CHAPTER 15

Arguments as Venues for Cultural Education: A Comparison of Epistemic Practices at General and Religious Schools in Israel

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It does not take particularly extensive travel, anthropological expertise, or keen ethnographic skills to notice that truths considered incontestable in one community are matters of contention in another. One need merely open a newspaper, switch on a television, or boot up a networked computer. Yet we know remarkably little about how such differences come about or how they are sustained. In this chapter, I examine how schools foster and preserve culturally distinctive epistemologies. I begin by presenting some findings from a comparative study of argumentation and epistemology I conducted among Israeli children and adolescents. In light of these findings, I then examine how argumentative discourse—both inside and outside of classrooms—functions as a key venue for cultural education. I then discuss research frameworks currently being developed to investigate such discourse and identify both promise and risk in these approaches. Finally, I discuss the implications for cultural education of both the empirical findings of my own study and of the theoretical perspectives discussed in the latter sections of the chapter.

The original aim of my study was to compare how children of different ages and backgrounds justify their religious beliefs. In individual interviews, I presented participants with a scenario in which two friends are engaged in an argument: One of them believes in God, the other does not and each is attempting to persuade the other that they are right. The participants were asked which of the two characters they most agreed with and why. They were

then asked what someone holding an opposing view might say to show that they are wrong, followed by some general questions about the nature of the dispute, such as whether there really are people who hold the opposing view, whether they might after all be right, and whether it is possible to prove who is right.

The 200 participants in the study were recruited from grades five, eight, and twelve at general and religious public schools in Israel. (The mean ages for each grade were 11 years 1 month, 14 years, and 17 years 6 months, respectively.) Because I shall focus here on differences between these two school populations it is worth describing them in some detail. The public school system in Israel includes a Hebrew sector serving the majority Jewish population and an Arabic sector serving the minority Muslim, Christian, and Druze populations. The Hebrew sector is further subdivided into two main streams. General schools are nominally secular, provide no explicit religious instruction, and are targeted at the majority "non-religious" and "traditional" segments of the Jewish–Israeli population. Religious schools, on the other hand, are targeted specifically at the "religious Zionist" community, which constitutes approximately 20% of Israel's Jewish population. Religious schools combine the subjects taught at general schools (using the same textbooks and following the same mandatory national curriculum) with an extensive religious education program. Pupils from religious schools thus differ from pupils at general schools with respect to both their family religious backgrounds and their exposure to organized religious instruction.

Numerically speaking, the religious Zionist community is a minority group within Israeli society. However, in terms of its cultural autonomy and control of national resources, it functions in many ways as a dominant class. For example, although religious schools receive more government funding per student than general schools, their curricula are subject to less governmental intervention and control (for a socio-historical account of how this came to be, see Shamai (2000)). This unusual combination of cultural autonomy and numerical minority makes religious schools in Israel an especially intriguing institutional setting in which to explore issues of cultural sustainability. For, unlike groups that possess more limited resources with which to resist the hegemonic forces of majority culture, the religious Zionist community in Israel has been able, through the religious school system and other political and social institutions, to establish powerful practices of cultural resistance and self-preservation. On the practical level, these practices can serve as instructive examples to other minority groups seeking to preserve their cultural identities in the face of hegemonic and assimilatory forces. On the theoretical level, they can serve as thought-provoking counter-examples to overly deterministic assumptions about the relations between majority and minority cultures that are sometimes implicit in socio-cultural analyses of educational institutions and practices.

Cultural Patterns of Belief–Justification

The present study explored various features of participants' argumentation, including the various kinds of justification they provided for their own beliefs, the counter-arguments they expected opponents to use to refute their beliefs, and the various strategies they used to rebut such counter-arguments. However, I focus here on only justifications and refutations and even more specifically on "creation" arguments, i.e. on justifications and refutations that included some reference to God's creation of the universe or humankind. Moreover, to avoid confounding school differences in argumentation with differing levels of belief in God, I focus only on the justifications and refutations generated by those participants—67% of general pupils and 95% of religious pupils—who said they believed in God.

To clarify what I mean by creation arguments, here are a few examples. Aryeh is a fifth grader at a religious school. Having stated that he believes in God, I ask him why. He responds, "There has to be someone who created everything and that's the Holy One, Blessed be He." Aryeh appears to be offering a version, albeit a highly condensed and simplified one, of the cosmological or "first cause" argument. Everything that exists must have been brought into existence somehow and the most plausible somehow, as far as Aryeh is concerned, is a divine act of creation.

Not all creation justifications were like Aryeh's. Many participants offered variants of the teleological argument or "argument from design" rather than the cosmological argument. And in most cases their justifications were much more elaborate. However, the justifications I am considering here all shared with Aryeh's response some kind of appeal to evidence that the world or humankind was divinely created.

Conversely, creation refutations are counter-arguments that participants expected non-believers to use to refute their religious belief. Shlomit is a twelfth grader at a religious school. Having already stated and justified her belief in God, she is asked what a non-believer might say to show that she is wrong. She replies, "She'd probably bring up all the scientific proofs: that the world evolved from an explosion and wasn't created by anyone, or that we started out as apes." Shlomit here sets up a combination of "Big Bang" theory and evolutionary biology as a possible challenge to her earlier attempts to justify her religious belief.

Before comparing the distributions of creation arguments among religious and general pupils, it is important to point out that pupils at both types of school encounter evolutionary biology in the context of Israel's national biology curriculum. Indeed, the same biology textbooks are used in both streams. Pupils at religious schools may therefore be assumed to be just as familiar with evolutionary biology as are their peers at general schools.

Given this context, the observed school differences in argumentation are quite striking. Whereas no significant school differences were observed with

respect to creation refutations, pupils at religious schools (71%) were more than twice as likely as their peers at general schools (33%) to employ creation justifications in support of their religious beliefs χ^2 (1,163 = 23.62, $p < 0.001$, and $\phi = 0.38$).

How may this difference be explained? Religious pupils do not appear to be any less *aware* than general pupils of the challenges posed to creationism by contemporary theories of cosmology and evolution. Indeed, although the trend was not statistically significant, religious pupils (29%) generated creation refutations *more* often than general pupils (17%). Rather, where general and religious pupils seemed to differ was in their respective evaluations of the *seriousness* of these challenges. Whereas religious pupils tended to treat such challenges as if they could be easily dismissed, general pupils were less sanguine.

To illustrate, consider the following interview excerpts. Tehiyah, is a twelfth grader at a religious school. Like her classmate Shlomit, she too cites contemporary scientific accounts of cosmology and evolution as potential counter-arguments to belief in God. However, she is almost incredulous that anyone would take such counter-arguments seriously:

> I don't have a shadow of a doubt, especially as someone who has studied biology, that this whole world must have been created by someone . . . not from monkeys, not from colliding rocks, not from any of those things . . . If secular people would just learn biology, then they wouldn't be able to come out with all that Stephen Hawking nonsense, that it's rocks and all that stuff.

By way of contrast let us now look at what Shirli, a twelfth grader at a general school has to say about these same theories: "To me, personally, it doesn't seem logical that the world could come into existence just like that. Personally, that's what I believe." Where Tehiyah rejects evolutionism out of hand as something that is obviously and objectively false, Shirli seeks to diminish its force by relativizing it: rather than framing the evolutionist challenge to creationism as a zero-sum game, Shirli frames it as a question of personal taste or preference. Specifically, she admits by implication that, while evolutionism seems implausible to her, it may seem plausible to others.

Cultural Epistemologies

These distinctive ways of framing the conflict between evolutionist and creationist accounts of origins were not unique to these two particular participants. Nor were they distributed randomly throughout the sample. Rather, they varied systematically with school. Pupils at religious schools tended to reject evolutionism out of hand as nonsensical and ridiculous,

whereas pupils at general schools tended to argue that, "personally," they did not find it convincing.

Thus, what might have seemed at first glance to be a simple group difference in the use of a particular kind of justification turns out, on closer inspection, to be symptomatic of a more comprehensive difference in how individuals from these two communities treat theories of origins. Pupils from religious and general schools not only employ different argumentative strategies, they subscribe to different conceptions of cosmology. Religious pupils subscribe to an objectivist conception of cosmology, in which God's creation of the universe is obvious and incontestable. General pupils subscribe to a subjectivist conception in which beliefs about origins are matters of personal preference.

And this is only the tip of the iceberg. As noted earlier, the participants were required not only to justify their own beliefs and to generate possible counter-arguments, but also to respond to various general questions about the nature of the dispute. I will focus on two questions in particular. Is the question rationally decidable? And is it possible that I am wrong? These questions are of particular interest because traditional psychological accounts of epistemic development have used responses to such questions to distinguish levels of epistemological maturity (see, e.g. Kuhn, 1991; King and Kitchener, 1994).

According to such accounts, people progress through at least three discrete stages or levels of epistemological understanding, each following the other in invariant sequence and constituting a comprehensive transformation of the individual's conception of knowledge. At the realist stage, every question is considered to have a single, correct answer that can be known, at least by experts, with absolute certainty. At the relativist stage, all knowledge claims are considered subjective and idiosyncratic to the tastes and preferences of the individual. And at the rationalist stage, knowledge is seen as something that is constructed tentatively by evaluating the evidence for and against competing beliefs and points of view. Thus, according to these accounts, relativists are distinguished from naïve realists by their insistence that there is no rational procedure for deciding between competing knowledge claims, whereas rationalists are distinguished from realists and relativists by their recognition that knowledge is inherently fallible.

In one respect, the age trends in the present sample were consistent with traditional accounts of epistemic development. The fifth graders (71%) tended more than eighth (49%) or twelfth graders (29%) to consider the question of belief in God to be rationally decidable χ^2 (2,163 = 19.43, $p < 0.001$, and $\phi = 0.34$). However, not only were no significant age differences observed with respect to fallibility, but, even among fifth graders, around half the participants acknowledged that their belief might be mistaken.

Moreover, systematic differences were observed between religious and general pupils. Religious pupils (68%) tended to consider their religious belief

to be infallible more than general pupils (33%) χ^2 (1,163 = 20.08, $p < 0.001$, and $\phi = 0.35$). Similarly, religious pupils (60%) tended to consider the question of belief in God to be rationally decidable more than general pupils (39%) χ^2 (1,163 = 6.07, $p = 0.010$, and $\phi = 0.20$).

These findings suggest that religious pupils differ from general pupils, not only in their preferred strategies of belief–justification, nor only in their general approaches to theories of cosmology and evolution, but also, at a more fundamental level, in their conception of the basic epistemological character of disputes about belief in God. Religious pupils consider such disputes to be not only rationally decidable, but to be decidable conclusively in their own favor. General pupils, on the other hand, consider such disputes to be unsusceptible in principle to rational resolution and are more willing to countenance the possibility that their own belief might be mistaken.

Epistemologies and Identities

If one were to interpret these school differences according to the hierarchical assumptions of traditional accounts of epistemic development one would be forced to conclude that pupils at religious schools are less mature than their peers at general schools. Indeed, this is precisely how some researchers have interpreted their own recent findings of connections between religious orthodoxy, creationism, and epistemological beliefs (cf. Desimpelaere et al., 1999; Sinatra et al., 2001).

This is certainly one possible interpretation of such connections. But it is not the only possible interpretation. It assumes that subscription to realist, relativist, or rationalist epistemological beliefs is a matter of cognitive maturity alone. However, if there are good reasons that cognitively sophisticated and mature individuals might have for subscribing to epistemological beliefs that psychologists have traditionally viewed as naïve and immature then alternative interpretations must be considered.

I propose that there are such reasons and that, therefore, we need to consider alternative interpretations. Specifically, I propose that people's epistemologies are related to their personal and cultural identities—their senses of who they are as individuals and members of communities—and that their epistemological beliefs may be inextricably intertwined with their beliefs about the kinds of people they are or the kinds of people they want to be. Shlomo, a religious twelfth grader, illustrates this point well. Asked directly whether it is possible that his belief in God might be mistaken, Shlomo replies incredulously, "What are you talking about?! I told you: there's absolutely no chance."

From this response, one might reasonably conclude that Shlomo is a realist. After all, he considers the question of God's existence to have a single, correct answer and claims to know with absolute certainty what this answer

is. However, when asked a very similar question later in the same interview, Shlomo quickly dispelled this initial impression (interviewer's probes are italicized):

> *You said that you believe in God wholeheartedly. Would you say that you know for certain? [. . .]* Yes, [I know] for certain. It's stupid when you think about it, because if there's one thing that you can't know for certain then it's this. But I do know for certain because, I'm telling you, if I didn't know it for certain, I'd go crazy. No one can accept [that there isn't a God]. There are some people who simply push it away and don't deal with it. That's easy. You can do that. I can too. But I'm telling you, if I knew, if some omniscient person were to come and tell me that there isn't a God, then I'm telling you, I'd go crazy in one second. I couldn't stand it. Suddenly everything would be in doubt. It would be like the floor opening up beneath my feet. Suddenly you don't know anything. Maybe that's what I think. Perhaps it's only me that thinks that, but I'm comfortable thinking it. It's the only thought that I am prepared to accept on this topic.

Shlomo insisted that it is impossible that his belief in God is mistaken. Yet his confidence is not the product of a dispassionate assessment of the grounds for his belief. It is the product of a conscious act of will. Shlomo admitted implicitly that his belief in God may indeed be mistaken. Yet he refused to consider his belief in God as anything but certain, for to do so would be too much for him to bear. Thus, Shlomo's realism is far from naïve. It rests neither on a simplistic understanding of the epistemic status of religious faith nor on delusions of infallibility but on his beliefs about the kind of person he is and the kinds of belief he can live with and the kinds he cannot.

The connections described thus far between cosmologies, epistemologies, and identities illustrate just how complicated it is to disentangle argumentation practices, epistemological beliefs, and conceptions of self. At the same time, however, they emphasize how important it is for educators to distinguish between these various layers or aspects of thinking and being if they are to promote reflective, scientific ways of looking at the world without trampling over the deeply held beliefs and commitments of those they seek to educate. For unless educators appreciate that epistemological beliefs are not merely cognitive or that commitment to creationism may be the result of something other than scientific ignorance, then they are unlikely to take students' values and commitments into account when teaching subject matter that touches on these issues.

The practical implications of these theoretical insights for educators seeking to enact practices of cultural sustainability will be discussed in more detail in the final section of this chapter. However, to appreciate the extent of the

practical challenge, one must recognize the conceptual difficulties that underlie it. These conceptual difficulties are well illustrated by recent attempts to study the relations between epistemology, identity, and cultural practices in classrooms. It is to these attempts, therefore, that I now turn.

Socio-cultural Perspectives on School Epistemology: The Promise and the Risk

Current research programs, informed by socio-cultural perspectives, have sought to unravel the complex knot of relations between identities, epistemologies, and cultural practices by looking carefully at moment-to-moment interactions in classrooms for evidence of different kinds of epistemological work getting done. There is much promise in this approach, but also much risk. For if we focus only on moment-to-moment interactions in classrooms we risk underestimating or ignoring the role of practices that take place over longer periods and in other settings.

To illustrate more concretely both the promise and the risk, let us return to my study of religious argumentation and epistemology. So far I have considered cosmologies, epistemologies, and identities in the abstract. Now let us to turn to the contexts within which they get negotiated and constructed. Specifically, let us ask the following question: What is different in the experiences of religious and general pupils that might account for the differences observed above?

Because this was an interview-based study rather than an observational one, we had to rely on second-hand reports by the participants about the discourse practices in which they engaged, rather than on direct observations. Moreover, explicit questions about these practices were not included in the original interview schedule, so we had to rely on participants' unsystematic comments-in-passing. A key contribution of the socio-cultural research frameworks currently being developed is that studies using them would necessarily generate more direct evidence of discourse practices than I am relying on here. Nonetheless, the picture these unsystematic and fragmentary comments painted of divergent discourse practices is quite striking.

It appears that religious and general pupils engage in theological discourse in very different settings and under very different conditions. In religious schools, pupils experience theological discourse within the context of official classes in which teachers or rabbis set out to prove God's existence and to rebut conclusively any potential counter-arguments. As Hannah, a religious eighth grader, commented, "Every seminar they bring up the whole thing; that God exists, proving to us that God exists." In contrast, pupils in general schools reported no such instances of "official" theological discourse. Instead, when referring to previous occasions on which they had discussed the question of God's existence, they tended to cite informal conversations with peers that

ended with the opposing sides agreeing to disagree. The following comment by Ron, a secular twelfth grader, is typical: "To tell you the truth, I had exactly the same argument with my friend. We sometimes go hiking and speak about this kind of stuff. And I didn't succeed. I'm always saying stuff to him and he's always saying stuff to me, but neither of us is ever persuaded."

An especially striking example of school discourse practices serving as a venue for cultural education is provided by the phenomenon of "pre-interview coaching." At two of the participating religious elementary schools, my suspicions of such coaching were aroused after encountering almost identical lines of argumentation in my interviews with pupils from a particular class. These suspicions were later confirmed by pupils' explicit admissions at a later point in the interview that they had indeed been "prepared" for my visit. In one school, pupils had been told a story about Rabbi Akiva (though in one version, Akiva had mutated into Maimonides), who convinces a skeptic (in some versions a Gentile, in others a heretic) by showing him a beautiful painting and telling him that his cat (in almost all versions "Mitzi") had painted it by accident by upsetting a box of paints on a canvas. When the skeptic objects that a cat could not have produced such a magnificent work of art, the rabbi points out the much greater complexity and beauty of the natural world, showing that it too must be the result of design. In the other school, pupils were told a story about an inspector who comes to school and goads the children by insisting that, since he cannot see God, God must not exist. One of the pupils in the story then responds that the inspector must have no intelligence, since he cannot see that either. Although no such instances of explicit coaching were observed in religious high schools, religious pupils often referred in their responses to seminars or classes in which theological questions were dealt with by teachers, rabbis, or counselors in similarly summary fashion (see, e.g. Hannah's comment above).

Taken together, these findings suggest that many of the school differences described above may have their roots in the divergent cultures of theological discourse to which religious and secular pupils are exposed. Specifically, by exposing their pupils to models of theological discourse in which all questions can be answered clearly and conclusively in the affirmative, religious schools appear to foster argumentative practices and epistemic orientations that look (at least superficially) very much like naïve realism. Conversely, by implicitly consigning religious beliefs to the private domain, general schools seem to promote a view of theological matters as questions of personal preference that lie beyond the pale of rational debate.

An analysis of this kind demonstrates the importance of a practice-oriented approach to the study of student epistemologies. If we are to understand more fully the processes by which particular epistemological orientations are fostered or discouraged in different educational settings, we must attempt to observe these processes as they are enacted in practice.

I am not sure if the kinds of practice described above qualify as "micro-practices," as defined by Sherin (2004). They seem to be at about the right grain size in the sense that they could be observed in episodes that last minutes or hours. Yet, the *meaning* of these episodes for the people participating in them derives from their being located within a broader context of *other* practices against which they are fore-grounded. For example, religious pupils may learn to treat evolutionary theory differently from other scientific theories, not—or not only—because of discourse practices in biology class, but because of how issues they encounter in biology class are encountered in different ways and under different circumstances in religion class or their principal's sermons on the weekly portion. Moreover, as in the case of theological discourse among general pupils, the practices in which we are interested may be ones that occur beyond the school walls or that are noticeable only by their absence or by contrast with practices in other institutional settings. Nonetheless, if defined broadly enough, I am confident that the frameworks such as that of Sherin (2004) could encompass practices of these kinds and durations.

However, I am less confident about their ability to encompass processes spread over wider stretches of space or time. The first such process I will consider is that of individual development. Sherin's (2004) micro-practices framework, like many other recent contributions to the literature on student epistemologies, seeks to introduce greater sensitivity to context in the study of epistemic development. As noted earlier, such development was characterized in initial studies as a progression through discrete stages or levels of epistemological understanding, each following the other in invariant sequence and constituting a comprehensive transformation of the individual's conception of knowledge (see, e.g. Perry, 1970; Chandler, 1975; Kitchener and King, 1981). In more recent studies, researchers have begun to question the comprehensiveness of these shifts in epistemological understanding and to attend more closely to the variety of contexts within which epistemic judgments are made. Some have sought to show that epistemic development is a somewhat "domain-dependent" process that occurs with respect to some kinds of knowledge claim before others (Kuhn et al., 2000; Hallett et al., 2002). Others have sought to show that epistemological beliefs are multidimensional rather than unitary (e.g. Schommer, 1990, 1993; Elby and Hammer, 2001; Hammer and Elby, 2002). And still others have emphasized the importance of cultural context (e.g. Gottlieb, 2002; Chan and Elliott, 2004).

These studies have shown that traditional models of epistemic development were insufficiently sensitive to context. However, in modifying the assumptions of these models, we should take care not to throw out the developmental baby with the universalist bathwater. Trajectories of epistemic development may vary systematically across domains, dimensions, and cultures. But that does not mean that there is no such thing as epistemic development or

that in fact there are not reasonably stable age trends. For example, despite the differences between religious and general pupils, a stable trend towards considering the question of belief in God was rationally undecidable was observed over the course of adolescence in both groups.

By focusing on micro-practices, researchers necessarily eliminate from their immediate frame of reference processes of individual development that take place over the course of months and years rather than minutes and hours (see e.g. Krakowski, 2004). For all my own interest in context, I think it would be a mistake to ignore these developmental processes. Just as practices emerge and change over time, so too do people. And just as epistemological beliefs, values, and commitments can exist outside individual heads, so too can they exist inside them. If researchers are to keep individual development on their agenda, then the study of micro-practices must be extended to include these processes. Practically speaking, this means studying micro-practices among a wide range of age groups and following changes in micro-practices of a given group longitudinally.

Yet, processes of individual development are only one kind of long-term process that we need to track if we are to understand the emergence of particular epistemological orientations at particular times and places. There are processes of even longer duration that must be considered.

Just as the meaning of a single statement of epistemological belief cannot be understood without situating that statement within the broader context of practices from which it emerged, so too cannot the moment-to-moment practices within an individual classroom be understood without situating them within the broader network of institutional practices that determine what kinds of activities take place in that classroom. Classrooms are located in school buildings that are built and furnished in particular ways, class schedules are structured according to particular curricular, pedagogic, and bureaucratic principles that are developed over long periods by various local and national stakeholders, teachers are trained in various institutions (each with their own agendas and constitutive practices) to interact with students in particular ways, and so on. If the moment-to-moment conversational practices *within* classrooms play an important part in fostering particular epistemologies and ways of thinking then, by extension, so too do these other processes which take place *outside* classrooms, but which largely determine what happens inside them.

Consider general and religious pupils' divergent approaches to evolutionary theory. Undoubtedly, these are attributable—at least in part—to what happens in general and religious classrooms. But the different kinds of things that happen in general and religious classrooms are attributable in turn to such things as the different ways in which class times and spaces are structured, teachers trained, curricula designed, and so on, at each type of institution.

And if things are not complicated enough already, then we can take this one step further. The institutional practices just considered have been

discussed ahistorically. But these larger institutional practices are shaped themselves by longer-term processes of historical change. National priorities change, education systems get reorganized, new curriculum topics or pedagogies emerge, and others become contentious. And beyond the official education system: ethnic tensions build up and subside, new political and religious movements emerge, scientific paradigms shift, and so on.

In the case of how religious and general pupils approach evolutionary theory, the importance of such processes cannot be underestimated. Discussions of theories of origins within Jewish theology, views on the centrality of evolutionary theory to modern biological science, changes in biology curricula and the training of science teachers, and policy changes in the Israeli education system in general and the religious stream in particular: all these have their own histories and each of these histories has left some imprint on the discourse practices in contemporary classrooms.

If moment-to-moment interactions in classrooms are micro-practices, then these latter processes might be thought of as macro-practices. We must indeed examine micro-practices if we are to understand better the different kinds of epistemological work that get done in classroom discourse. However, a focus on micro-processes alone risks blinding us to the importance of macro-processes in shaping such discourse.

My point is not that research frameworks such as Sherin's (2004) micro-practices framework are misguided in any way. On the contrary, I believe they serve as an important corrective to the tendency of researchers to study student epistemologies out of context. My concern is only that the particular slices of context on which the micro-practices framework trains its analytic lens are themselves situated within broader networks of practices that need also to be taken into account. The solution is not to try and encompass everything into one complete and true analytic framework or research design—no research framework can encompass everything. It is, rather, to recognize the inherent partiality of our selected framework and to seek out additional perspectives and analytic tools that can be used to complement it, correct some if its biases, and shrink its blind spots.

An example of the kind of simplification that must be resisted is the infamous tendency to infer causal direction from evidence of association. Researchers using an analytic framework that views epistemological beliefs as emergent properties of communicative micro-practices will tend to interpret data that associate group practices with individual beliefs in terms of the former causing the latter. Conversely, researchers using an analytic framework that views discourse practices as products of the epistemological commitments of the individuals who engage in them will tend to interpret the same data in terms of the latter causing the former. Because it is impossible to translate the processes and connections in which we are interested into rigorously controllable and testable laboratory experiments without fatally distorting

them, we do not have any clear-cut method for deciding between these competing interpretations. Moreover, as the examples considered in this chapter suggest, each of the associated elements may be mutually reinforcing. For instance, religious certainty is valued within the orthodox community in Israel, is promoted through various discourse practices in religious schools (such as seminars at which proofs for the existence of God are rehearsed and potential counter-arguments rebutted and ridiculed), and is exhibited in religious pupils' rejection out of hand of evolutionary counter-arguments to the argument from design. Do the seminars cause the certainty or does the certainty cause the seminars? Does the creationism cause the belief in God or the belief in God cause the creationism? Does Shlomo subscribe to the epistemological beliefs that he does because of the person he is or is he the person he is because of the epistemological beliefs to which he subscribes?

The data we have collected thus far do not provide any clear-cut answer to such questions. Nor is it easy to imagine additional data that would. If anything, the data suggest some kind of co-construction rather than a one-way causality in either direction. As cultural psychologists have argued in a number of other contexts, it may be most helpful to conceive of cultural practices and individual cognition as "making each other up" (Shweder et al., 1998 Rogoff, 2003; Shweder, 2003). Stated as baldly as this, the suggestion may sound a little too pat. But placed in the context of the connections described above between argumentative strategies, cosmologies, identities, and discourse practices it begins to look like a subtle and helpful perspective. At the very least, it serves as a corrective to the tendency to jump to any premature conclusions about causal directionality.

Implications for Cultural Education

The empirical findings and theoretical insights presented above have several important implications for educators concerned with issues of cultural sustainability and cultural education. I begin with the obvious and move on to the less immediately apparent.

First, cultural education (sometimes) works. The differences described in the previous sections between the epistemic values and argumentative practices of religious and general pupils demonstrate the effectiveness of educational institutions as promoters and sustainers of cultural capital. Although numerically a minority, the religious Zionist community in Israel has managed, in its educational institutions, to create a cultural niche, wherein beliefs, values, and practices different to those of the majority secular community are promoted and sustained.

Second, cultural education is reactive. Not merely in the general and tautological sense that groups seek to enact practices of cultural sustainability (i.e. they engage in "cultural education", as opposed to "education") only when

they perceive their beliefs, values, and practices to be under attack. But also in the more specific and substantive sense that such education assumes the form of tactically situated roadblocks expressly outfitted to withstand and counter predicted incursions. For example, stories ridiculing evolutionary theory do not get told accidentally. They get told to people at times and in places perceived by interested parties to be in need of protection from the lure of evolutionary theory. In an important sense, when we use the term "cultural education," we really mean "counter-cultural education." This does not mean that educators seeking to sustain minority beliefs, values, and practices can never take the initiative or think strategically. But it does mean that their agenda is determined for the most part by the nature of the hegemonic forces against which they wish to operate. Educators ignore these inherent constraints at their peril: One does not survive a bear hug by treating the bear as if it were a mouse.

Third, a curriculum is only one resource at the disposal of cultural education. Even when uncongenial curricular content is imposed from above by a majority culture using all the legal and bureaucratic forces at its disposal, educators who seek to sustain minority beliefs, values, and practices can create niches where the homogenizing sting of such content is subverted or neutralized. The theological discourse practices at religious schools are a case in point. Due to its inclusion in the national biology curriculum, evolutionary theory is granted some measure of validity within the discourse context of biology textbooks, classes, and homework. But when it comes to theological discourse, such validity is explicitly negated and ridicule takes its place. I refrain here from any judgments about either the desirability or effectiveness of such compartmentalization. I wish only to point out that educators sometimes use discourse practices in one area of school life to subvert or neutralize culturally problematic curricular content in another.

Fourth, the task facing educators who seek to sustain minority cultural practices is not merely to gain control of particular curricular decisions. It is also, more fundamentally, to contest the hegemonic models of rationality and intellectual maturity that underlie the framing of such decisions. As we saw above, traditional models of epistemic development equate subscription to a realist epistemology with cognitive immaturity. Yet, we saw also that realist beliefs are actively promoted in some cultural settings and that, in these settings, epistemological realism may be less an expression of cognitive immaturity than of commitment to the values and practices of one's community. Educators whose curricular decisions rest on uncritical acceptance of traditional models of epistemic development may thus be unwitting accomplices in undermining the values and practices of minority communities. And, conversely, educators who seek to sustain minority beliefs, values, and practices need actively to refute the implicit assumption that such beliefs, values, and practices are irrational or backward.

Fifth, educators who seek to implement practices of cultural sustainability must resist the temptation to imagine that the educational settings in which they work are either infinitely mutable on one hand or deterministically closed to intentional modification on the other. In truth, we know very little about how cultural change is brought about. And this is not simply because we have not yet done enough research. As I have attempted to show in the preceding section, it is because there are great conceptual and methodological obstacles to drawing clear conclusions about the causes and effects of cultural phenomena. Our only recourse is to collaborate in the study of cultural sustainability and at several levels, including the disciplinary, the theoretical, the empirical, and the practical.

At the disciplinary level, collaboration is needed to ensure that the unique contributions of psychological, sociological, geographical, economic, historical, political, religious, and linguistic factors (to name but a few) to cultural change are taken into account and given their due. At the theoretical level, collaboration is needed to ensure that our preferred theoretical frameworks within a given discipline do not blind us to alternative descriptions of the same phenomena or even to the very existence of particular phenomena. For example, within the discipline of psychology, the behaviorist, the neuropsychologist, the psychoanlyst, the cognitivist, and the developmentalist each look at cultural phenomena through different lenses, each with their own areas of sharp focus and each with their own blind spots. At the empirical level, collaboration is needed to ensure that our focus on particular instances or cases of cultural change does not lead us into parochial over-generalization, which itself may serve as a form of cultural hegemony. Issues of cultural sustainability vary enormously, depending on the particularities of the culture seeking to sustain itself and the challenges with which it is faced. Only by comparing across cases (something this conference allows and encourages us to do) can we hope to become wiser about general features of cultural change as well as the nuances specific to particular socio-historical settings. And finally, at the practical level, collaboration is needed to allow us to learn from the successes and failures of others' attempts to enact practices of cultural sustainability. To twist a famous dictum of Tolstoy, every threatened culture may be threatened in its own unique way. But that does not mean that educators concerned with sustaining particular cultures cannot learn from each other. When hegemonic forces leave us with so few options, the least we can do is to learn as much as we can about the options we have.

Acknowledgments

The data reported in this chapter were collected in course of the author's doctoral research at the Hebrew University of Jerusalem. The research was made possible by grants from the Israel Foundation Trustees, the Golda Meir

Fund, the Mandel Foundation, the Memorial Foundation for Jewish Culture, and the Professor Eliezer Stern Institute for the Study and Advancement of Religious Education at Bar Ilan University. Adam Afterman, Eyal Aviv, Tali Berko, and Yasmin Ron assisted in the construction and testing of the coding scheme. Earlier versions of sections of this chapter were presented, respectively, at the Biennial Meeting of the European Association for Research in Learning and Instruction in Padua, Italy in August 2003 and at the Annual Meeting of the American Educational Research Association in San Diego, U.S. in April 2004. The author thanks the participants in those symposia and in the cultural education–cultural sustainability conference in Jerusalem for their penetrating questions and profound insights.

Resources and Tools for Educators

Questions

Educators seeking to apply insights from this paper to their own institutional setting should ask themselves the following questions.

1. On what assumptions about the nature of knowledge are the forms of argumentation practiced in my classroom (or other educational setting) based?
2. What values and beliefs do these practices reflect and support?
3. Where do these values and beliefs diverge from those of the culture(s) I wish to sustain?
4. What am I doing now and what might I do in the future to close this gap?

For Further Reading

For a comparison of different approaches to the study of epistemological understanding and their relations to educational practices, see the special issue of the journal *Educational Psychologist* (Volume 39, Issue 1) guest edited by Barbara K. Hofer in 2004. For more comprehensive analyses of the relations discussed in this paper between cultural practices, models of maturity, and conceptions of truth, beauty, and justice see Barbara Rogoff's (2003) *The Cultural Nature of Human Development* (Oxford: Oxford University Press) and Richard Shweder's (2004) *Why Do Men Barbecue? Recipes for Cultural Psychology* (Cambridge, MA: Harvard University Press).

Suggestions for Educators

My practical advice to cultural educators is threefold: know your context, create niches, and define your goals in your own terms.

1. Know your context. The above analyses have shown how intimately the educational practices of minority cultures are intertwined with the discourse practices of the majority cultures within which they are embedded and with which they interact. To act effectively, cultural educators must acquire a comprehensive understanding of their particular cultural context. They must become experts in the processes of curriculum development, teacher training, performance assessment, policy formation, and so on through which the majority culture seeks to impose its hegemony on educational practices and be able to identify areas of potential conflict and accommodation with the beliefs, values, and practices of the minority cultures they wish to sustain. For example, those who wish to sustain creationist beliefs in the face of hegemonic forces that promote evolutionism must know where and how within the educational system evolutionist beliefs are promoted and what legal and social constraints there are on the promotion within this system of creationist beliefs. The practices described in this paper indicate how successfully and comprehensively modern orthodox educators in Israel have mapped their context and identified points of educational leverage. In different ways, but with some similar outcomes, so have creationists in the U.S.
2. Create niches. Given the overriding imbalance of power between minority cultures and the majority cultures within which they are embedded, one of the most promising strategies of cultural sustainability is the creation of cultural niches within which this balance of power is temporarily and selectively reversed. While representatives of minority cultures rarely have enough power to change a national curriculum, they often have enough power to create protected spaces and times within their educational institutions wherein the epistemological assumptions of a hegemonic national curriculum can be challenged, relativized, or undermined.
3. Define your goals in your own terms. This chapter has shown how seemingly impartial studies of educational processes or apparently neutral theories in developmental psychology turn out on closer inspection to rest on assumptions about the nature of knowledge, maturity, and cultural identity that are specific to a particular Western, secular world view. By taking for granted the forms of educational discourse that are most prevalent in the majority culture, minority educators constrain themselves artificially and perhaps even undermine their own ultimate goals. What practitioners of cultural education mean by "growth," "understanding," "maturity," "knowledge," "justification," and so on may diverge substantially from the meanings of these terms as used in official documents and the "neutral" educational discourse of the dominant culture. Educators concerned with cultural

> sustainability must therefore use such terms warily and, where necessary, reject them in favor of culture-specific terms better equipped to communicate their precise goals. For example, it is a mistake to define educational goals in terms of knowledge, understanding, and awareness if the qualities of mind that the cultural educator wishes really to promote and sustain are faith, commitment, and belonging. Cultural educators should be appropriately skeptical of universalist assumptions about the nature of cognitive maturity and have the courage to define their educational goals in terms of their own—culture-specific—conception of the educated person and the ideal society.

You might now want to turn to your community/staff/students etc. and request them to give their own answers to these rather important issues.

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