do we throw the garbage? Do you have the infrastructure? No. If the Arab sector infrastructure had the same infrastructure as the Jewish sector, I think our situation would improve a lot.

Currently students in most Arab schools have little exposure to EE. The exceptions are the schools in which the principal or a teacher promotes the issue, often through cooperation with an external organization. According to a senior staff member in an education department in an Arab town:

EE is progressing, but in very, very small steps and specific locations. In a given town you might find a school that is very “green,” with environmental projects all year round, but two other schools that have hardly heard about it. Why? It depends on the principal, the staff, the NGO that initiated the activity. There is nothing obligatory, nothing broad that includes the whole sector; therefore we are a big darkness with spots of light here and there.

The fact that Arab students are massively over-represented among the students who choose the matriculation exam in environmental sciences (40% of these are Arab) might seem promising, but according to interviewees this may be since this subject is currently less demanding than other science subjects proposed for matriculation. Another reason that strong students do not select this subject is the low chance to find a job in this field, as one interviewee described:

The problem is that there are no jobs for students who graduated environmental sciences. There is a stream of jobseekers, it is still very difficult to find a job in this field.

In conclusion, the Arab society has a long and strong relation with the environment and the land, alongside multiple environmental problems, many of which stem from environmental injustice and/or the political context. EE is in early stages, and tools to promote it are lacking, yet there is much willingness among Arab educators to improve the situation.

Ultraorthodox Schools

Jewish philosophy, history, literature, and law are replete with linkages to the topics of environmental relevance. Basically, the natural world is God’s creation, and humans are entrusted with responsibility toward it and its preservation for future generations. Each Jewish holiday has an aspect linked to nature (Benstein, 2006). This is not to say that these traditions map cleanly onto environmental imperatives or onto daily practice: there is not a traditional framework binding Judaism and sustainability into a unity (Negev, Garb, & Benstein, 2009).

The Ultraorthodox Education system separates boys and girls from the age of three: boys learn in “Talmud Torah” to eighth grade, after which they learn in a “lower Yeshiva” for three years, and then in a “higher Yeshiva.” They study secular subjects, including Hebrew and basic arithmetic, only in the “Talmud Torah,” usually in the “non-prime” afternoon slots. The scope and level of the secular subjects varies, and there is barely any governmental oversight of these. The pedagogic authority lies with the rabbis of the particular school. The institutionally extra-territorial nature of ultraorthodox schools, mainly boys’ schools, is also related to poor quality of schools. This
has been identified as a barrier to environmental awareness by an orthodox senior in an education department of a local authority:

We approach the schools and talk about improving its appearance, and they reply—stop, first take care of the basic infrastructure, we look like a murky shelter. The number of schools in the ultraorthodox sector that conform to standard is almost zero.

Girls go to kindergarten between ages three to six, then to primary school in first to eighth grade, high school in ninth to twelfth grade, and usually also a “Seminar” between ages 18–20, where they typically obtain a teaching certificate. Girls study secular studies, generally according to the core subjects of the Ministry of Education throughout kindergarten and school, and the teacher training is according to Ministry requirements as well. For these reasons, as all interviewees confirmed, it is far easier to implement EE programs in girls’ educational institutes.

As with the Arab sector, the Ultraorthodox community can be described as more ecological in the sense of having a considerably lower ecological footprint than average (Garb, 2002), though this is due to a combination of poverty and a partial ethos of voluntary simplicity. Thus the Ultraorthodox sector is characterized by collective charity institutions that allow extensive re-use of household items, lower consumption (e.g., car ownership, electronics), and a high residential density. Some simple modeling has shown that more would be gained in environmental terms over a 50-year time frame through reducing secular consumption rates to Ultraorthodox levels than from lowering the high Ultraorthodox fertility levels that worry secular environmentalists to secular levels (Garb, 2002). A senior in an Ultraorthodox education department of a local authority said:

I think there is awareness. I think the poverty helps us a little to teach about voluntary simplicity, and about using everything to the maximum. It really helps, and I say it with sorrow, as I don’t think this should be the way.

Despite this, the Ultraorthodox population, like the Arab one, is perceived as a population with low environmental awareness, both by itself and by the general population (Shilhav & Kaplan, 2003). This is due to low emphasis on the environment in the education system, community agenda, and lifestyle. However, many interviewees testified that recently awareness and demand regarding environmental quality is increasing, as expressed, for example in concerns for cleanliness of public spaces, health, and well-being.

Even though the Jewish resources are rich with environmental aspects, it is almost impossible today to “bundle” or surface this dimension within the syllabus of sacred studies itself. A senior in an Ultraorthodox education department provides a critical yet empathic explanation for what he sees to be the reasons for this single-minded focus on textual Torah studies:

The environment has a very important place in the Halacha (Jewish law) . . . but because of what happened in the Second World War, Ultraorthodox deal with rehabilitating the Torah and neglect everything around. A whole generation of Yeshiva students is taught Torah from morning to evening, with not enough reference to the way they act, which is very, very important in the Halacha.

This same focus in now challenged by the national authorities, who call for the introduction of national core curricula into their boys’ education, and draw fierce opposition from Ultraorthodox leaders. Thus, the time is not ripe for a mainstreaming of EE efforts, and these must take place at the margins of this preoccupation: for example, several interviewees said the best time to do
EE is before and during vacations. Despite these constraints, the success of individual grassroots projects testifies that both such projects and activities during vacations are options for EE at boys’ Ultraorthodox education. In conclusion, while Ultraorthodox society has sustainability-promoting cultural resources and practices, explicit focus on EE is limited, and there is almost no investment in the environmental field. Nevertheless, there are beginnings of development, often accepted positively in the community, education institutes, and municipalities.

TOWARD MULTICULTURAL EE: ISSUES AND POLICIES

Key Issues Uncovered in the Study

Several recurring themes of relevance arose in the empirical data:

1. **Content:** Both Arab and Ultraorthodox groups have traditions, religious resources, environmental practices and orientations that differ from the secular mainstream. At large, both groups also suffer from worse environmental conditions than the general public. Yet there is little inflection of the EE materials to their particular backgrounds and needs.

2. **Representation:** Both groups are under-represented in several aspects of EE, including setting policy, teacher-training, and program creation.

3. **Resources:** As a whole, Arab and Ultraorthodox households and neighborhoods have lower socioeconomic levels. In resource-poor communities, local authorities and parents can provide less resources for EE and are often less able to leverage governmental and NGO funds.

4. **Infrastructure:** Infrastructure deficits may hamper environmental programs. Crowded schools with low-quality buildings, absence of open spaces, and run-down surroundings can make it difficult to teach and encourage place connectedness.

5. **Employment:** For different reasons, both sectors have a constrained range of employment opportunities, and the environmental field offers limited work opportunities. Thus, environmental training is not seen as a preferred avenue into the professional world.

6. **Curriculum:** While Arab schools belong to the national school system, Ultraorthodox education system is autonomous. Thus, increased environmental emphasis in the general curriculum would be reflected in Arab schools, but affect the Ultraorthodox educational system far less, especially for boys.

In light of these recurring themes, our study attempted to focus our exploration of policy interventions around three main questions:

- What are the appropriate contents and methods and who should develop these?
- How should teachers be trained and the field as a whole promoted?
- What are the necessary educational system and budget changes?

While these are general headings of emphasis, multiculturalism theory would suggest that the responses and content under them should not be generic, but tailored to each group, often requiring specific policies and epistemologies.
Toward Multicultural Approaches to EE

The three questions listed above were explored and elaborated in an iterative process during the interviews in the course of the research, and the draft policy recommendations were reviewed by diverse interviewees. This yielded a broad set of suggestions for promoting EE along the lines of the opportunities for EE/multicultural cross-pollination sketched in Figure 1. These suggestions were developed separately for each of the two populations, yet both share many similarities, probably reflecting similarities of their situation in the local context, as presented previously.

Multicultural Approach to Contents and Methods

Two of the three components of EE in the tripartite schema adapted from Kymlicka (1998) discussed previously (generic core topics and topics unique to the group) are feasible in both sectors we studied. The third element—studying the environmentally related insights and practices of other groups—seems premature in the current context of Israeli society. Topics unique to the group include its environmental conditions in the historical, political, and national context. Environmental justice can provide a framework for teaching these contents and hands-on methods for participation in decision making in order to improve the environmental conditions of the group. This is true for both sectors, and especially for the Arab sector that suffers poor environmental conditions as portrayed previously. Since degraded environment and infrastructure were identified as barriers to achieving EE targets such as place connectedness, explicitly addressing these issues in a problem-solving approach could contribute toward achieving this target of EE.

In Ultraorthodox society, the gender divide is prominent, so that suggested EE interventions reflect this. For both sexes, a strong linkage of environmental topics to Jewish resources is imperative, especially in the boys Talmud Torah, where religious learning comes before all else. Even materials that contain the necessary Jewish perspective would only be studied during the “secular” studies period of the day, and not at the expense of the Sacred Studies periods, devoted to core religious texts. Materials will need to be specifically designed for the Ultraorthodox sector, and, conceivably, for the genders. Non-Ultraorthodox materials are considered as representing an irrelevant and illegitimate “foreign” and “modern” sense. One organization has begun to publish low-cost textbooks dealing with various Jewish religious laws that have an environmental dimension, which can be used even in the most conservative Talmud Torahs. An example of the kind of materials in such texts would be the discussion of \textit{Bal Tashkhit} (“do not destroy”), a basic ethical principle in Jewish law, derived originally from verses in Deuteronomy (20:19–20), but elaborated into a broader injunction against wastefulness.

A special challenge for Ultraorthodox EE is the use of outdoors education, which enables direct connection with nature and diverse physical and social experiences that promote the aims of EE (United Nations Economic Commission for Europe [UNECE], 2005). In addition to the material question of costs, there is the question of finding the right niche in a packed educational timetable devoted to sacred studies, especially for boys. Here the three annual holidays of the Lower Yeshiva can be utilized, when it is customary to go on trips, with visits to environmental sites approved by Ultraorthodox authorities such as nature reserves, as well as voluntary community work connected to the environment and relevant Jewish resources. In the words of one interviewee, during these times:
... there is more openness and desire for trips. The vacations are the time to do things with the boys—the parents don’t want them at home anyway. This is the time to do activities for the boys focusing on the environment, nature, trips, religious commandments pertaining to “people and their fellows,”7 community responsibility . . . it has to be approved by the rabbis but in the vacations they give them time off anyway.

While all Ultraorthodox interviewees emphasized cultural adaptations, in the Arab sector several interviewees spoke first and foremost about the more general need for books in Arabic. Arab high school students can learn from Hebrew textbooks, but teachers and principals testify that this results in a significant slowdown of learning. As one researcher told us,

Arab teachers and principals are desperate for materials . . . they have nothing, no materials and no methods. You can’t rely on the Ministry of Education to develop them, though they do want achievement and to close the gaps . . .

But while according to some interviewees translations can be satisfactory (especially in matriculation exam textbooks), others claimed that cultural adaptations and original textbooks are necessary in order to address environmental issues in the Arab sector. In the words of one, “we need to write our own programs in Arabic to suit the Arab society, and not to translate. . . . The cases are different. We need to write in Arabic, and if we do translate it requires major modifications.” As a small example, a popular activity in a general EE text might be writing letters to the local authority on environmental problems the children perceive. But, as one Arab teacher warned us, this would not be advisable in the Arab sector, where local governance is still very much along clan lines, and a teacher initiating such letters could arouse controversy.

An existing source for EE contents and methods is non-governmental organizations. Several notable environmental organizations exist in the Ultraorthodox and Arab sectors, and general environmental organizations have long-standing EE experience in these two sectors. Tapping on the environmental knowledge, experience and infrastructure of these organizations can assist developing appropriate contents and methods.

A Multicultural Approach to Teacher Training

Teacher training in EE is limited in general, and even more so for the sectors we examine. Yet EE is unique in that it could be infused into all school subjects, from the sciences to the arts and humanities (UNECE, 2005), and a minimum core enabling teachers to do this could be included in their training. EE also involves outdoor learning, which requires unique training. An interviewee from an NGO involved in the Ultraorthodox sector described the current and desired situation:

The teachers learn to take them (the students) from here to there . . . we are trying to include the experience, to show them, to look a little, to absorb, to feel. They don’t have it in trips, they are usually very practical and purposeful. They are not used to it. To look at a flower, to think, to observe. People in our world do not know to observe so why would they (the teachers) be so good at it?

There is a vicious circle: as it stands, the absence of EE in the school curriculum perpetuates a lack of interest on the part of teachers in obtaining such training, and teacher-training colleges are not motivated to offer such courses.

The general dearth of interest and incentive is only compounded in the case of Arab and Ultraorthodox teacher-training. Ultraorthodox male teachers in the Talmud Torah schools do
not go through any teacher-training (they are termed “melamed” [literally, teacher], a category implying a religious educator). Ultraorthodox female teachers complete a full teacher-training, in separate Ultraorthodox colleges, while Arab teacher trainees complete their training in Arab colleges, or in mainstream institutions. Since schools and sector-specific teacher-training programs in these sectors are stressed financially, and have other preoccupations, and since teachers tend to have less linguistic, cultural, and geographic access to the kind of resources they might draw on independently, the marginalization of environmental teaching is even more pronounced.

In addition to infusing environment into general subjects, interviewees also suggested sector-specific opportunities. An Ultraorthodox interviewee suggested that it could be incorporated into home economics, and an Arab Head of Education in a local authority emphasized possible linkages with learning about local heritage and land practices. One instructor who included environmental activities in Ultraorthodox teacher training reported they were well accepted:

The teachers are very open, they enjoy [these activities] and are enriched. They don’t usually go outdoors frequently, or have contact with ideas about environment, health, or nutrition. They are very receptive, also, because they do not have the “noise” of the television and all the other games that exist in the secular world. So [these activities] give them another sphere for having fun with the children, and it is a wonderful world for them.

Integration of EE into teaching can be successful even with the melameds in the Yeshivas, who do not go through formal training or teach according to a syllabus. An interviewee from an environmental NGO involved in the Ultraorthodox sector suggested that “holidays, halacha, are things that can integrate (EE aspects), and maybe they want a trip during the holiday so they will do something related.” Thus, the fact that the environment is a theme in diverse traditions, can help integrating it into teaching even in very traditional and independent education systems.

The current standard qualifications required from EE teacher trainers are a barrier to the entry of lecturers in this field. Considerable thought must be given to who is best equipped to serve as trainers for teachers in these sectors, and how interested teachers can be reached. In the Ultraorthodox sector, for example, since there is no central training system for the melameds, the connection with them must be done locally, and with the approval of a trusted religious body. Here, and in the Arab school system as well, alternative qualification criteria, including the inclination and background of potential teachers, may need to weigh in more heavily than those considered within the standard teacher-training institutions. In any case, a greater challenge for EE teacher training will be qualifying teachers for addressing more critical issues and equipping students to act upon them. Such issues include the role of power in environmental decision making, equality in monetary resource allocation, and in natural resources distribution. These challenge societal and political order, and it is therefore a great task to infuse them into EE.

A Multicultural Approach to Representation and Budget Allocation

Creating a more multicultural approach to EE raises the question of representation as a key pragmatic and political issue, connected to positions and budgets allocation. Questions of representation arise at all levels, including: Who trains the teachers? Who develops policies and
curricula? How is the budget divided among different socio-economic levels? These issues are especially important in EE, since cultural and political contexts emphasize the need for EE that emerges from people who are intimately in touch with the needs and social worlds of students and their communities.

For example, The Ministry of Environmental Protection has six districts, each with a full position for an EE coordinator, yet these are almost entirely staffed by (non-Ultraorthodox) Jews. Only in one district, in the North, there is a position defined for an Arab EE coordinator. In the other districts, the Jewish coordinators reach across language and culture differences as they assist Arab and Ultraorthodox schools. Many local authorities in Israel established environmental units. Most of the towns with an Ultraorthodox population fall within clusters that are under the responsibility of environmental units. Some of the secular and non-Ultraorthodox religious EE coordinators in these units are active in the orthodox communities to a limited extent. Arab towns also may belong to an environmental unit. While it is the Ministry that funds the EE coordinator in these units, the ultimate choice of a candidate rests with the local authority, and several interviewees suggested that the choices were often made for local political considerations. One Arab interviewee explained: “the problem is that the Heads of the municipalities control the environmental units, each one wants to nominate his people . . .”

These crisscrossing administrative frameworks for EE often result in Ultraorthodox and Arab sectors being represented and served by people from outside their communities. This is not to propose an absolute system of neat alignment of origins between groups and those that represent them. As Kymlicka (1995) argues, there are limits to a system of “mirror representation,” in which each person can only be represented by people of the same class, ethnicity, language, gender, etc. He argues that this approach would constitute a random sampling of representatives at the expense of democratic processes, reducing the responsibility of the hegemonic group to take care of all groups in the population, and is, in fact, impossible since each person in the society differs from other members of his group in many parameters. At the same time, Kymlicka supports Young’s (1989) view that weakened groups in the population should be granted representation, to compensate for the historical circumstances that have made participation in decision-making harder for them. At stake is not simply political fairness, but the ability of an outsider to adapt materials to the needs and social world of Ultraorthodox and Arab communities. Even within these communities there may be tensions, as when a Christian Arab from a stronger socioeconomic background administers programs for a predominantly Moslem population from a weaker background, or when more qualified Moslems from the more privileged northern Israel find themselves as preferred but resented candidates for positions among the southern Bedouin communities.

Another important aspect of representation is the monetary representation of minorities in the overall EE budget—perhaps, even, “over-representation,” to compensate for past under-allocation. A related aspect would be to ensure that the grants through which these funds are allocated are accessible to these sectors in simple pragmatic terms: where and in what language they are advertised, do people have the expertise needed to fill in applications, and the kind of contents that are called for, which can include culturally-related environmental contents. Arabs identified additional kinds of culturally related framings that should be taken into consideration when designing EE in their communities, for example, regarding culturally accepted methods for community support:
In the Arab sector even the wealthy do not give in the sense of money, but in the sense of recruiting for a project. The giving is not in the modern sense, American sense, Israeli sense of giving money... there are other ways, recruiting parents, mothers, time. Time is also a resource that can be translated to money and we need to think about additional ways of giving for a cultural cause, if I cannot raise money I will raise something else.

Another culturally related monetary issue is the direct transfer of governmental funding to schools in the Arab sector. This is done via the municipalities, which “works very well in the Jewish sector but is very problematic in the Arab sector.” Such funding barriers are relatively easy to overcome once identified, which can be vital for EE. Tapping into available non-monetary resources in the community may be even better than raising money for EE, since community members can contribute invaluable heritage and active engagement, as well as equipment and manpower.

CONCLUSIONS

Contemporary populations consist of various cultural groups, situated in different settings, including infrastructure and education systems, and differing in their knowledge, values, and social priorities. In the general societal context, cultural differences translate into power dynamics, and are reflected in the unequal distribution of natural resources, budget allocations, and participation in decision making and policy making. Our empirical research in two different societies in Israel has shown that these differences must be considered in order to develop effective EE. We suggest that multicultural education provides several means to this end, including diverse representation in policy making, and a modular framework that includes both core and unique contents and values and facilitates inclusion of religious resources which relate to the environment. The multicultural perspective also uncovers alternative, community-based EE frameworks including genuine environmental epistemologies and non-monetary resources such as knowledge, experience, time, and equipment. Yet, marginalized minorities often suffer environmental injustices and have a complex relation to the state. Fair, meaningful, and effective EE must involve these aspects both in contents and in practical means and tools to not only advance a better environment for all groups in society, but also reduce environmental inequalities, and multiculturalism can also serve as a framework to this end.

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NOTES

1. It is worth noting that another environmentally related educational field that is emerging in the past two decades is Education for Sustainable Development (ESD). Eilam and Trop (2010) show that the relationship between EE and ESD remains contested in the literature, and has been described by different scholars along the whole spectrum from two distinct fields to completely overlapping. In this article we refer to EE in a similar manner as the previous NAAEE definition. We stick to EE in this article since in Israel this is the popular term, with very little usage of the term ESD, or discussion of the differences between the two.

2. The acknowledgment of TEK is not unique to the field of sustainability. Science and medicine have always drawn on this knowledge; in fact, there has been a reaction to the appropriation and commercialization of such knowledge that disregards the intellectual property rights of the groups that developed it. For a discussion about TEK and science education, see Snively and Corsiglia, 2000, and Stanley and Brickhouse 2001.

3. EE is an intervention program: it aims to change behavior, and fails to achieve its aims if knowledge and awareness are improved without change of behavior (Hungerford & Volk 1998).

4. While there are clear reasons to jointly consider these two most prominent minority “cultures” as a case study, we would not want to reinforce the stereotyped “othering” of them with respect to the Israeli mainstream, nor deny their internal diversity.

5. As emphasized in the popular idiom from the Ethics of the Fathers: “Who is rich? One who is satisfied with what he has.”

6. The religious commandments are divided into those Bein Adam LaMakom (between man and God) and Bein Adam LeChavero (between people and their fellows).

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