

The Linguistic Ecology of Education

by

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**A thesis submitted in conformity with the requirements
for the degree of Doctor of Philosophy**

Department of Theory and Policy Studies in Education

The Ontario Institute for Studies in Education of the University of Toronto

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Abstract

This work explores the implications of linguistic diversity for the organization of schooling, by developing and applying an original, critical-realist theory of language based on ecological psychology. Rather than carrying around in their heads comprehensive maps of the world or entire linguistic systems, individuals are portrayed as adapting their awareness and actions to different natural and linguistic environments, modifying those environments in the process. The particular importance of linguistic adaptation is shown to lie in its co-ordering effects on imaginative awareness: metaphoric and metonymic schemata that enable us to grasp forms of order that elude direct perception, but also frequently seduce us into mistaking ideas for reality.

In the linguistic ecology of modern societies, knowledge and ideas are typically produced at sites distant from schools. It is shown that many of the imaginative skills cultivated in the linguistic traditions of the middle classes have in fact co-evolved with the formal education system and with the norm-governed use of texts as representations of reality. As a consequence, members of other cultural communities, whether they differ in terms of class, ethnicity, or other

characteristics, encounter a linguistic order in schools that is integrated and co-evolving with a complex hierarchical system of social relations.

Administrative and policy decisions which reinforce or modify this ecology of language have important constraining and enabling effects on school achievement. In particular, policies which exclude vernacular languages from schools not only confer unequal privileges but reinforce two contrasting tendencies in cultural negotiation: dynamic sublimation (whereby individuals come to see themselves and others in collective terms) and dynamic reduction (whereby individuals lose awareness of historical, social and ecological context). In order to limit such potentially dangerous effects, schools need to be founded upon the extended cultivation of a critical awareness of place, in which cultural and linguistic diversity are treated as carefully and systematically as natural diversity. The indigenous concept of the cyclic renewal of relationship is recommended as a model for learning, together with the use of critical ethnography to generate and share knowledge about and among such projects. It is argued that this would simultaneously provide the foundation for an emancipatory, research-based science of language and education.

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Introduction

*We shall not cease from exploration
And the end of all our exploring
Will be to arrive where we started
And know the place for the first time.*
— T.S. Eliot, "Little Gidding"

These much-quoted lines were written some twenty years after Eliot had recorded his journey across the wasteland of modernity. "What are the roots that clutch, what branches grow/ Out of this stony rubbish?" he had asked—a question that resonated with two generations desolated by war, betrayed by the promises of peace, and bewildered at the crumbling of certainty on every front. Ironically, it was in the dark and cold of wartime England that the answer came: "not looked for/ But heard, half-heard, in the stillness/ Between two waves of the sea." Yet Eliot's answer did not mark a conclusion, only a promise and an exhortation. "For us, there is only the trying. The rest is not our business."

This work reports on a similar journey. It grew out of a long personal struggle involving both language and education, at times resembling Eliot's waterless trek into the "dead mountain mouth of carious teeth", in which faith and endurance (not only my own) were sorely tested. At the present time, an oasis has been reached: small, fragile, familiar yet strange, "both intimate and unidentifiable". Little of reality has changed, yet nothing is the same. Perhaps the record of my route will help other travellers to make it across the dry land.

In my beginning is my end. The earliest struggles I had with education involved loneliness and boredom. I was a shy child, set further apart by an unusual accent, wide-ranging intelligence, and emotions too close to the

surface for comfort. I remember each step upwards, from grade to grade and school to school, as an enormous relief, bringing greater freedom of choice and intellectual challenge. Almost unconsciously, I encountered undergraduate and graduate life in the same way, finding greatest fulfillment in the least predictable choices: history and philosophy as adjuncts to the natural sciences, orienteering and mountain running as athletic disciplines, Esperanto and nuclear disarmament as internationalist causes. Perhaps it was inevitable that, despite my love for biology, I would finally abandon the straight and narrow path of a laboratory career for something far less defined—something for which, even now, I have no name. Readers will find ample evidence of this deep-rooted eclecticism in the development of this book's central thesis: that a naturalistic approach to the study of language and education entails the reform of long-established theoretical metaphors, research methods, and organizational systems.

This is not a thesis that is likely to come from a disciplinary insider, and indeed the journey that brought me to the wasteland's edge began far outside the citadels of social science, in linguistic encounters too direct and personal to succumb to prescriptive theory. I will say little explicit about Esperanto in the chapters of this work, but years of thinking, dreaming, learning and communicating in the language inform every paragraph and page. Putting these connections into language is a task for another day. For the present, let me cite my friend and colleague Probal Dasgupta, from a memorable essay that bears many re-readings:

Before descending into depths of theory, let us first offer an image of the type of language that Esperanto is, in contrast to familiar types: we may say that ethnic languages are like *countries*, while Esperanto is like a *ship*, which does carry passengers and cargo, but which members of its

permanent crew regard as their home. The elusive job of sociolinguists trying to handle the Esperanto experience is especially hard in the case of the "crew": for these adventurers, the ship is specific ("home") and grows on them, and comes to represent a cultural tradition; at the same time, the ship is a potent symbol (and a practical means) of perennial homelessness, and resists not only the hang-ups and power-syndromes of the usual type of tradition, but even the category of "home" in the solid and settled sense that seems natural to landlubbers with their legalisms and nationalisms. (Dasgupta, 1987: 309)

For some fifteen years I have felt myself to be a member of this crew, trying to understand the world as seen from the deck of a ship, slowly becoming familiar with the ways of the ship itself. In neither of these tasks did the tools of the land-based cartographers seem particularly natural or useful. In the end I felt impelled to disembark and undertake the job myself, in the trek reported here. Yet this point might never have been reached, but for a second crucial encounter on the margins of modernity.

Some years ago, having ceased to work full-time with Esperanto, I began to collaborate with Canadian First Nations (indigenous) people on problems concerning language and education. In their passionate conviction of the importance and sustainability of their ancestral languages, I recognized values widely shared by Esperanto speakers; in their struggle to develop a *modus vivendi* between diverse communities and cultures, I again found a process to which I could immediately relate. To these common perceptions my indigenous mentors added two new and important dimensions: spirit and land. As I laboured to understand these perspectives and integrate them with my own vision of the world, I found myself increasingly at odds with the disciplinary works that claimed to offer generalizable knowledge of language, society, and schooling. The realities they sought to describe seemed

to have been selected and preprocessed, cutting them off from the vibrant complexity of living systems. When the opportunity presented itself, I determined to reclaim them.

I therefore make no pretense of objectivity. My own experience of Esperanto, and my efforts to understand indigenous experiences of language, have provided the “reality checks” to which I have returned, time and again, in my efforts to retheorize language in ecological and evolutionary terms. Conversely, I cherish the hope that this work will ultimately contribute to the community-based revitalization of indigenous languages, to the reform of schooling along indigenous/ecological lines, and to the widespread acceptance of Esperanto as a contribution to a sane and sustainable global linguistic ecology. These are long-term goals, and I do not expect this one text to provide more than a tiny additional nudge in this direction. Together, however, they constitute the “why” that frames the more specific, and sometimes abstract and technical explorations in the chapters to come.

There is another “why” toward which I harbour more ambiguous sentiments. This research was done within a program of doctoral studies in education, in circumstances that greatly limited my opportunities to share the work with others, and particularly with the indigenous and critical thinkers whose insights I value most highly. Although I see value in a text such as this, I would be happier if it had evolved in a more dialogic fashion. In Bakhtinian fashion I have tried to give due weight to voices other than my own, citing authors at length, letting them speak for themselves and preserving a proper context for their words. I have tried, also, to develop a theory that is *self-critical*, for it locates knowledge in action rather than in text and thereby invites the reader to treat its paper-bound formulations with

skepticism. Nonetheless, I regard this kind of project—the single-author doctoral dissertation—as symptomatic of the very ills for which it seeks a cure; and to that extent, it leaves me dissatisfied.

This concern with “why”, with the depth and breadth of sources and causes, is what led me to enroll in the field of educational administration, although I am not sure that all of the faculty in my department would recognize the present work as a contribution to that discipline. Most of those who write about schools as social and political institutions, let alone those who treat them as mass production lines of marketable knowledge and skills, view language unproblematically as something that administrators use and teachers teach: a matter of what and how, but never why. This bias, incidentally, is largely shared with the field of applied linguistics, where research has rather consistently avoided fundamental questions of why schools are organized around particular forms of language and not others. In both disciplines, it is critical theorists of various persuasions, ranging from Marxism to feminism to phenomenology, who have begun to pay closer attention to the “whys” of language—and even so, this “discursive turn” has often focused on language to the point of obscuring reality. Why *this* should be so is also a concern of the present work.

In any case, as will become apparent, the theory of linguistic ecology I offer here is above all a theory of “whys”. Like other philosophical theories, it brings us to the shores of the ocean of human potential and asks: what are we doing? what is it we want? And what can we afford? Like other ecological theories, it shows modern education to be as wasteful of linguistic and cultural resources as modern economies are wasteful of the planet’s resources. Like other critical theories, it points to reasons for this cultural

pathology and suggests remedies against it. Its most important contribution, in my own estimation, is to show how deeply language is implicated in our forms of social organization, allowing language planning to be linked with social reform and renewal within an integrative vision of ecological schooling. To move from one system to the other will be the struggle of generations, but it not too early to sketch some of the dimensions and dynamics of the challenge.

After some experimentation, I have cast this exploration in a helical form, climbing like a spiral stairway to the light. The three turns of the staircase rise from a foundational survey through an elaboration of ecological concepts and methods in educational linguistics to an ecological re-visioning of schools, communities, and society. At the same time, three vertical pillars hold the structure together: a critical realist exploration of the epistemology and ontology of language (Chapters 1, 4 and 7); a reappraisal of the sociology of language and education in the era of modernity (Chapters 2, 5 and 8); and an elaboration of critical/indigenous/ecological alternatives to mainstream schooling (Chapters 3, 6 and 9). Sometimes the connections between chapters are made explicit, sometimes they are left to readers to work out for themselves. No single chapter summarizes the work as a whole.

In my end is my beginning. Grateful as I am for this oasis, I know that its shade is temporary: "Because one has only learnt to get the better of words/ For the thing one no longer has to say, or the way in which/ One is no longer disposed to say it." Or because the language that is right for a particular task and time can shackle our imaginations and our deeds, if clung to for too long. Although Eliot believed that "human kind cannot bear very much reality", on this final point I differ: reality may not be consoling, but to turn away from

it is to turn away from life. Slippery and imprecise as they are, words can offer glimpses of that infinite variety. It is when we make them an end in themselves that we forge our own chains.

**First Turn:
Traditions and Directions**

1 A Naturalist Epistemology

Since the 1970s, the English philosopher Roy Bhaskar has argued for the possibility of a naturalist social science that can “illuminate and empower the project of human self-emancipation” (Bhaskar, 1979; 1986; 1989). By “naturalist”, Bhaskar has in mind an epistemology of discovery that might be shared by the natural and human sciences: a view of knowledge as invariably situated and fallible, but nonetheless open to testing and improvement. In his later works Bhaskar relabels this position “critical realism”, and I will follow him in using these two terms interchangeably.

What fundamental premises are entailed by critical realism? To lapse briefly into philosophers’ jargon, I read “realism” as a claim *both* that regularities in world affairs exist (an ontological premise), *and* that accessibility to multiple observers is a sound criterion for identifying them (an epistemological premise). Denying either of these claims leaves us with no grounds for scientific knowledge at all. “Critical” I take to refer to the necessarily limited perspective of any individual or group, and thus to the need to examine the context of all knowledge claims to understand the grounds and bounds of their validity (what we might call a meta-epistemological premise). Denying the critical premise while affirming the two realist premises amounts to an existence claim for a privileged, objective perspective, a single truth that is independent of subjective positioning. In essence, the critical premise represents a defense, in the law courts of philosophy, of everyday pragmatic knowledge against disciplinary objective

knowledge. Look at what people must know in order to function in their worlds, Bhaskar tells us, and make sure that your theories of society do not deny them their privileged standpoint as knowers; nor forget to examine your own sociocultural positioning to locate the limits of your theoretical knowing.

Embodied Agents

This approach to the philosophy of science itself extends well over the margins of social theory, and there it meets and mingles with the “feminist sociology of knowledge” developed by Dorothy Smith (1987; 1990a; 1990b). Working outward from her personal experience, seeking to understand the ways in which it was “excluded or subdued” in psychiatric and other disciplinary knowledge, Smith came to conceive of a sociology that would take such exploration as its basic method. That is, instead of starting with the “social facts” that have figured so centrally in the sociological imagination since Durkheim and employing them as causal or explanatory categories, sociologists would begin with the lived experience of individuals and explore how and why this experience was ignored, subsumed, categorized or otherwise reworked within the “relations of ruling” that characterize a particular society or its parts. This would be a sociology founded on agency, with structure shown to arise from specific activities of individuals, as she makes clear:

If people do not appear as agents in their own effects, then that is... something that is itself an organization of people’s actual activities. Thus if people’s activities can come to have the properties of a system, that effect must be specified with reference to the social practices and relations in and through which subjects are active in accomplishing their

own invisibility. To treat human action in terms of systems necessitates an account of how people may be separated from their actions so that what they do or 'expect' may become the components or parts of a system. If the system assumes the prerogatives of agency vis à vis the actors, then its 'causal' hegemony must also be describable in terms that show how that is brought about in socially organized practices. (Smith, 1990a: 46)

Smith traces this line of sociological inquiry back to Marx in *The German Ideology* (1846) (Marx & Engels, 1970). In trying to identify the shortcomings of Hegelian idealism as a basis for social science, Marx came to insist that all concepts are anchored in the social relations ordering people's activities: "concepts 'translate' what people already know as a matter of their experience" (Smith, 1990a: 40). Once removed from this social context, concepts lose their hold on reality: they can be strung together according to the whim of the theorist, who, according to Marx, is then engaged not in science but in ideology. In order for science to remain science, it must ensure that the connections it makes between concepts are not merely "mystical" but describe the co-ordering of the actual practices of real people. Marx's best-known application of this idea was in his description of the practices of commodification, whereby the use value of things (including people's labour) becomes detached from their exchange value. His point was that economic emancipation is only possible if capitalism is analyzed in terms of the social conventions that sustain it; otherwise its internal logic appears unassailable.

In her own work, Smith has traced a different source of alienation—one as pervasive and influential as capitalism itself. Through her early work on the sociology of mental illness and a personal struggle with psychotherapy, she gradually came to identify a "complex of relations and practices that organize psychiatric knowledge to exclude or subdue the

actualities of people's experience," and then to realize that similar or analogous practices are ubiquitous in modern societies (1990a, b). Central to all of them, according to Smith, is a reliance on *texts* as a primary source of data about the real world. Much effort is invested in training social scientists (and, for that matter, journalists and others) to transform their experience into texts according to objectifying conventions, within which the texts and documents often come to appear more "real" than the people behind them:

We do not return to or give primacy to the actual, living individuals in their concrete situations of action from which we would, as social scientists, seek a hasty escape, moving perhaps from a set of particular events to find in them a schema that will interpret them and, in interpreting, forget about the original particulars. ...

Sociologists have believed, perhaps because they have wanted or hoped to, that they were doing science, that the procedures they used in returning the concept to the actual world of living individuals were referential. That is, they took it that such concepts of their discipline as power, legitimacy, authority, elite, social class, and so forth, referred to phenomena that were discoverable in the world of actual events and living people. But even lacking the formal positivist commitment, sociologists have sought to use the actualities of people's lives as they know them to embody the conceptual order of a social scientific discourse. The actualities of living people become a resource to be made over in the image of the concept. The work becomes that of transposing the paramount reality into the conceptual currency in which it is governed. Sociological procedures legislate a reality rather than discover one. (Smith, 1990a: 53)

It is clear how such an analysis connects with that of Marx. Whenever texts come to routinely stand in for reality, the production and interpretation of such texts becomes ideological. Over the past five centuries, life in the modern(izing) world has fallen further and further under the sway of such acts of transcription, in which all participate through their willingness to

recognize themselves in descriptions which make no reference to their own individual circumstances, but treat them as representative members of some social category or other. The entire legal, political and governmental apparatus of modern societies relies on a “mode of ruling”

that involves a continual transcription of the local and particular actualities of our lives into abstracted and generalized forms. It is an *extralocal* mode of ruling. Its characteristic modes of consciousness are objectified and impersonal; its relations are governed by organizational logics and exigencies. We are not ruled by powers that are essentially implicated in particularized ties of kinship, family, and household and anchored in relationships to particular patches of ground. We are ruled by forms of organization vested in and mediated by texts and documents, and constituted externally to particular individuals and their personal and familial relationships. (Smith, 1987: 3)

Given that we all live within such a web of objectified discourses, the starting point for an emancipatory sociology lies in identifying gaps in it—access points to lived experience that provide “a *point d’appui* for sociological inquiry... a place to begin, not a topic, nor a subject matter, nor an object” (Smith, 1993: 183). A new discourse can then be woven (or, as Smith puts it, a “new language” discovered or created) which takes those previously unspoken, unacknowledged realities as central. Suddenly, what had seemed to be knowledge is exposed as social practice, and a new knowledge called into being—likewise, of course, a form of social practice, but one which in that time and place may serve an emancipatory function.

My project is a sociology capable of expanding anyone’s access to the workings of the world they live and act in. Imagine it as making visible to us the social relations that organize our lives, that are present in our everyday worlds, but aren’t fully apparent in them. Sociologists might be producing for people something like a map that would let us see how what we do is hooked into social process beyond our view. ...

In proposing a sociology for women, I've wanted to rewrite sociological conventions so that sociological discourse is always exposed to being surprised and changed by having to rediscover the society through the experience of those who live it and through an insistence on grasping the actual forms of society's organization and relations in the ongoing concerting of people's activities. (Smith 1993: 188-190)

Although formulated as "a feminist sociology of knowledge", Smith's project is clearly relevant to any individual or group who finds their experience systematically denied or reinterpreted within the discourses of a discipline or society. My particular concern in this work is to explore its implications for understanding the relationship between language and the world. The only way to know whether a particular concept is grounded in "the actual social relations ordering people's activities," as Smith advises (1990a: 39), is to ask subjects, through the medium of spoken language, whether it makes sense to them, and let them debate the matter until they arrive at a conclusion. But this implies that the semiotic move that detaches concepts from the world *must inhere in language itself*. There would be no need for such questions or debates if words were unambiguously connected to reality; texts can be ideological only to precisely the same extent that *speech* can be ideological. If, as Smith argues, ideology is a pervasive feature of written language, it follows that language in general offers no sure knowledge of the world and no privileged access to experience.

We are thus brought face to face with the questions that define a critical realist approach to language and education: What is knowledge? What is language? In what ways are they related? And how can these relationships themselves be known? Lest these concerns appear overly abstract in a work on educational organization and policy, let me cite the following call for "a

new science” by a noted scholar of educational administration, which reflects exactly the concerns of this chapter:

Scientists inspired by positivism approach administrators with the conviction that their theories and methods enable them to know administration in a way mere practitioners don't. The reverse assumption now seems a better point of departure: administrators know administration, scientists don't. The point of such enquiry would be to enable scientists to come to know what administrators know and to bring a fresh and questioning perspective to it. ... The new science will surely also require giving up the notion that decisions and organizations themselves can be controlled by science. Greater insight such science may offer, but greater control, no.

A possible research agenda of the new science is apparent:

1. How is the social reality of the organization built and maintained? What do administrators and others contribute to this process?
 2. What is the role of language in the building of administrative reality?...
- (Greenfield & Ribbens, 1993: 155-7)

Thomas Greenfield's ideas will make several appearances in the chapters to come, but the point I wish to reiterate here is that the quest for a naturalist epistemology is indeed crucially relevant to the study of schools: "It is the individual that lives and acts, not the organization. It is, therefore, the experience of individuals that we must seek to understand" (Greenfield, 1993a: 123). Moreover, understanding the individual's experience of *language* may help to explain much else about the ways in which "social reality" is "built and maintained". Bhaskar's and Smith's visions of an emancipatory science are echoed in Greenfield's passionate call for "an anarchist theory of organization" that would cease to take language for granted:

Language is power. It literally makes reality appear and disappear. Those who control language control thought, and thereby themselves and others. We build categories to dominate the world and its organizations. The

anarchist wants to let the reality of people within the categories shatter them and thereby to reduce the control. (Greenfield, 1993a: 130)

Emergent Knowings

There lurks, however, a persistent danger in interpretivist accounts of language such as the one just cited, which typically treat meaning as constructed in the process of social interaction. What is to be made of the fact that, in any given situation, some uses of language do apparently mediate our knowledge of reality better than others? How is progress in scientific theory and technology to be explained? Why do some people enjoy greater freedom in their use of language, or power over it, than others? Critical realism is not only *critical*, pointing to limitations to knowledge: it is also *realist*, seeking to explain how knowledge is possible at all and why its ecology in modern societies seems to foster or reinforce profound inequalities of opportunity and choice. In this respect it differs from idealist philosophical traditions as emphatically as it contests objectivist philosophies of science. Language and knowledge are in some sense “emergent systems”, in Bhaskar’s terms: they cannot be understood through a focus on the isolated individual alone, for some of their key properties derive from the co-ordering of the actions of many individuals. It is this extensive and invisible structuring of the social world that must somehow be made manifest in a critical realist account of the development of individual knowledge, without being said to *determine* what it is that people know and do.

This is the distinction that puts Smith at odds with socially engaged post-modernists, whose emphasis on discourse engenders skepticism not only towards “standard science”, but also towards projects that aim to

rehabilitate it (Clough, 1993; Denzin, 1997). Smith, like Bhaskar, takes our access to “a world beyond discourse” as a fundamental fact about human beings and the basis of any prospect of emancipation. Knowing is something that people do as they move through their everyday lives in the material world, involving all kinds of perception and their unarticulated personal history as embodied beings; it is something that these same people can do as they talk about their experience, reflect on it, and seek to improve their lives. An emancipatory science, then, must acknowledge and seek to build on this kind of knowledge, while remaining alert to the ways in which it may be diverted, co-opted, or fossilized.

Conceptualizing the access of ordinary people to the world has proven an extraordinarily difficult task for Western philosophy and psychology, for reasons that will be explored in the second turn of this work. It gave me great difficulties as well, until I came across Edward Reed’s comprehensive outline of an ecological psychology (1996a). Here at last I found a full-fledged alternative to Cartesian dualism: a theory of mind and awareness as *situated activity*, rather than *private state*. The constantly shifting relationship between an organism and its surroundings is said to define both meaning and value, the former consisting in the use of ecological information to guide activity, the other involving the maintenance, development and reproduction of the organism-in-environment. In place of the monological mind squatting inside the brain like the pilot of a submarine, its knowledge of the world limited to electrical signals from the inapprehensible Outside, Reed’s theory depicts pilot and submarine as an organic whole, born in water and dancing with it—not submarine, but dolphin.

From one perspective, then, the present work can be seen as a pioneering exploration of the implications of ecological psychology for theories of language and education. I believe, in fact, that Reed's work corresponds, as well as any single theory can, to the naturalist epistemology that I have argued to be common to Bhaskar, Smith and Greenfield. It is a *realist* theory, in that knowledge of meaning is held to be acquired by discovery through activity in the world—that is, neither inherited in our brains nor conjured out of nowhere; it is implicitly a *critical* theory, in that meaning varies according to the position of the discoverer and thus cannot be known in an a priori, objective fashion. It is, finally, a theory well adapted to dealing with such *emergent* phenomena as language and social structure, as the name "ecological" implies.

This term "emergent" will turn out to be critically important to the critical realist account of knowledge developed in the Second Turn. Let me therefore briefly describe my own understanding and use of it. Emergence is the acquisition by complex systems of properties that do not characterize their elements. Collections of molecules, for instance, exhibit stable, significant properties (such as the pressure of a gas, the viscosity of a liquid, the ductility of a metal) that do not exist as such at the molecular level (although energy, movement, and intermolecular bonding do), but are proper to the system as a whole. More dramatically, in non-linear systems (where the results of some processes affect the conditions of their own production), operating far from equilibrium (i.e. continually absorbing and emitting energy), one set of emergent properties can suddenly switch to another, as a tiny change in one subunit becomes amplified and spreads throughout the system. The physicist and philosopher Fritjof Capra has described the impact of emergence on

recent thinking in the physical and biological sciences (1982; 1991; 1996). The following passage oversimplifies somewhat, but highlight the central idea:

The great shock of twentieth-century science has been that systems cannot be understood by analysis. The properties of the parts are not intrinsic properties but can be understood only within the context of the larger whole. Thus the relationship between the parts and the whole has been reversed. In the systems approach the properties of the parts can be understood only from the organization of the whole. Accordingly, systems thinking concentrates not on basic building blocks, but on basic principles of organization. Systems thinking is “contextual,” which is the opposite of analytical thinking. Analysis means taking something apart in order to understand it; systems thinking means putting it into the context of a larger whole. (Capra, 1996: 29-30)

The oversimplification, of course, lies in the implication that “parts” themselves are not in fact sub-systems, just as “systems” themselves are parts of greater systems. To some extent, then, human knowledge must always be concerned with parts, and much can be learned through the reductionist process of focusing more and more narrowly on smaller and smaller systems. The importance of emergence, however, lies in the recognition that such narrowing comes with a price tag, and the debt can only be redeemed by reintegrating reductionist knowledge with the study of larger and larger systems: with *ecological* knowledge, or “systems thinking” as Capra prefers. Some aspects of this scientific revolution are familiar, such as the triumph of quantum mechanics and the blossoming of chaos theory; yet its implications for the social sciences are still woefully underexplored (Bhaskar, 1989).

Ecological psychology offers an important foundation for such work, in the following way. In the ecological view, all of human life consists of innumerable interacting systems that themselves are interwoven with the

non-human world. Ecological realism thus implies trying to understand what order there is in this world by developing awareness both of systems and their parts—more precisely, of the interaction of systems at different levels of complexity. Most theoretical approaches can deal with only one level of complexity, treating others as either fully dependent or fully independent, and the picture of reality that emerges is correspondingly limited. The theory of ecological psychology elaborated by Reed (1996), however, entails a focus on the relationship between two levels of particular interest: the organism and its environment, or the person and her social and natural world. As a theory of *relationships* (or “basic principles of organization”, as Capra would have it), it avoids many difficulties associated with the classic structure/agency dichotomy, while opening up connections to ecological and evolutionary theory in other areas. Some of these connections will be explicitly made in the course of this work.

Such developments in the natural and social sciences support Bhaskar’s skepticism concerning the traditional divide between them. The real divide, I believe, lies between the analytical and the ecological, the objectivist and the critical. In the next chapter I will review some of the social factors that have privileged one mode of reasoning over the other for the last few hundred years. One might say, in a reversal of Marx’s famous eleventh thesis on Feuerbach (Marx & Engels, 1970), that the analytical way of thinking has changed the world, but obscured our interpretation of it. “Instead of being a machine,” as Capra sums up,

nature at large turns out to be more like human nature—unpredictable, sensitive to the surrounding world, influenced by small fluctuations. ... In the deterministic world of Newton there is no history and no creativity. In the living world of dissipative structures history plays an important role,

**the future is uncertain, and this uncertainty is at the heart of creativity.
(Capra, 1996: 193)**

**Where there is uncertainty, there is hope as well as danger. A
naturalist epistemology may help us face up to both.**

2 The Modernist Heritage

As suggested by Dorothy Smith's sociology of knowledge, the disciplinary "ways of knowing" that have evolved over the past 400 years are intimately linked with contemporary "relations of ruling". Because of their shared reliance on decontextualized linguistic descriptions of the world, the everyday practice of the social sciences can be shown to parallel the "forms of organization vested in and mediated by texts and documents" that increasingly constrain every aspect of our lives (Smith 1990a,b). And this linkage is far from accidental, as the Polish-British sociologist Zygmunt Bauman has compellingly demonstrated in a series of works on the sociology of modernity and postmodernity (e.g. (Bauman, 1992). The values and assumptions that undergird life in modern industrial nations have their origins in pre-modern Europe; thus, through the critical study of history, we can gain invaluable insights into the genesis and maintenance of the present social order.

Although important aspects of modernity can be traced back to Hellenic civilization and the Roman Empire, the spread of Christianity, and the reign of Charlemagne, the era may be said to properly begin in the seventeenth century in what was effectively a counter-Renaissance (Toulmin, 1992). Thinkers of the previous century, such as Montaigne, had delighted in the unexpected diversity of the world uncovered by European explorers, marvelled at the richness of ancient thought unearthed by classical scholars, and wryly reflected on the fallibility and idiosyncrasies of their own

civilization. By 1650, this generous and particularistic spirit had surrendered to a proselytizing universalism. The universe and the body came to be viewed as machines, the human person and society as ameliorable by design, and Europe (more specifically, its Western half) was soon cast in the role of the “civilized” continent, with the mission of spreading reason throughout the world. A program was established which, in various guises, has now left no corner of the globe untouched.

Both Toulmin and Bauman portray the birth of modernity, as this program is now commonly known, against the backdrop of eroding social certainties in 16th-century Europe. Millennium-old systems of local surveillance and control were crumbling before waves of economic, religious and linguistic innovation, yielding up new freedoms, new wars and new allegiances. Out of this chaotic mix now arose a distinctive voice, one scarcely heard in Europe since the decline of Greece: that of the secular intellectual, offering a new vision of order based on reason. Descartes’ claim to philosophical certainty was soon followed by theories of rational government and the rational individual—both of them radically novel and strikingly self-interested from the intellectuals’ point of view, as Bauman points out:

Metaphorically, the kind of authority in which such a vision of the world established men of knowledge could be described as “legislative”. The authority involved the right to command the rules the social world was to obey, and it was legitimized in terms of a better judgement, a superior knowledge guaranteed by the proper method of its production. With both society and its members found wanting (i.e. shapeable yet heretofore shaped in the wrong way), the new legislative authority of men of knowledge established its own necessity and entitlements. (Bauman, 1992: 11).

So it was that a new kind of social alliance was formed, one which would steadily grow to challenge and then supplant the old partnership of Church and Monarch. In this new dispensation, intellectuals supplied the modern state with the experts necessary for the legislating of order, in return for the state fostering conditions in which intellectuals could continue to pursue their quest of ultimate knowledge. The alliance was often an uneasy one, but possessed of a dynamism that endured for three centuries. As Bauman argues, the military and technological success of the modernizing states was essential to justify and expand the intellectual claims made for the power of reason:

The remarkable resilience of purpose so typical of the modern mentality was grounded in the unshakeable belief that the efforts have history and invincible reason on their side and that the ultimate success was not just attainable in principle but a foregone conclusion. The conviction had in turn all the backing of social, economic and political realities.

Paradoxically, though modernity militated against the pragmatist compromise, it was in the end the *pragmatic* argument from the ever more evident superiority of the western mode of life and thought that kept lending credibility to the hopes of finding the clinching proof for the species-wide validity of western science, morality and aesthetics; or for the form in which they had been conceptually sublimated. (Bauman, 1992: 13).

While this expansionist period lasted, modernity appeared from within as an inevitable stage of human evolution, the culmination of a long climb from the gates of Eden or the primordial sea. Every bar to this progress, every social ill, was considered to be ameliorable by reason, or alternatively to be a manifestation of unreason and the "primitive" and therefore destined for eradication. Only as the bars and the ills began to multiply and take on unpredicted and massive forms, as the apostles of reason began to admit to

limits in their methods of knowing, and as the citizens of Cosmopolis began to feel uneasy about their future, did it become possible to imagine modernity as a limited historical phenomenon: a cultural episode of global significance, yet particular in its assumptions, its forms of order, and its self-conception (Bauman, 1992; Hall, Held, Hubert, & Thompson, 1996).

In the present work I will be particularly concerned with the modernist constructions of “language” and “education” and the disciplines that claim to yield reliable knowledge of them. This kind of reflexive and evolutionary analysis (what Foucault would call “genealogy”) is fundamental to critical realism, for by tracing the social embeddedness of theory it helps call into question various premises that lie concealed in familiar ways of describing the world. I will also employ a surprisingly neglected approach to studying modernity, by contrasting its modes of knowledge and practice with contemporary work in indigenous philosophy, linguistics and education. The distinctive epistemological and axiological systems of indigenous peoples embody ways of “thinking differently” that can test the limits of any critical theory; at the same time, indigenous communities face enormous practical and theoretical problems in negotiating their encounters with modern systems of language and education. Ultimately, then, this exploration of modernity is not intended merely as an end in itself, but as a guide for those who would transcend its heritage.

Linguistics: Technologizing the Word

Despite their characteristic fascination with language and discourse, postmodern sociologists have shown remarkably little interest in charting the

far-reaching linguistic transition that accompanied the onset of the modern era in Western Europe. Yet the transfer of intellectual discourse from Latin to local languages of power was arguably a *sine qua non* for all that followed. The transition from Erasmus to Descartes involved not only a shift of ideas, but a shift in medium that was earthshaking in its implications.

Well before the appearance of the printing press in the mid-15th century, several European vernaculars had achieved widespread use in law, administration, and literary life (Parker, 1983). Yet in this premodern linguistic ecology, none of these languages was considered to be anything more than one element in a complex mix of varieties and registers; Latin maintained an undisputed status as the sole language of true knowledge, whether it be of the Catholic Church or of the learned laity. The rapid spread of printing in Europe from about 1450 upset this ancient balance. Self-help manuals and popular tales in the vernaculars rapidly acquired a considerable readership (Illich, 1981), fostering the spread of shared ideas and values across linguistic zones (Anderson, 1983); while rulers in the secular and religious realms soon began to explore the potential of the new technology to consolidate their power. The first argument for the introduction of an artificial standard vernacular in order to civilize the populace dates from 1492 (Illich, 1981). By 1520, this Spanish initiative was being duplicated in France and other Western monarchies; soon after, Martin Luther gave the linguistic revolution a mighty shove by not only translating the Bible into High German, but by proclaiming its daily reading to be a sacred duty of the sincere Christian. Thus the symbolic capital of both this world and the next was invested in the nascent national standard languages, with financial capital following close behind. Monarch, church and merchant combined to

transform language from a constellation of local systems of meaning into a standardized commodity exported over a wide territory (Anderson, 1983).

As this revolution gathered momentum, the European intellectuals began to transfer their allegiance from Latin to the vernaculars. As Vivien Law points out, one of the earliest steps in this process was to “rehabilitate” the vernaculars by demonstrating that, like Latin, they followed complex grammatical rules that could be investigated and described. As the sixteenth century passed, “the equation of ‘regularity’ with the rules of Latin became increasingly explicit... so that later grammars of the vernacular are often more artificially constrained by the Latin model than earlier ones” (Law, 1990: 810). So it was that beneath the Renaissance’s fascination with diversity, which extended to early attempts to gather and classify samples of previously unknown languages, the Roman imperialist dynamic persisted. In linguistics it would finally erupt in the form of the Port-Royal grammar (1660), consolidating the “universalist” hold on the discipline for the next century and a half:

With growing clarity through the sixteenth century and beyond, one can discern two quite different approaches to language: the “particular” approach, focusing on the physical phenomena which differentiate languages, which closely parallels the newly-emerging biological sciences in its methods and findings; and the “universal” approach, which, concentrating on the principles underlying language, continued to derive much of its inspiration and method from philosophy and in particular from logic. Linguistics since the Renaissance is characterized by the constant interplay and alternation of these two approaches, sometimes in the form of open competition between opposing schools, sometimes in subtler form within the work of one individual. The mainstream of scholarly research is normally dominated by one approach; the other, despised by mainstream linguists, goes underground, fostered by “eccentrics” or by small groups geographically and intellectually distant

from the centre. ... Since about 1500 the focus of linguistic research has alternated between the particular and the universal approach at intervals of approximately one hundred and fifty years. (Law, 1990: 808).

By the early seventeenth century, then, methods of linguistic description had been developed with a view to rendering the vernaculars ideologically and aesthetically acceptable to the Latin-trained intellectuals of Europe. To this grammatical legislative work was then added the novel technology of the monolingual dictionary, "a landmark in human evolution no less significant than the wheel, the steam engine, or the computer" (Harris, 1980: 127). While dictionaries, like grammars, must engage with the reality of linguistic diversity, they do so in a way that promotes an image of language as an autonomous closed system. Dictionaries are compilations, disseminated in limitless identical copies, of a finite stock of words defined in abstraction from their physical production, contexts and histories of use. As Harris argues, this ostensibly neutral and practical tool was perfectly adapted to the modernist alliance:

It was no accident that vernacular lexicography eventually came to be placed under the tutelage of such bodies as the Accademia della Crusca and the Académie Française. ... In part [the notion of discrete, monolithic languages] was due to a reaction against the linguistic exuberance and innovation of the Renaissance, and consciousness of a need to "fix" and stabilize the vernaculars as literary media. To this, the nationalistic ideal of a single, unified language added no small contribution. In part also it was the foreseeable consequence of the authority attributed to works compiled by "language experts" ... The difference in linguistic psychology between pre-dictionary and post-dictionary Europe must have been rather like the difference in commercial psychology before and after the introduction of standard national currencies. (Harris, 1980: 128-31).

We are now in a position to appreciate how modern linguistics arose in a setting where a certain hierarchical conception of language was privileged: one that valued writing above speech, system above spontaneity, instruction above innovation. Transferring these values from Latin to the European vernaculars implicated the latter in a process of commodification analogous to that described by Marx and reinterpreted by Smith. "Languages" were increasingly perceived as autonomous systems separated from "the actual, living individuals in their concrete situations of action," not only by linguists but increasingly by the speakers themselves. Today the word "language" for most people refers to a standard language, as used and legislated by teachers, grammarians and lexicographers. Language varieties without such institutional support (American Black English, for example) are often denied the title of "language" altogether, or regarded as poor, uncultivated cousins to "modern languages". As observed by Bauman, such value judgements have characterized modernism throughout its history:

Popular, locally administered ways of life were now constituted, from the perspective of universalistic ambitions, as retrograde and backward-looking, a residue of a different social order to be left behind; as imperfect, immature stages in an overall line of development toward a "true" and universal way of life, exemplified by the hegemonic elite... The same active, proselytizing stance—once extended beyond the confines of its own society—constituted alien forms of life as ossified relics of the past, or otherwise artificially arrested stages of human development. Such aspects of human life as the emerging absolute power was bent on reshaping, or bound to reshape, had been selected as the bearers of a special status: men were about to reform them, hence they had to be conceived of as man-made in the first place. Those aspects were now seen as distinguished by their plasticity, temporariness, transitoriness—and, above all, amenability to purposeful regulation. (Bauman, 1992: 7-8).

Such was the linguistic program unfolding in Europe as its explorers and missionaries began to bring back data on the bewildering variety of languages spoken in the lands of trade, colonization and conquest. However influential the universalist paradigm, Western linguists could not ignore this extraordinary diversity. Their attempts to find order in it struggled with and eventually supplanted the universalism represented by the Port-Royal grammar, first in the form of historical linguistics, which developed and flourished throughout the 19th century (Collinge, 1990), then in the linguistic anthropology of the late 19th and early 20th centuries (Blount, 1995). Yet for the most part this was a particularism filtered through modernist ideologies, and in particular the conviction that “peoples” and “languages” must fit together one-to-one, as the tenets of Romantic nationalism prescribed for Europe itself. Linguistics was developed as the science of *autonomous* speech traditions, with multilingualism in all its forms relegated to the periphery and frequently ignored altogether.

Peter Mühlhäusler has recently traced the impact of this ideology in the Pacific region (Mühlhäusler, 1996). Drawing on a vast range of research literature, he argues that in many parts of the Pacific before European contact linguistic diversity was actively valued, communities and individuals were generally multilingual, and the very notion of bounded, discrete languages was largely unknown:

Language was not a self-contained object of inspection. The practice of naming languages was far from universal and when it occurred it rarely corresponded to the entities that present-day linguists set up on the basis of criteria such as shared lexicon, mutual intelligibility, geographic or political boundaries or separate literacy tradition. The difficulties of distinguishing between languages, dialects, communalects and such phenomena encountered by present-day linguists do not so much reflect

their inability to find these “objects” as their non-existence. (Mühlhäusler, 1996: 35)

Into this complex linguistic ecology of thousands of overlapping language varieties, Europeans imported the instruction of the missionary, the rule of the administrator, and the technology of written language. As Mühlhäusler describes in detail, these three interlinked systems of practice consistently ignored the nature of the cultural system with which they were dealing, interpreting tribal divisions as linguistic divisions, outsider or trading languages as standard languages, and linguistic diversity as a primitive barrier to efficient modernization. Modern linguistics was never far away from these efforts, being used to develop new written standards, to organize foreign language teaching, to underpin official language policy and planning, and to inventorize the peoples now nominally under Western rule. The effects are plain to see in language shift, decay and death, in the loss of local knowledge and traditional practices honed over generations, and in repeated crises of identity, intra- and intercommunal relations.

In an appendix, Mühlhäusler explicitly addresses the “imperialism of linguistics” as an aspect of “linguistic imperialism”. He points out that the kinds of question studied by linguists in the Pacific are “entirely derivative of the large Western creation called linguistics,” and argues that they have “suppressed many of the most promising areas of study and... led fieldworkers to miss valuable opportunities” (336). Among these are the study of indigenous pidgins and indigenous bilingualism, the study of language in its social context, indigenous ways of talking about language (which might “provide a way out of the terminological crisis that linguistics

currently finds itself in”), and the nature and use of metaphor in indigenous cultures. Most damningly of all:

Linguists hide behind the shield of scholarly objectivity whilst the linguistic diversity that has been in existence for tens of thousands of years is being eroded at an alarming rate. Little is done to preserve the languages of the area. Economic pressures, central governments, military actions and the decline of the natural environment have not been counteracted by any genuine progress in the area of language preservation. The chance that most, or even a substantial number, of the smaller languages of the area will survive seems remote. ...

In the case of much linguistics, the range of questions that have been addressed have been unduly narrow, ethnocentric and insensitive to the plight of the languages and their speakers. Moral questions and questions of the consequences of linguistic activity have been notoriously avoided in the mistaken belief that it is possible to engage in an ideologically free linguistics. (Mühlhäusler, 1996: 337-8)

Mühlhäusler’s survey and conclusions could presumably be replicated in virtually any part of the world and even, with some adaptation, in Europe itself. To repeat, modern linguistics has never been concerned with studying multilingual systems or with intracommunity variation; its fundamental methods of description, analysis and synthesis have been shaped by the social, cultural and political forces of modernity, or what Mikhail Bakhtin calls “the current of centralizing tendencies in the life of language” (Bakhtin, 1981: 273). This is not to say that its methodologies are invalid or its questions not worth asking. It is to imply, however, that they constitute a partial and selective mode of understanding, and that the objective of the present work—to develop an ecological theory of language in which no speaker’s or community’s experience is denied or treated as marginal—will require some very different assumptions.

Education: The Quest for Certainty

The same is true of the second major research tradition on which this work will draw. Formal schooling, like modern languages, is now widely accepted as a defining feature of modern societies; yet in order to understand why schooling takes the form we are familiar with, why it has the effects that it does, and why it is so resistant to systemic change, it is absolutely necessary to see it in its historical and evolutionary context.

Bauman, for one, has argued that the entire idea of popular education (as contrasted to the training of a clerical elite) derives from the modernist “ideology of culture [which] represents the world as consisting of human beings who are what they are taught” (Bauman, 1992: 3). This idea was as novel as any other element of the Enlightenment: to the medieval mind, cultural difference was divinely ordained and largely immutable. The education of certain classes was regarded as a means of perfecting their members for their role in life—a confirmation of their identity rather than an alteration. But as traditional roles began to lose their hold on medieval society, the stage was set for a new conception of the person that would justify the intervention of state and expert:

First, human beings are essentially incomplete and not self-sufficient. Their humanization is a process taking place after birth, in the company of other human beings. ...

Second, humanization is essentially a learning process, split into the acquisition of knowledge and the taming, or repressing, of animal (and almost invariably antisocial) predispositions. ...

Third, learning is just one side of the relation of which the other side is teaching. The completion of the humanization process, therefore, requires teachers and a system of—formal or informal—education. The educators

hold the key to the continuous reproduction of cohabitation as a human society. (Bauman, 1992: 3).

As this conception took shape from the Renaissance onward, the search was launched for a set of technologies that would do for education what printing, dictionaries and prescriptive grammars aspired to do for language. The Czech intellectual Jan Amos Comenius, in the mid-seventeenth century, was the first to formulate the promise of “a Great Didactic... the whole art of teaching all things to all men, and indeed of teaching them with certainty, so that the result cannot fail to follow” (quoted in Piaget, 1993: 175). This extraordinary prospectus has since been extended to many fields of educational endeavour; it continues to flourish in the publishers’ blurbs of a vast pedagogical industry, and—ironically—in the mouths of the politicians it was once designed to convince, but who now wield it as a weapon against the autonomy of teachers and schools. As with many other aspects of modernity, its underlying value orientation is that of *control*—over nature, over the body and mind, over social behaviour, and ultimately over the future.

The dominant metaphor of modernity is the machine, and the conception of society as a machine is the hallmark of modernist social science. “Objectivist”, “positivist”, “functionalist”, “structuralist”—these are some of the labels that have been used to describe the modernist orientation, each singling out a different aspect of a whole system of interlinked beliefs and values (among which, ironically, is the denial of any such underlying value system!). Society is viewed as tending towards equilibrium (i.e. towards machine-like order and predictability), hence dominant values are reified as natural laws. Social “structures”—language, schools, and administration, for

example—are discursively abstracted from their social context, and autonomous disciplines are founded for the propagation and elaboration of such discourses. When experts manage to win state patronage for their ideas, new waves of legislative reform are launched, invariably with the promise of greater control, greater certainty.

As Bauman's account suggests, education is particularly central to the modernist alliance between expert and state. Historically, the spread of compulsory education has been more consistently associated with the quest for social control within state borders than with any other goal (Green, 1990); against this backdrop, educational thought has played a legitimating role as much as a technological one. Generation after generation of parents and teachers have been persuaded of the value of education-as-it-is for their children and for society; as these claims have grown harder and harder to maintain, selected prophets of education-as-it-might-be have been invited to take over the legislative role—always with the proviso that the chief mechanisms of control remain intact. So it is that the mainstream of educational discourse has remained determinedly modernist, for no other theoretical orientation is suited to the maintenance of a compulsory state-wide school system.

To trace the many manifestations of this approach in contemporary educational theory would take a book in itself (see Cherryholmes, 1988 for a related exploration). An elegant and convincing illustration is nonetheless readily available in Thomas Greenfield's account of "the decline and fall of science in educational administration" (Greenfield, 1993). One might, for instance, compare the Comenian vision of "a Great Didactic" with Daniel Griffiths' promise of a "general theory which enables the researcher to

describe, explain and predict a wide range of human behaviour within organizations" (quoted in Greenfield & Ribbens, 1993: 2). In these words Griffiths expressed the goal of the so-called New Movement, which took over and expanded the field of educational administration from the 1950s on, and which still exerts considerable influence through textbooks, journals and professorships. Greenfield describes its basic character in terms that Dorothy Smith would recognize:

The theories sought by the founders of the New Movement were to be something like Newton's laws of dynamics: mathematical formulae relating operationally defined concepts would direct researchers to reason how the administrative world was constructed; it would enable them to devise strong hypotheses for checking their reasoning and direct them to the data relevant to such experimentation. ... In this approach to theory and research, facts are important, but only facts of a certain kind.... [T]he researchers of New Movement administrative science were themselves the ultimate criterion for determining what was "fact" in the social movement they were studying. (Greenfield, 1993: 34)

As Greenfield's studies collectively make clear, the primary impact of the New Movement was not theoretical, but *rhetorical*. The theory itself never advanced very far beyond Parsonian descriptive schemes and procedures for the interpretation of standard questionnaires; little research followed its maxims, and there may not have been a single case of school administrators employing it as a heuristic guide in their own work. But the *promise* that such a theory existed or was being developed proved immensely useful for those training the administrators, and, it may be added, for those seeking funding for their research projects. It justified an approach to teaching and knowing that elided all of the difficult, messy, imponderable dilemmas of human action: not only justified it, but vested it with moral authority (Greenfield, 1993). At the same time, as Greenfield writes, "it offer[ed] the

Sovereign the possibility of choosing the 'certified' decision-maker, the one who uses science to bring excellence, effectiveness, or efficiency—as though these conditions had no value content—to whatever organization employs him” (1993: 149). The old alliance was alive and well.

Because the New Movement promised the impossible, its appeal could not be sustained indefinitely. Yet it has not disappeared, only been transmuted into myriad subdisciplines and substrategies that claim to be moving towards an objective understanding of *part* of the puzzle of educational administration: leadership, organizational learning, school effectiveness, school reform. The fundamental values and assumptions are the same. Consider, for example, the contemporary “educational reform movement” or “movement for effective schools”, which seeks to identify and systematically enhance the key characteristics of schools with high levels of academic achievement. Mary Haywood Metz has argued that it relies on assumptions such as the following:

- schools and students are much more alike than they are different;
- what differences do exist can be fairly judged through standardized assessment procedures;
- the social structure and technical organization of schools are their most important, defining characteristics;
- adults determine what happens in schools;
- schools are separate from their communities (Metz, 1988).

Such premises would surely meet with unqualified approval from New Movement researchers; likewise, the movement’s goals and rhetoric would strike a familiar chord. Schools as they are *can succeed* (and success is what the government and the public define it to be); it is only a matter of determining the critical variables and bringing them under control.

Politicians and administrators alike are attracted by such promises, impressed by the volume of research they can generate, seduced by the illusion of progress as “hot topics, social concerns, popular concepts, theory or models” (Immegart, 1977: 316, quoted in (Greenfield, 1993: 34) generate kaleidoscopic shifts in old ideas. Only after some time—a couple of decades, perhaps?—does disillusion begin to set in and the sub-field to slowly shift into another one or to fade from view altogether.

Because of their narrowly technical perspective and consistent failure to address issues of power in schools, the influential critic Seymour Sarason has termed such functionalist approaches to reform a “predictable failure” (Sarason, 1990). Yet more radical alternatives, in so far as they fail to cohere with the values and beliefs of modernity, are doomed to equally predictable failure—not in their application, but in their ability to win widespread acceptance. Cleo Cherryholmes has summed up the still-powerful attractions of modernism (termed “structuralism” in his account) as follows:

Structuralism in education promises accountability, efficiency, and control as well as order, organization, and certainty. Structuralism is consistent with teaching for objectives, standardized educational assessment, quantitative empirical research, systematic instruction, rationalized bureaucracies, and scientific management. As long as structuralist assumptions remain unacknowledged, they are immunized against criticism (Cherryholmes, 1988: 30).

The present work is premised on challenging those assumptions: so much is evident. Yet, as Chapter 3 will make clear, there are many different critiques of modernity on offer. The rationale for an *ecological* approach is best appreciated in the context of a still broader historical and geographical

perspective, one embodied in the lifeways and worldviews of the world's indigenous peoples.

Resistance: The Indigenous Alternative

The linguistic certainties that Europe sought to establish in the colonial realm were part and parcel of modernity's approach to human diversity. As Bauman convincingly argues, this was an attitude cultivated in the first place in Europe itself, where an acceptance of diversity as divinely ordained had been replaced by the idea of progressive social development towards the ultimate unification of Rational Man. An unwavering conviction of expert reason's access to universal truth, philosophically legitimated by Descartes, was accompanied by an equally unshakeable faith in the superiority of the societies that had discovered it:

The other side of philosophical certainty was cultural self-confidence. It was the latter that gave the unreflecting and unyielding resolution to that Europe's missionary zeal, for which the colonial episode of modernity was so notorious. ... Extirpation of local and class autonomy was waged doggedly and unswervingly under the banner of objectively superior cultural values, at war with not-fully-human, erroneous, retarded or superstitious forms of life and thought. ... No room was left for second thoughts, hesitation, scruples. (Bauman, 1992: 13)

"Not-fully-human": the phrase resonates down three hundred years of colonial history. Whatever the personal or communal relationships established between the European diaspora and indigenous peoples in the early period of contact, as the latter became objects of administrative power they were invariably dehumanized. Indeed, it was the legislative fervour of modernity that constituted "indigenous " as a meaningful term, for there was

little else in common between the agricultural Iroquois and the buffalo-hunting Sioux, the Tukano of the rain forest and the Quechua of the high mountains, the close-knit tribes of Maori and the scattered kinship groups of Yolngu. Such differences were seen as irrelevant in light of the single inexorable path of development prescribed by modernity. Even the means used to domesticate these widely-differing peoples varied little from region to region, encompassing physical extermination, duplicitous treaties, settlement on reservations, destruction of their economic base, prohibition of cultural traditions, removal of children, and enforced education in “modern” schools, among others (Schulte-Tenckhoff, 1997).

The impact of modernity on indigenous cultures could be illustrated from the history of any country in the New World (Wright, 1992); for the purposes of the present work, a single example may suffice. From 1991 to 1996, Canada’s Royal Commission on Aboriginal Peoples reviewed the full scope of immigrant-indigenous relations since the first European settlements on Canadian territory in the 16th century. Included in the massive multivolume report is a thorough and well-researched account of how a long period of contact and co-operation between European explorers, traders and settlers and indigenous peoples was eventually transformed into the grim dialectic of oppression and resistance (RCAP, 1996). According to the Commission, for some two hundred years after the first settlements

the social, cultural and political differences between the two societies [sic] were respected by and large. Each was regarded as distinct and autonomous, left to govern its own internal affairs but co-operating in areas of mutual interest and, occasionally and increasingly, linked in various trading relationships and other forms of nation-to-nation alliances. (RCAP 1996, vol. 1: 32)

This period, at the Commission's estimation, came to a conclusion in the Maritimes by the 1780s, in Ontario by 1830 and British Columbia by 1870. Economics and demographics were at work, but more fundamental was the dependence of European administrative systems on the modernist frame of reference, within which the epistemological claims of Aboriginal nations were not only inadmissible but incomprehensible. Treaties, for instance, meant what their European signatories interpreted them to mean; Aboriginal interpretations were simply naive misunderstandings by unlettered savages. The value of land was dictated by the European economic system; Aboriginal perceptions of a sacred relationship were primitive superstition. Another example is supplied by the Commission:

In contrast to western society's linear conception of progress and evolution, Aboriginal conceptions continued to be based on the concept of the circle. For example, western conceptions spoke of the evolution of different forms of production from simple to more complex, with the latter replacing the former over time (and never to return to them again). ... In this perspective, western society was seen to be at the forefront of evolutionary development, with Aboriginal peoples lagging far behind. As a result, Aboriginal peoples needed to be protected in part, but also guided – even required – to catch up, in a process of accelerated evolution. ...

By contrast, Aboriginal perspectives continued to emphasize diversity and local autonomy. In this view, different groups have adopted ways of life best suited to their local needs and circumstances; each is equally valid and should not be expected to change unless the group believes that a different model would meet their needs better. (RCAP 1996, vol. 1: 149-150)

The Commission proceeds to describe how the newly formed Dominion of Canada moved to implement the modernist agenda, already firmly in place in the eastern regions of the country:

The first prime minister, Sir John A. Macdonald, soon informed Parliament that it would be Canada's goal "to do away with the tribal system and assimilate the Indian people in all respects with the inhabitants of the Dominion." Such a goal placed Canada in the vanguard of the empire-wide task of carrying the 'white man's burden', which was at one and the same time the duty of 'civilizing' Indigenous peoples, be they Maori, Aborigine or Zulu. ...

Parliament was moved to action. Though rarely consulting Aboriginal communities, it translated that duty into federal legislation such as the Indian Act and periodic amendments to it. It crafted educational systems, social policies and economic development plans designed to extinguish Aboriginal rights and assimilate Aboriginal people. (RCAP 1996, vol. 1: 144-5)

It will come as no surprise that, just as in Europe, compulsory schooling became "the centrepiece of the assimilation strategy" in the Commission's estimation (RCAP 1996, vol. 1: 148). Particularly notorious is the joint government and church residential school program, in which Aboriginal children "were separated 'from the deleterious home influences to which [they] would be otherwise subjected' and brought into contact with 'all that tends to effect a change in [their] views and habits of life'" (*ibid*). The legacy of this program endures today in the form of broken families and dysfunctional communities, caught in a self-amplifying cycle of alienation, abuse and despair (see e.g. (Haig Brown, 1988; Ross, 1992; Ross, 1996). Recent initiatives by the Canadian government to set the federal-Aboriginal relationship on a new footing have focused particularly on compensation for the residential school experience (Canada, 1997).

Yet the focus of the assimilation effort shifted many decades ago to more conventional forms of schooling. In 1948, a Joint Committee of the Senate and House of Commons recommended that "the education of native

children be integrated with that of non-native children wherever possible” (Gooderham, 1975: 45); this program has succeeded to such an extent that today nearly half of all Aboriginal children on reserve and virtually all others are enrolled in provincial schools, while most of the remainder are taught the provincial curriculum by non-Aboriginal teachers in band-controlled and federal schools (RCAP 1996, vol. 3, ch. 5). Although most provincial governments now recognize that Aboriginal students may have particular needs, this has resulted in only in very limited changes to mainstream curricula, pedagogies and evaluation (Kirkness & Bowman, 1992; Tanguay, 1984); the federal government has likewise shown little interest in helping First Nation Education Authorities achieve deep reform (Paquette, 1986).

Such resistance is deeply rooted in the historical genesis of the educational system. The legislative reason of modernity has long taken for granted that equity in schooling is to be attained through equality in schooling—that teaching a common curriculum, using similar methods in similar settings, will yield similar results for all children, whatever their cultural background. In fact, this assumption has proven disastrously wrong for Aboriginal students in North America and elsewhere, as a wealth of research has shown (Deyhle & Swisher, 1997). Far from adapting to the norms of mainstream schooling, Aboriginal students have become “pushouts”, resisters, with higher “at risk” levels than any other part of the school population. Even when this failure is explicitly recognized, however—as it has been since the 1960s—reforms have typically been tried in piecemeal fashion, often at the behest of a single visionary teacher, administrator or policy-maker, with the institutions and discourses of modernity poised at all

times to recapture the ceded ground. In Canada today, according to the Royal Commission on Aboriginal Peoples:

The majority of Aboriginal youth do not complete high school. They leave the school system without the requisite skills for employment, and without the language and cultural knowledge of their people. Rather than nurturing the individual, the schooling experience typically erodes identity and self-worth. (RCAP 1996, vol. 3, ch. 5)

For a quarter of a century, both Aboriginal people and the federal government in Canada have agreed that the objective must be “Indian control of Indian education” (1972). Yet the evidence suggests, once again, a gaping epistemological breach. Viewed through the lenses of modernity, the issue is simply one of inserting Aboriginal administrators, Aboriginal teachers and Aboriginal “cultural knowledge” into various slots in the system, without the system itself changing in any major way. Indeed, since the incentives to conform to provincial curricula are so strong, it is difficult in this perspective to envisage more than a secondary or transitional role for the Aboriginal component: Aboriginal language, for instance, in the first three to six grades, with English or French after that. Overwhelmingly, these are the kinds of reforms that have been proposed and implemented since the government’s acquiescence to a policy of “Indian control”; the recommendations of the Royal Commission (1996, vol. 3, ch. 5) likewise fall in this category.

There are others, however, for whom the principal objective is not to insert “Indians” into “education”, but to discover what “Indian education” is, or can be. This is the perspective that informs the present work. It involves a rethinking of education from a position *outside* modernity, drawing on traditions of thought and awareness that evolved in myriad ecological

contexts over thousands of years and that share fundamental insights into the relationships between people, land, life and spirit. As Chickasaw educator Eber Hampton describes it, this process is itself an evolutionary one, an unfolding organic succession progressing through the following stages (Hampton, 1995):

(a) Small numbers of Native personnel are introduced into non-Native structures and some Native content is provided through Native studies, elders in the schools, and other programs. Most schools for Native children retain assimilation goals, lack Native-language instruction, and have high failure rates.

(b) The increase in the number of Indian educators prepares the way for Native-controlled schools and school boards. This is apparently a transitional phase because even with Native control, most of the structures, methods, content, and faculty remain non-Native; but work to overcome many major obstacles continues.

(c) In this phase there is strong articulation of self-determination goals; school-community relations have improved; a Native curriculum has and is being developed in most Native communities; the numbers of Native educators have increased dramatically; Native cultural values and language are being actively promoted; and there is recognition of the need for Native approaches to educational methods and structures.

As will be shown in later chapters, this third stage is now beginning to produce striking examples of educational thought and practice which point towards a fundamentally different set of standards than those imposed by modernity. In his own multidimensional exploration of "Native education *sui generis*", Hampton identifies such standards as culture and diversity, vitality and spirituality, service and respect, place, history, and tradition; and he makes clear the equal necessity, in the struggle to reassert these values against the modern worldview, of *relentlessness, conflict, and transformation*:

At the cultural level, Native and non-Native conceive of their meeting in different terms and do not understand the other's actions, thoughts, or purpose. Their sense of time, of space, of energy, of humanity, are all different. Truth, beauty, and justice are all marked and evaluated differently. Epistemology, ontology and cosmology are all different. ...

At the historical level, Native and non-Native look at the world from opposed positions. Not only must they contend with personal differences in viewpoint, language and experiences; not only must they contend with cultural differences in value, understandings of human relationships, and modes of communication; but they must contend with the world-shattering difference between the conquered and the conqueror, the exploited and the exploiter, the racist and the victim of racism. It is this historical difference of perspective that demands more than 'learning about each others cultures'. It demands that we change the world.

(Hampton 1995: 41).

This work is, ultimately, about changing the world; or, more precisely, about understanding it in order to change it. Here the Native/non-Native dichotomy will be recast as the struggle between modernity and something far older, an ecological understanding of the world as a system of relationships in which each person has a integral place to be discovered, explored and tended. Language and education are but part of this struggle, yet crucial ones, implicated as they are in the socialization of children and adults into the invisible systems of co-ordered awareness and action that we experience as knowledge and power. Making these systems visible to the imagination is a first step towards rendering them accessible to change.

3 Critical Perspectives

As argued in the previous chapter, the mechanical world-view of modernity has given rise to a range of disciplines with a strikingly static, monological and fragmentary view of their objects and methodology. While their success in inculcating similar perspectives in new generations of researchers has been truly remarkable, the modern social sciences have not delivered on their promise of unified and objective truth, substituting instead an endless succession of promissory notes drawn on narrowly circumscribed research programs. In this way legislative reason sows the seeds of its own opposition, as those scholars that took its promises at face value become disillusioned and turn their intellectual skills to dissecting its failures.

One of the most influential initiatives of this kind in the twentieth century brought together a number of German Jewish intellectuals, including Theodor Adorno, Max Horkheimer and Herbert Marcuse, in the Frankfurt-based Institute for Social Research, founded in 1923. In his programmatic opening address, Horkheimer, the founding director, rejected the “uncritical, outdated separation of spirit and reality” and argued for a wide-ranging study of

the connection between the economic life of society, the psychological development of its individuals and the changes within specific areas of culture to which belong not only the intellectual legacy of the sciences, art, and religion, but also law, customs, fashion, public opinion, sports, entertainments, lifestyles, and so on. (Horkheimer, 1989)

Out of the Frankfurt School grew a social science tradition that was characterized both by an effort to see society as an organic whole rather than through the lenses of isolated disciplines, and by an increasingly sharp critique of the modernist social agenda. Inspired both by the historical materialism of Marx and the psychology of Freud, the School attracted a number of leading thinkers in the decade following its founding, united by their belief in the emancipatory potential of reason and science together with dismay at the latter's frequent use for other ends. After Hitler took power in Germany, the majority of the Institute's members emigrated to the United States, where they sought a label "which, while differentiating its adherents from prevailing forms of orthodoxy, also tended to veil their radical commitments in an environment that was hostile to anything remotely associated with Marxism" (Bronner & Kellner, 1989: 1). In this way the term "critical theory" was born, at first to refer to the Institute's activities at Columbia University, and later to designate a wider range of work aimed at uncovering and challenging the epistemological assumptions of modernity.

Horkheimer and Adorno, in particular, were shocked by the way in which fascism had appropriated many of the values, methods and rhetoric of the Enlightenment. They began to search for the overarching cultural patterns responsible for this and other threats to human freedom, resulting in a series of influential studies that for the first time reached a broader English-speaking public:

Surrendering attempts to develop a Marxian theory of society oriented toward radical social transformation, they became concerned with how modernity was rooted in forms of domination which went back to the Greeks. *Dialectic of Enlightenment* thus represents a shift away from interdisciplinary social theory to philosophy and cultural criticism,

around which much of critical theory would center during the next two decades. (Bronner & Kellner, 1989: 11)

Other important intellectual challenges to modernism were spawned in the interregnum and post-war periods (Seidman, 1994). In France, structuralism eventually gave birth to post-structuralism and the work of Derrida, Foucault, Lyotard and others; in the United States, Deweyan pragmatism inspired the work of C. Wright Mills and an influential reconception of sociology as public discourse; in Germany, Jurgen Habermas developed a liberal brand of reconstructed Marxism. From the 1960s onwards, new social movements common to all Western societies began to develop distinctive forms of critical analysis: feminism, anti-racism, queer theory—all directed towards overturning modernist assumptions about human nature and the supremacy of legislative reason. For this reason, it seems useful to extend the use of “critical theory” as a catch-all term for these diverse traditions, in so far as they may contribute to seeing modern society “steadily and whole,” in all its political and cultural diversity.

The intertwining of these diverse approaches may become more apparent when we examine their influence in the study of language and education, and particularly in the two disciplines which define the poles of the topic: educational administration, concerned with broad political, cultural and organizational issues, and applied linguistics, with its traditional focus on language learning and teaching in classrooms and individuals. Although critical theory rarely succeeds in bridging the two, some of its potential to achieve this may be glimpsed in the following sketches, whose concerns will be further developed and integrated within the ecological framework as the work proceeds.

Critical Theory in Educational Administration

Educational research offers a paradigmatic case of the “endemic fragmentation” in social theory that the Frankfurt School so vigorously opposed. Can a critical educational vision be demanded from the philosophers, with their faith in reason above empirical research? from experts in curriculum or pedagogy, whose awareness is frequently confined within the four walls of the classroom? from the sociologists, trained to see both learners and teachers as groups in thrall to social forces outside the school? In all of these areas, perhaps, a start can be made; yet I have placed my bet (perhaps quixotically) on educational administration as the discipline that might integrate them all, the what and how and why of schooling and the communities that intersect within it. At its best, educational administration confronts—in practice as well as in theory—some of the central questions of human existence: who are we and who are our children? what do we know and what must our children know? how can we prepare them for challenges we cannot foresee, or even for those we know only too well? Once obscured by the technocratic agenda of modernity, these problems are now resurgent in the study of educational administration—and it is critical theory that has put them there.

We saw earlier how modernist theories of education have gone by different names—objectivist, functionalist, positivist, etc.—but have generally shared the vision of schooling as a social and cognitive machine, whose input consists of incomplete human beings and whose output should correspond to dominant social ideals (whether those emphasize the pupil’s “station in life”, economic potential, scholarly aptitude, or other contribution to social order). Educational administration, in this paradigm, is the

engineering science, the one that minimizes friction and wastage and maximizes efficiency and quality. If there is a common theme in contemporary critical theory in education, it is the assertion that schools simply do not and cannot function in this way. Society and schools are inherently conflictual, a dynamic system of opposing interests, whose net contribution to social reproduction involves not only the transmission of knowledge and skills but the maintenance of inequitable forms of social order.

Beyond this consensus, for which there exists a vast range of empirical evidence, critical theorists have pursued a number of diverging or criss-crossing paths. Without claiming to have exhausted the field, I will briefly sketch four lines of inquiry that have been particularly influential in educational administration over the last two decades.

Subjectivism

The first line of critique to make a significant impact on the mainstream of educational administration was pioneered by Thomas Greenfield, beginning in the early 1970s (Greenfield & Ribbens, 1993). His "anarchistic theory of organization" attacked some of the fundamental tenets of objectivism, notably the ontological status attributed to institutions such as schools:

It is true that organizations appear to be solid, real entities that act independently of human control and are difficult to change. Yet the paradox is that the vital spark, the dynamic of organizations is made from nothing more substantial than people doing and thinking. ... The root problems of organizations thus dissolve into questions about what people do, why they do it, and whether what they do is right (Greenfield, 1993: 92-93).

Greenfield perfectly exemplifies the metamorphosis of a critical thinker from true believer to iconoclast. The effectiveness of his onslaught stemmed both from comprehensive acquaintance with the methods and theories of the modernist paradigm, and from the passion and stylistic elegance he invested in their refutation. Like the members of the Frankfurt School, he viewed objectivism as a retreat from the complexities of human existence; this led him to a distrust of structural theories of any kind, critical or otherwise, and brought him into contact with the phenomenological tradition pioneered by Husserl and Schutz (Hughes, 1980). Yet the emphasis in Greenfield's work lies very much on the "critical" rather than the "theory": he was more concerned to expand his colleagues' awareness of schools as human enterprises than to offer an alternative analytical frame for the forms of order within them. The nearest he came was to advocate a kind of dynamic cultural ethnography:

Organizations are modes of being that provide frameworks for action; they are sets of instructions for living one's life. The instructions are made by people and are directed both at others and at self. One organization may be distinguished from another by asking how the modes of being vary from setting to setting. We may come to understand organizations by recognizing that they are instructions for living acted out by people who repeatedly come together and work in concert or in opposition to each other. The power of organizations lies in the transformative capacity of human action. In thinking, being and acting, people do things to themselves and to others. To understand organization requires that we understand how intention becomes action and how one person's intention and action triggers intention and action in others. ... The ways in which people exert will and intention and in which they restrain them are complex indeed. Learning to be in an organization is a matter of bending others to one's will and of being bent by others' wills. (Greenfield & Ribbens, 1993: 104-5)

Greenfield's ability to perceive and eloquently portray these human complexities has rarely been equalled, and I shall return to his writing at intervals throughout the present work. Yet in this and many other passages, Greenfield can be seen wrestling with an overly individualist, Cartesian conception of the self. "If we are confined to subjective realities, how can we ever understand others?" he asks later in the same essay; and shortly after, "Should meaning be discovered or imposed?" (Greenfield & Ribbens, 1993: 114). Lacking a means to approach "the problem of order" except in terms of constraints on individual freedom, he was placed in the position of advocating anarchism within a field dedicated to control: a useful check to objectivist arrogance, perhaps, but one whose rhetorical power is equalled by its impotence in the field of practical action. Certainly, Greenfield's assertion that *administrators*, not scientists, know administration, and his arguments for moral training in the field rather than scientific training in the classroom, constitute part of a viable non-modernist paradigm. But the larger question remains: how can administrators come to understand, not just what they do and why they do it, but what it is that their actions do? How and why are actions co-ordered across space and time, and what moral responsibilities does such co-ordering entail?

Constructivism

These questions lay at the heart of the "new sociology" that developed in Britain at the same time as Greenfield was elaborating his subjectivist critique. Beginning from an observation similar to Greenfield's, that "social reality is constructed out of ongoing social interaction", this approach was more directly indebted to the structural traditions of Marxism and the Frankfurt School (Anderson, 1990; Bates, 1980). Its main line of reasoning, as

applied to educational administration, was set out by Richard Bates in a seminal paper in 1980:

The relationship argued by the proponents of the new sociology of education is that the structures of knowledge within society are closely related to, if they are not derived from, interests of different groups within the social structure. ... The spread of this idea has been the stimulus for a new and critical analysis of the way in which educational and social structures are related. In particular, it has emphasized a number of problems which have previously been 'taken for granted.'

1. What counts as knowledge ?
2. How is what counts as knowledge organized?
3. How is what counts as knowledge transmitted?
4. How is access to what counts as knowledge determined?
5. What are the processes of control?
6. What ideological appeals justify the system? ...

An analysis of these questions is also crucial to an adequate theory of educational administration. For if educational administration is understood as a technology of control, then analysis of the mechanisms through which such control is implemented via the structuring of knowledge in schools is the proper basis for the development of a critical theory of educational administration (Bates, 1980: 9-10).

Unlike Greenfield's preoccupation with individual experience, this "critical constructivist" approach was well adapted to studying the particular interests and power relations that legitimized certain social structures rather than others. Yet its fruitful application to other areas of education was not duplicated in educational administration. Writing nearly a decade after Bates, Gary Anderson noted:

Bates's questions have largely been ignored, in part, because the current paradigm of educational administration does not pose questions in this way and because most current empirical research in educational administration – whether of a positivist or naturalist paradigm – is

incapable of studying such phenomena because it lacks a critical approach to research (Anderson, 1990: 43).

Anderson's influential review of critical ethnography in education – a research methodology that exemplifies the constructivist approach (Anderson, 1989) – confirms this silence:

Although critical ethnographies have focused on students and teachers both in and out of classrooms, administrators have received less attention. Critical perspectives on administration are largely theoretical. The few critical studies that have been conducted... have portrayed administrators as the managers of organizational meaning, the custodians of organizational legitimacy, and the definers of organizational and social reality (Anderson, 1989: 258).

In a 1996 review of research on such “management of meaning” in schools, Lawrence Angus concurs:

In the literature on educational administration, even where, following Greenfield, scholars have been interested in understanding organizational participants' values and experiences, the realization that organizations are sites of cultural interaction has not generally led to analysis of broader questions about cultural dynamics in schools, the nature of social interaction, the politics of administration, educational change, and the relationship between schools and society. This is largely because, even in this relatively progressive literature, the reduction of organizations to collections of voluntarist individuals largely ignores, or at least oversimplifies and underestimates, the influence on organizations of power, history and the social, economic and cultural structures within which all schools and all organizations are embedded (Angus, 1996: 980).

Angus sees the greatest progress as stemming from the feminist and postmodernist research traditions, to which we now turn.

Feminism

In a long and detailed review of feminist contributions to research in educational administration, Jill Blackmore locates this tradition's strength in its preoccupation with specific contexts and "lived alternatives", in opposition to the generalities of much critical theory (Blackmore, 1996). For instance, "phenomenological" feminist researchers have chronicled the experience of women administrators and shown how it is at odds with "androcentric" models of educational administration (Shakeshaft, 1987; Shakeshaft, 1989), while "cultural" feminists have shown how power works in organizations to exclude women's preferred ways of working, relating and leading (Blackmore, 1993).

Yet these strengths have not been fully realized, according to Blackmore's account. Feminist researchers have often drawn uncritically on "malestream" theories of social justice, culture, and leadership, among others, resulting in positions that can readily be co-opted by functionalist or liberal theory. In order to avoid reproducing the exclusions already built into these discourses, Blackmore believes that feminist researchers must develop

more sophisticated theories of power which would see power as relation and process, and interests as neither purely altruistic nor selfish. A feminist politics of difference is also pushing for a view of difference which neither seeks to assimilate or separate, which names relations of similarity and dissimilarity, but which recognizes difference as relational in contrast to the logic of "pure" identity of Western thought which represses particularity and heterogeneity through rationalizing and totalizing discourses such as that of management. A feminist politics of difference recognizes the interdependence and interspersed of groups rather than essentialist notions of 'otherness' (Blackmore, 1996: 1033).

This interpretation of feminism in terms of a politics of difference is highly compatible, as Blackmore points out, with a central theme of post-structuralist/ post-modern thought: "Feminists find poststructuralism seductive because of its emphasis on language and subjectivity, the notion of multiple subject positions of women, lived contradictions and discourse, of seeing power as having the potential for both oppression and emancipation" (Blackmore, 1996). Hence, in her view:

While feminism has provided a critical edge to educational administration, it will be the conjuncture of feminism, post-colonialism and post-modernism which hopefully will require more fundamental rethinking of the field in strategic areas of citizenship, subjectivity, and of how the local/global relationships frame issues of rights and responsibility, of individuals and the state, with respect to educational administration (Blackmore, 1996: 1034).

Postmodernism

Just as "critical" theory is a label that can be appropriated by any challenge to the functionalist orthodoxy, so the fashionable term "postmodern" is used to refer to a wide range of theoretical positions which share a rejection of "master narratives" of human progress towards a rationally ordered world (Mitchell, Sackney, & Walker, 1996). Yet not all such positions can be deemed "critical" in the sense that they analyze "the major sites of conflict and social crisis for the purpose of advocating political activity," as in the description cited earlier. Some postmodern positions come close to rejecting the very notion of political activity, while others, in their attitude of "anything goes", betray an unwillingness to confront the oppressive and alienating forces that continue to operate in human societies

no matter where they are situated on the modern-postmodern scale (Green, 1994; Haber, 1994).

Postmodern research in educational administration tends to focus on a perceived “restructuring of contemporary society” from a “culture of certainty” to a “culture of uncertainty” (Hargreaves, 1994). It is argued that this historic shift renders change in schools imperative, in the direction of collaborative decision-making, decentralization, theoretical pluralism and flexibility (Hargreaves, 1994b; Mitchell, et al., 1996). Yet these measures, in themselves, are not incompatible with liberal versions of functionalism. Indeed, questions about the role of the school in (re)producing social inequalities, or about its meaning in the lives of its students, are rarely raised in this version of postmodernism. The structuralist emphasis on form over content, so central to the theorizing of educational administration as a distinct discipline, can lead to the paradoxical result that “postmodern” administration is presented in ways that are as “totalizing” as their modernist precursors, and offer equally little to the disadvantaged (Green, 1994).

At its best, however, postmodern research succeeds in breaking away from outworn patterns of thought that have become fossilized in our research paradigms and in our very language. The most influential theorist of this kind is Michel Foucault, whose writings on the relations between power, knowledge, and subjectivity (e.g. (Foucault, 1972; Foucault, 1973; Gordon, 1980) have inspired a reexamination of unspoken assumptions and hidden techniques of domination in many ostensibly “neutral” or “scientific” disciplines. Like other critical theories, this kind of analysis has not been widely practiced in educational administration (Blackmore, 1996). Nonetheless, some explorations of this kind are under way (Capper, 1994;

Foster, 1996; Ryan, 1996; Starratt, 1996), whose general ethos is captured by Jerry Starratt:

Within the postmodern mood we discover a series of insights concerning the nature of knowledge as a social and cultural construct, the understanding of learning as involving the learner in knowledge production, the understanding of learning as inescapably involving the self's own narrative, the relation of learning/knowledge to cultural production, the relation of learning to self-realization and self-creation, and the relationship of learning to communities of language and communities of memory, and hence to the meta-narratives of communities (Starratt, 1996: 53).

William Foster, in summarizing the implications of this turn of thought for educational administration, would reformulate the profession's goals as

the creation of spaces, spaces for the development of communities of understanding, and spaces undominated by the legacy of economics and efficiency. We might also look to how administrators can be bridge builders and border crossers – providing opportunities for the reconstruction of a meaningful public life for all (Foster, 1996).

When one considers the implications of this vision for language policies in schools, the scale of the challenge becomes apparent. Can spaces be created, and communities of understanding built, if schooling is premised on the use of a single standard national language in all grades and across all subjects? Can unilingual administrators be effective bridge builders and border crossers, lacking any access to the home languages of their students and any experience of the variety of perception, sentiments and expression that accompanies language diversity? Or are the advocates of a postmodern approach to educational administration speaking only of the middle-class communities they know themselves, embracing diversity only when it has

been tamed and trained to suit the ideologies and assembly lines of industrial democracy?

Thinkers in educational administration rarely ask such questions, largely because this process of linguistic commodification and standardization is so entrenched as to be nearly invisible. It is from the applied linguists, whose work implies a sustained focus on the reality and dynamics of language diversity, that one might hope for a more searching exploration. As we shall see, this hope has not yet been fully realized.

Towards a Critical Applied Linguistics

Belated as the arrival of critical theory was in educational administration, it required another fifteen years or so to scale the battlements of applied linguistics (Pennycook, 1997). The arguments used by its early proponents have a familiar ring, as in a 1987 address by Chris Candlin to the 8th World Congress of Applied Linguistics:

[There has been] a dissatisfaction with current trends and movements in the field, a feeling that we were losing touch with the problems with language experienced by ordinary folk, becoming intensely involved in sometimes arcane debate, frequently sectarian, theory-oriented and often impervious to the goings on in neighbouring fields of endeavour, whether outside applied linguistics or within. ...

[A] critical perspective [would aim] at showing up hidden connections say between language structure and social structure, between meaning-making and the economy of the social situation, but also the connections between different branches of the study of language and their relationship to our central objective, the amelioration of individual and group existences through a focus on problems of human communication. (Candlin, 1990: 461-2)

Shades of Horkheimer and Greenfield! Yet despite the problems identified by Candlin, the modernist worldview has proven at least as resistant to critique in applied linguistics as in educational administration. In part this may be because the discursive objects of applied linguistics, the “modern languages” that are supposed to be transmitted in speech and writing, have—as argued in Chapter 2—been reified still more effectively than schools in popular consciousness. Some of the predominant beliefs about language that have flourished under these epistemological conditions have been summarized by Ben Rampton (1995), drawing on Brian Street’s cultural-political model of literacy (Street, 1984). According to the “autonomous” model, as Rampton terms it,

- a. Language is a neutral technology.
- b. This technology is founded on universal laws of cognition.
- c. The technology may best be studied and understood in abstraction from particular social situations.
- d. Language hierarchies reflect objective differences in use-value between languages.
- e. Different languages and language varieties can be unambiguously distinguished and studied.
- f. Research on language is objective and politically neutral.

These premises are not unique to applied linguistics, for they reflect an image of language that has become entrenched throughout the linguistic sciences, whether their emphasis is theoretical, empirical, or historical. In Rampton’s analysis, the hallmark of critical theory in applied linguistics is the substitution of an “ideological” model for the autonomous one. In this view, language is viewed as inextricably social, context-dependent, value-laden and fluid, and all language research serves particular political or cultural agendas.

Implicitly, and perhaps explicitly, such an approach to applied linguistics will also be critical of modernist theories and methods in neighbouring fields. Critical applied linguistics, in other words, is also applied critical linguistics, and it may be necessary to devote as much attention to the latter as the former. Some of the implications have been drawn out by David Corson (e.g. (1997), and will be further explored in the course of the present work.

Rampton himself believes that the turn to critical theory in British applied linguistics has been prompted both by the general crisis of liberalism (one of the great political philosophies of modernity) and, more particularly, by a growing concern with language teaching in Britain itself, in contrast to the discipline's historical focus on teaching English in overseas colonies and territories (Rampton, 1995). His sketch of the growing mutual disenchantment and disengagement of the British government and British academia accords nicely with Bauman's account of post-modernity (1992), when the state's diminished need for intellectual legitimization loosens the discursive constraints on intellectual freedom.

This is not to say, however, that critical theory is about to acquire the status of an orthodoxy in applied linguistics; indeed, as in the case of educational administration, progress in its first decade or so has been slow and fragmentary. Pennycook's own introductory survey (1997) mentions only a handful of current research directions, including language rights (Skutnabb-Kangas & Phillipson, 1994); political, cultural and feminist analyses of the teaching of English as a second or foreign language (Pennycook, 1994a; Phillipson, 1992; Sunderland, 1994); Freirean critical pedagogy and critical literacy (Graman, 1988; Walsh, 1991); critical discourse analysis and critical language awareness (Fairclough, 1992; 1995). He notes, however, "the

difficulties in determining both what it is to be critical and what is meant by Applied Linguistics" (Pennycook, 1997: 23), and I will argue for a wider view of both.

Language Acquisition

The primary focus of applied linguistics has traditionally been language teaching and learning, or more broadly language acquisition. In what Rampton terms the autonomous model, "language" is essentially conceived of as a semiotic system detached from actual situations of use, and "language acquisition" consists of recreating this system in the learner's head. I would therefore define as implicitly critical all *situated* theories of language acquisition, because treating language and people in their social context necessarily entails attention to the relationships between them and thus to the cultural and political functions of language. Of course, such research need not be *overtly* critical: that is a rhetorical, strategic and political choice.

Chris Candlin, in the AILA plenary address already cited, points to some of the implications of a situated approach: paying attention, for instance, to the sociocultural positioning of native and non-native speakers; exploring the interrelatedness of acquisition and use; preserving context in discourse analysis; and including reflexivity in research design (Candlin, 1990). It can immediately be seen how much more difficult, in this orientation, is the drawing of general conclusions and the building of universal models of language. Even corpus analysis, an increasingly popular approach to developing and testing theories of acquisition, must be regarded with suspicion because of the difficulty of recording all the significant contextual features that may be playing a role. The situated approach calls for

ethnographic methods which have been underdeveloped and underused in applied linguistic research, notwithstanding the noteworthy U.S. tradition in the ethnography of “language in education” (Cazden, 1988; Green & Wallat, 1981; Hymes, 1980; see also Corson, 2000, chapter 7). A critical applied linguistics would need to be built upon a constant cycling between general theory and the rich detail of concrete settings and interactions.

An interesting framework in this regard has been developed by Jim Cummins in the neighbouring field of bilingual education—a research area that has been central to the development of applied linguistics in North America, but has had relatively little impact on European traditions. One of the striking predictive failures of the autonomous model is the idea that learning in two languages should require twice as much time as learning in one, and thus that the use of a minority language for all or part of the school day must detract from students’ linguistic and academic skills in the dominant language. In fact, a wealth of research evidence shows the opposite: that quality bilingual education, aimed at maintaining and developing minority language skills, does not diminish students’ academic achievement and in the long run often enhances it. At the same time, bilingual education dedicated to other goals—for instance, a quick transition to dominant-language instruction—yields poor results in both the short and long term (Cummins, 1996).

In seeking to explain these consistent patterns, Cummins has found it necessary to invoke a full range of levels of explanation: from “macro” social relations through “micro” interactions in the classroom to cognitive processes in individual learners. Each of these levels constrains the process of language acquisition in different ways and to different degrees. Particularly

interesting, from a critical perspective, is Cummins' argument that effective bilingual schooling relies on the negotiation of collaborative power relations among students and between students and the teacher (Cummins, 1996). Elaborating and exploring the implications of this hypothesis in different cultural and educational settings would be a crucial task for a critical applied linguistics.

Language Use

In the autonomous model of language, use is understood primarily in terms of building up sentences and texts by deploying one's acquired knowledge of words and grammar, and the chief methodology for studying language in use is discourse analysis. Pennycook (1994b) has traced the genesis and diffusion of this branch of applied linguistics, arguing that it reflects "a general epistemological shift towards a more empiricist and pragmatic view" of language, but that it also displays important conceptual limitations. Prominent among these are a highly restricted definition of context that excludes such dimensions as culture and ideology; a focus on linguistic form as the only dependent variable of interest; and an emphasis on what Pennycook calls "pragmatism", but might be better described as *instrumentalism* (the "neutral technology" orientation identified by Rampton). I would therefore define as critical all theories of language use that try to establish a relationship between the micro settings studied in "autonomous" discourse analysis and broad patterns of sociocultural interaction. Most such theories tend to be structuralist, whether in the Marxist tradition or in some other; however, in contradiction to Bourdieu (Bourdieu, 1977; cf. Thompson in Bourdieu, 1991: 11-12), I believe that they need not be.

The relatively new tradition calling itself “critical discourse analysis” is primarily associated with the names of Norman Fairclough, Gunther Kress, and their European colleagues (e.g. Fairclough, 1995; Kress, 1990). Strongly influenced by Marxist structuralism, these writers tend to regard the higher levels of social order as determining the lower levels: power relations between dominant and dominated groups determine the ideologies (world views?) of these groups; ideologies determine what can be said and how it can be said in particular social settings or institutions; such discourse-level forms of order determine the actual production of utterances and texts. While this approach displays certain strengths in revealing hidden forms of persuasion and background assumptions in texts, it is fundamentally antithetical to ethnographic ways of knowing: there is no point in investigating lower levels of order if it is the higher levels that invest them with meaning. As Pennycook puts it, if mainstream applied linguistics errs in positing a decontextualized subject, the critical discourse analysts have swung to the other extreme: “we now have a subject determined by ideologies that can simply be deduced from the texts” (Pennycook, 1994b: 126).

Pennycook sees greater promise for a critical applied linguistics in the work of Michel Foucault (Pennycook, 1994b). Rather than viewing discourse as something existing apart from its users and determining their actions, Foucault saw it as the actual concrete struggle over definitions of knowledge: over what counts as a fact and what does not. As disciplines and institutions form, certain understandings of the world become keys for admission to their inner circles; these understandings are both the product of a multiplicity of relationships among the initial participants, and a constraining influence on new participants. This approach to language use in effect makes the

positioning of speaker and hearer an issue for research rather than a theoretical premise. To what degree are speakers' words their own, to what extent does the discourse speak through them? What kinds of knowledge must the learner absorb to make sense of what they hear within a discourse, and finally to begin to participate in the discourse itself? What discourses are most important to the second language and foreign language learner, and what impact will entry into those discourses have on their lives? Such are the kinds of question that a critical applied linguistics would take as central.

Written Language

As noted above, Rampton drew on "the new literacy studies" in his dissection of the autonomous orientation in applied linguistics, and these two fields do indeed overlap in many respects. Like standard language, literacy has long been portrayed in the discourses of modernity as a neutral cognitive technology accessible to all, and one of the most striking "applications" of linguistics since the Second World War has been the design of massive literacy programs in developing (and developed) countries. In my view, then, critical applied linguistics will be much enriched by including literacy studies within its purview, particularly given the latter's rapid development in the last fifteen to twenty years.

One line of attack on the industrial conception of literacy developed from some striking ethnographic studies by Scribner and Cole (1981), Heath (1983), Street (1984) and others, demonstrating the existence of very different kinds of literacy practice in different cultural communities. This "cultural" or "social" tradition in literacy studies has been in ascendancy ever since, as can be traced in landmark works such as Gee's *Social Linguistics and Literacies*

(1991), *Street's Social Literacies* (1995) and Barton's *Literacy: A Introduction to the Ecology of Written Language* (1994). At the same time, a parallel line of critique has developed from the work of Paulo Freire (1972; 1985; 1987), who saw in literacy a powerful tool for the emancipation of the oppressed, provided that it was a literacy grounded in their own realities. This tradition shares the "cultural" emphasis on the validity of local knowledges and practices, but regards them above all as resources for social change. Researchers in critical literacy therefore borrow occasionally from ethnographic research, but devote most of their energy to challenging homogenizing and disempowering literacy practices in schools, the media, and academic discourse (Lankshear & McLaren, 1993) and to developing critical pedagogies in classroom settings (Shor & Pari, 1999).

Currently, a multidisciplinary effort is underway to combine the strengths of both traditions in "a pedagogy of multiliteracies" (Group, 1996). It would be interesting indeed to see how a critical applied linguistics might contribute to such a project, perhaps expanding it still further to "a pedagogy of multilingualism" (cf. Skutnabb-Kangas, 1995).

Language Policy and Planning

Isolated in a somewhat peripheral and sedate subdiscipline of applied linguistics, the autonomous tradition in language planning is only slowly being enriched by more critical approaches (Blommaert, 1996; Fettes, 1997). The mainstream orientation views language as an instrument that can be shaped and wielded by the state to promote national unity and efficient communication within its borders; its principal concerns are thus the definition, officialization and dissemination of one or more standard

languages (so-called corpus, status and acquisition planning). Language varieties that do not fit this paradigm, such as non-standard varieties, indigenous languages, immigrant languages, sign languages and international languages, have generally been excluded from the field's concerns, just as they are absent from mainstream schools.

Since the early 1990's, however, central figures of the field have turned their attention to brokering linguistic compromise (Jernudd, 1993), or to strengthening small languages in the face of linguistic homogenization (Fishman, 1991), while a number of trenchant critiques have challenged some of the founding assumptions of the discipline (Luke, McHoul, & Mey, 1990; Tollefson, 1991; Williams, 1992). Equity, diversity and sustainability are coming to receive as much attention in language planning discourse as the traditional standards of unity and efficiency, and there is increasing recognition of the inherently political nature of such work (Blommaert, 1996). Over the same period, the concerns of the field have broadened, so that "language-in-education planning" and the study of educational language policy can now be related to wider linguistic goals and processes (Grabe, 1994; Ingram, 1990; Lambert, 1994).

Such progress notwithstanding, the field still clearly lacks a unified theoretical perspective, or even a focused theoretical debate, concerning such central issues as the dynamics of language shift and language death, the feasibility of planned societal multilingualism, and the multiple roles of English and other world languages. When Hornberger, for instance, theorizes "language planning from the bottom up" in the context of indigenous peoples in the Americas, she essentially transposes the modernist paradigm from the state to the indigenous nation (Hornberger, 1997). Can the

autonomous model really function in the indigenous world? What might be gained, what might be lost? What alternatives strategies may exist for preserving linguistic and cultural diversity? Such are the questions—of great practical urgency for thousands of indigenous communities— that a critical applied linguistics would help answer.

Even in such a limited review, the fragmented and ideological state of the linguistic sciences is apparent. Language is such a complex, multi-level, value-laden and ubiquitous feature of human societies that it can support a fantastic number of subdisciplines, subtheories, and what has been slightly referred to as “busywork”—quantitative, qualitative, experimental or theoretical studies that obscure as much as they reveal by virtue of flawed methodology, poor reporting and analysis, and uncritical commitment to received ideas. Although no branch of science is free from these difficulties, the study of language as a single organic phenomenon has suffered particularly severely.

An Integrated Approach

It will be argued throughout this work that an ecological approach to the study of language offers the best hope of an integrated critical theory. Much of this work is foreshadowed in David Corson’s work on language, discourse, and education, ranging as it does over epistemology and ontology (Corson, 1997), effective classroom strategies (Corson, 1998) and “language policy across the curriculum” (Corson, 1990; Corson, 1999), the ethics of school administration (Corson, 1995; 1996a) and the social consequences of schooling (Corson, 1996b). What I have tried to do in the following chapters is to integrate these concerns within a single psycho-sociological framework built

upon a critical-realist epistemology. If successful, it will highlight connections between language, culture, nature and identity that have long been obscured in modernist perceptions; it will offer critical insights into a wide range of theoretical approaches, from Bhaskar to Bernstein and from Habermas to Halliday; and it will ground a wide-ranging research program in the applied ecology of language, particularly the role of language in ecological schooling.

It is an ambitious goal, admittedly. Yet the research traditions cited above suggest that the time is ripe for such a program; that beyond postmodernist excoriations of the excesses of modernity, many questions still demand answers; much suffering awaits more than rhetorical alleviation; and the technologizing of knowledge continues to press inwards upon the remaining spheres of human freedom. If our one shared world is to remain a livable place a hundred years from now, it is the development of critical realism and ecological awareness, in our understanding and use of language and other essential resources for human well-being, that will help us achieve it.

**Second Turn:
The Subject and the World**

4 Knowing Reality, Knowing Language

In this second turn of the work's climbing spiral, I begin to elaborate an ecological approach to educational linguistics. The three chapters of this part mirror those of the First Turn: the first develops a critical realist epistemology, or theory of knowledge, with particular attention to the role of language; the second (Chapter 5) employs this framework to critically examine various influential theories of language and education; and the third (Chapter 6) begins to sketch an alternative program for expanding our knowledge of both education and language. In a sense, the entire Second Turn is about epistemology: about the connections between the subject and the world, and the extent to which those connections are mediated or modified by language.

Let me begin by restating one of the ideas introduced in the First Turn: that modern science has been traditionally conceived, for reasons deeply rooted in European history, as a search for machine-like regularity and predictability. This imperative has encouraged would-be social scientists to privilege theoretical abstractions, such as *languages* and *schools*, above the diverse, situated reality of *speakers* and *learners*, and thereby cast them in the role of legislators rather than interpreters (Bauman, 1987). Any alternative founded on critical realism (or "insider materialism," as Dorothy Smith has it) must reverse this approach to scientific knowledge. It must begin, not with the abstractions, but with the embodied and situated agents themselves:

If we begin from the world as we actually experience it, it is at least possible to see that we are indeed located and that what we know of the other is conditional upon that location. There are and must be different experiences of the world and different bases of experience. We must not do away with them by taking advantage of our privileged speaking to construct a sociological version that we then impose upon them as their reality. We may not rewrite the other's world or impose upon it a conceptual framework that extracts from it what fits with ours. Their reality, their varieties of experience, must be an unconditional datum. It is the place from which inquiry begins. (Smith, 1990a: 25)

To develop a speaker-centred account of language—the primary objective of this chapter—is not to deny the fact that people in a community typically share “a language”, in a sense that will gradually be made clear. However, it requires that this “co-ordering” of people’s activities in the world be explained, not taken for granted. We are not born speaking in similar ways to the people around us: we achieve it in concrete social contexts. Neither are we born perceiving ourselves as “members” of a community or “speakers” of a language: these perceptions, too, are achieved in socially embedded ways. A sociology that takes individual experience as its basic unit of data will seek to identify, not reify, such practices.

The facts are these: that no two people speak in exactly the same way; that different language communities are constantly coming into contact within schools and within the life of each of us; and that language is a vehicle of myth, ideology and power as surely as it is a vehicle of science, truth and solidarity. My aim is to engage with these realities rather than to bracket them out, as many within the linguistic professions have done. I will argue, in fact, that this bracketing has contributed to diverse forms of educational failure and inequity, and that an ecological theory of language offers our best hope

for *systematically* replacing these with more organic and self-sustaining forms.

The Ecology of Meaning

Beyond the Container Paradigm

We begin with the knowing speaker; yet what is it, exactly, that speakers know? What kind of knowledge is necessarily theirs by right, by virtue of their embodied existence in the world? The modernist claim has generally been that there is no such knowledge: people enter life as blank slates, upon which are gradually inscribed the teachings of their class, their culture, their profession. Described as the “banking theory” by Paulo Freire, this conception of knowledge can be summed up more generally as the “container paradigm” (Ben-Ze’ev, 1995). People’s knowledge at any time is simply the sum of everything that has been poured into them, including language. This implies that speakers, as individuals, cannot pretend to any knowledge independent of the culture around them—the domain of the anthropologist, the sociologist, and the other apostles of legislative reason.

Modernism can give the container paradigm a different twist, however. In this variation, the container is not simply empty at birth, but intricately pre-structured to filter and sort the information it will receive. Its proponents portray this as a more dignified (and accurate) view, since people are now regarded as actively imposing order on what is poured into them. Again, however, the *individual* speaker is deprived of any standpoint for independent knowledge, because the sorting mechanism is held to be

universal, not personal. In place of the social legislators, we have their equivalents in psychology, psycholinguistics, and related disciplines; in place of an emphasis on local, particular norms, we find an equally willed neglect of them in favour of claims for common human traits, at whatever level of abstraction is necessary.

If both of these approaches allow the individual to disappear from view, critical realists must explore a third alternative—abandoning the container paradigm. There are excellent empirical and logical grounds for doing so (Ben-Ze'ev, 1995), but equally important for the critical realist is the *pragmatic* justification: the fact that people can only be the agents of their own emancipation if they have independent access to knowledge about the world (Bhaskar, 1989). The task then becomes one of discovering what form this knowledge takes, and perhaps of developing an alternative set of metaphors for how such knowing is done. In order to avoid all the traps of idealism, so familiar from modernist philosophy, such an account must treat knowledge, or cognition, as an integral, unavoidable condition of being-in-the-world—a world in which, as Leonard Cohen put it, “Everybody knows.”

This suggests a vision of life and knowledge as interlinked—two aspects of a single phenomenon, as proposed by Humberto Maturana and Francisco Varela (Capra, 1996; Maturana & Varela, 1992). All living things, they argue, must be organizationally separated from their environment. Matter and energy flow continuously through living systems, but the latter are defined by *boundaries*, and these in turn pose a fundamental problem to the organism. Its ability to respond to environmental changes outside the boundary makes the difference between success and failure, life and death—but how can it register them without disturbing its organizational

closure? The only way, Maturana and Varela argue, is for the organism to “translate” environmental differences into rearrangements of its own structure. Such adaptive internal changes *are* cognition, in their terms—and thus “knowing” is a universal activity of organisms, exercised through “structural coupling” with their environment (Maturana & Varela, 1992).

The holistic and dynamic features of Maturana and Varela’s conception of cognition are also found in the “schema paradigm,” as described here by Ben-Ze’ev:

In the schema paradigm... the mind is not an internal container but a dynamic system of capacities and states. Mental properties are states of a whole system, not internal entities within a particular system. In this paradigm, the cognitive system is complex and dynamic; new information changes the system itself. Novel information is not stored in a separate warehouse, but is ingrained in the constitution of the cognitive system in the form of certain cognitive structures (or schemas). ...

Memory, in this view, is the capacity of the organism to arrive at states similar to its previous states of awareness while preserving a knowledge of their past origin. ... The metaphor of internal storage is inadequate, because the basic elements in this paradigm, capacities and states... are *retained* but not *stored*. ... A storage place is where you put things away in the expectation of finding them again in exactly the same condition as when you put them away. Retention is an active capacity for presenting something. Certain activities must be performed in order for a capacity or state to be retained. Retention of the ability to play the piano, speak a foreign language, or tell jokes require their use. (Ben-Ze’ev, 1995: 42-44)

With this concept of a dynamic, evolving cognitive system that dissolves the distinction between body and mind, we have taken a step away from the mechanical and container metaphors of modernity. But Cartesian epistemology is not so easily overcome, for there remains the duality of organism and environment, the “in here” and “out there”. Thus, Ben-Ze’ev

views cognition as a creative *internal* mapping of the *external* world.

“Cognition supposedly should copy reality,” he writes, but because it works in a different medium, “we should expect some distortion in the cognitive content” (Ben-Ze’ev, 1995: 53). In similar vein, Maturana and Varela (along with their popularizer Capra) speak of individuals “bringing forth a world” of their own creation, an internal representation that affords no sure knowledge of the world’s real nature (Capra, 1996; Maturana & Varela, 1992). No matter how sophisticated one’s model of mind, in any realist account of knowledge *focusing solely on the organism* this conclusion is inescapable.

The critical realist solution, then, must locate knowledge in *the system of organism-in-environment*. Maturana and Varela hover on the brink of such a theory with their notion of structural coupling, but then draw back, misled perhaps by the cybernetic tradition, or by the whole weight of Cartesian dogma behind it. The crucial insight is Wittgenstein’s (1959): that the concept of an internal “representation” of the world explains nothing. The meaning of a map inheres not in the map itself, but in the use the organism makes of it. What is more, if cognition involves finding one’s way through the real world rather than through a representation of one’s own devising, real knowledge can assume much more economical and flexible forms than those implied by the map metaphor, because the world can generally be used to represent itself. Organisms need not “know” the world in the sense of being able to dispense with it; they need to know *what to do* in it, and how to access and apply previous experience to “encountering the world” more effectively.

Life and Cognition

This is the central idea of ecological psychology (Reed, 1996a). Whereas Maturana and Varela emphasize environmentally-induced changes *internal* to the organism, Reed stresses that external *activity* provides the primary data available to any student of cognition. But he portrays such activity very differently from the classic stimulus-response or instinctual models beloved of behaviourists and ethologists. Making extensive use of selectionist reasoning, he argues that persistently available information in the environment—differences in ambient light, for instance, that are relatively invariant over time and with regard to the effects of behavioral changes—“tends to select for mechanisms in observers to use that information” (1996: 51). This implies that, at least in motile animals (Reed is agnostic concerning plants and less complex organisms), the life-essential appropriation of matter and energy—what Reed terms “the effort after value”—is accompanied by the *psychological activity of information pickup*—“the effort after meaning”.

Reed illustrates the importance of this concept for understanding animal behaviour by reference to Darwin’s studies on earthworms (Reed 1996). These simple creatures, possessing the barest rudiments of a central nervous system, very clearly modify their behaviour in response to environmental changes. For example, if one wall of their tunnel becomes scratchy (because an experimenter has stuck pine needles into it), the earthworms respond by packing dirt more tightly onto that side. If previously humid ambient air becomes drier, the earthworms respond by tugging leaves over the entrances to their tunnels. If the available leaves change shape, the earthworms find new ways of tugging them. All of these are responses to

unpredictable change that individual earthworms may never have experienced before. Collectively, they bespeak the earthworms' capacity for *awareness*, a term which elegantly captures the nature of information pickup as an ongoing and largely unconscious process. Earthworms are very unlikely to possess either consciousness or belief, but they are demonstrably and adaptively aware of their environment.

Awareness in this sense is an *ecological activity* serving to guide an animal as it makes its way through the environment. Rather than a private internal state of the mind or brain, awareness inheres in the constantly shifting relationship between the organism and its surroundings (Reed 1996: 67). "Meaning" can then be seen as another way of conceptualizing adaptive fit. What an animal can be aware of depends first on its biological inheritance (adaptation through natural selection), secondly on what transmissible forms of awareness its local community has developed (adaptation through cultural selection), and thirdly on its own unique life history (adaptation through individual learning). Thus, while natural selection ensures that an adequate range of meanings is normally available to guide the organism in its encounters with the world, communities and individuals may differ considerably in the degrees and kinds of awareness they achieve. It is, indeed, precisely this variability that provides the raw material for natural and cultural selection to propel the processes of evolution.

Awareness is itself not one activity, but several. Earthworms, lacking the central nervous capacity to store a great deal of information, simply use it to guide their immediate encounters with the world. Arthropods, molluscs, and vertebrates, however, typically live in and move through more variable habitats than earthworms, and must consequently be able to use a greater

range of meaningful information. These “higher” animals are characterized by “a capacity for awareness that is relevant to but not directly tied to overt activities” (Reed 1996: 66). In other words, the ability to store and selectively retrieve cognitively acquired information (“knowing”) is itself an adaptation to motile life in a complex, changing environment. Awareness, meaning and knowledge can thus all be regarded as natural properties of the system of animal-in-environment, evolving for each organism and community through a ongoing process of testing and reconfiguration.

The schema paradigm offers a complementary insight into the *internal* dynamics of this process, and thus into the nature of learning—an issue of central importance for education that will increasingly occupy our attention in future sections:

Learning something new involves a dynamic change in the structure of the cognitive system. Accordingly, we can assume a gradual development of the cognitive system along with an increase in the incoming information. Information is embodied in the structure of the cognitive system, and there is no separation between the system and the newly acquired information. Past experience and other personal characteristics are not stored in a separate warehouse; rather, they are ingrained in the constitution of the cognitive system in the form of certain cognitive structures. In this view, learning, adaptation and readiness are expressed as changes in the sensitivity of the cognitive system and not as changes in stored propositional information. Learning is a dynamic change of the whole system, not an addition of a discrete part; it involves the continuous updating of the schematic rules. In this sense, history is embodied in the schemas. (Ben-Ze’ev, 1995: 47).

But this history, to reiterate the central point, is not exclusively a *private* history. For all organisms it is a history of what Reed (1996) terms “encountering the world”.

The Structure of Ecological Meanings

Given that all terrestrial animals inhabit the same world and must solve many of the same ecological problems, it seems plausible that ecological meanings do not display an infinite range of variation. Things in nature do not occur randomly or chaotically: they have form, duration, sequence, pattern. Thus, the recurrent emphasis in cognitive science that information is simply *difference* (e.g. Bateson, 1972; 1979) may be of little use when it comes to assessing the basis of animal and human intelligence. Recalling Reed's suggestion that *any* persistent environmental structure may tend to select for systems to perceive it, we can ask whether ecological meanings themselves are structured in persistent ways; that is, whether all motile animals (at least) must solve essentially similar problems in their efforts towards meaning. Following the naturalist philosopher of language, Ruth Millikan, I shall argue that this is indeed the case, as a preliminary to showing how language itself is structured by this interaction.

All efforts towards meaning may be characterized, in fact, as the *perception of relationship*. The "blooming, buzzing" world of experience is filled with orderly relationships, and the fundamental cognitive challenge is to perceive and use them. Take *identity*, for instance—the special relationship a thing has with itself. As world variants evolve through space and time, we must be able to track them as one and the same object/event despite the changes they undergo (Millikan, 1984). This involves associating one internal schema with another, or many others. Things look different from different angles and in different lighting conditions: the interlinking of these visual schemas yields a schematic network for the concept "how something looks (can look)". Similarly, other associations can link visual schemas with

sensory, auditory and olfactory networks corresponding to the same real-world phenomenon. Since many distinct things are rather similar, these networks must be continually open to adjustment, increasing the probability of successful recognition and decreasing the chance of error.

World variants that lend themselves more readily to this kind of learning can be termed *substances*, and the ability to distinguish between substances necessarily implies awareness of natural *properties* (Millikan 1984: 275). Thus, abstract characteristics such as size, shape, colour, position and so forth are perceivable only to the extent that they differ among substances; while substances are distinguishable only to the extent that they display different properties. This, Millikan argues, is a *necessary* feature of identification, which must hold for all organisms capable of awareness, from earthworms to humans: it is a fundamental ecological mode of cognition.

But the perception of relationship goes further, for the natural world does not merely consist of independent substances waiting to be discovered. Things move through time and space, interacting with each other in complex but orderly ways. Even routine acts of identification therefore involve perceiving each object, not only in terms of the substances and properties it exemplifies, but in terms of the typical changes it may undergo or be subjected to, and the possible consequences of such changes—that is, its relationship to the world around it. Such perception is fundamental to the effort towards value, as organisms strive to maintain themselves against the vagaries of their environment. This mode of cognition finds its greatest development in *prospective awareness*, a capacity essential to all more complex modes of life (Reed, 1996a), and one which will increasingly occupy our attention in the sections to come.

For a different but complementary perspective on the ecology of cognition, Mark Turner's recent cognitive-linguistic analysis of human thought processes offers many striking parallels (Turner, 1996). What Turner calls the "capacity for story" is basically the ability to recognize similar relationships in our encounters with the world. Every time we reach out to pick up a glass, to take one of his examples, the actual event is different in small details. To *plan* to pick up a glass (a simple exercise in prospective awareness) is to access a narrative schema, an abstract summary of recurrent sensory and motor experience that picks out the *significant* relationships common to many similar actions or events:

These small stories are what a human being has instead of chaotic experience. ... Although... inventive constructions of the human mind, they are not optional. The necessary biology and the necessary experience of any normal human infant inevitably produces a capacity for story in the infant. It is not possible for a human infant to fail to achieve the concept of a container, for example, or liquid, or pouring, or flowing, or a path, or movement along a path, or the product of these concepts: the small spatial story in which liquid is poured and flows along a path into a container. Our core indispensable stories not only can be invented, they must be invented if we are to survive and have human lives (Turner 1996: 14).

Turner, as a faithful Cartesian, views narrative as a human "invention" imposed upon an otherwise incomprehensible universe. But the ecological perspective turns this around: narrative is rather a means of discovery and adaptation to *real* regularities in world affairs. It is important to be clear that this does not imply that narrative schemas constitute some kind of internal map of the world, as if "schemas" corresponded to "world variants" in a one-to-one fashion. Neither should schemas be conceived of in purely neural terms, as connectionist models of "mind" usually take for

granted. A schema is a dynamic network of associations potentially involving the entire body, in which the central nervous system plays a key but not an exclusive role. Schemas are inherently plural, involving many subcomponents to differing degrees, and tentative, being open to modification on the basis of experience. And a schema is not meaningful in itself. What is meaningful is the adaptive fit of schema to world, organism to environment; in Bhaskar's terms (1989), meaning is *emergent* from the system of living things, or what Capra (1996) calls "the web of life".

To put this another way, the ecological paradigm holds no place for the Cartesian picture of a human being as "a mind in a brain in a body" (Turner 1996: 116). Instead, brain and body are considered to be well-integrated parts of a single organism, and mind is the dynamic, unfolding process of that organism's integration in the world. States of mind are also states of being. Learning is thus still more consequential than is usually thought, for learning does not simply change the "content" of the "mind", it changes what an organism *is*: what meanings it can be aware of, what values it can attain. By the same token, learning is also a more complex affair, for it involves changes in a cognitive system that is already massively interconnected and integral to a particular way of living in the world.

The thrust of this section has been to show how individual knowledge—the knowledge of the knowing speaker—is possible, and what kind of knowledge it is. First and foremost, it is *active* knowledge, stemming from the lifelong, continuous effort towards meaning and value that characterizes all living things. Secondly, it is *realist* knowledge, in the sense that it is derived from direct encounters with the world. This knowledge is tentative and fallible, but adaptive: under the conditions that fostered its

development (what Millikan calls Normal conditions), it is a reliable guide to awareness and action. Thirdly, it is *non-propositional* knowledge: not only does it not depend on language, it exists in another medium entirely, one that can be imperfectly visualized with the help of schema theory but is ultimately one and the same as life itself. Such a theory of knowledge satisfies the tenets of Bhaskar's critical realism, Smith's "insider materialism," and Millikan's epistemological naturalism: we are both phylogenetically and ontogenetically adapted to discovering real meanings in the real world.

From this it follows that language, uniquely human as it is, cannot be said to *constitute* our experience of the world. If all animals can be said to be aware; if the perception of substances, properties and narrative is a fundamental adaptive skill; if meaning and value are naturally emergent properties of complex ecosystems, available for empirical investigation—then language cannot be credited with any of these features of human cognition, long taken to be our peculiar birthright. And so in the next section we confront the questions that flow from this conclusion: what can human language be for, if it is not essential for knowledge; and how does the kind of knowledge made possible by language relate to the knowledge we possess as living, embodied beings?

The Emergence of Language

If we accept the tenets of selectionism, as the best theory we have for understanding the appearance of novelty in the natural world, then human beings must have developed the faculty of language because it provided real adaptive value at the time of its appearance. The idea sometimes put forward,

that language made a sudden and spontaneous appearance late in human development as an accidental by-product of some other evolutionary process (e.g. Dixon, 1997: 1), is clearly wrong. Merlin Donald, for instance, lists six major physiological innovations needed for the development of oral language: four related to the production and recognition of vocal sound, and two concerning the interpretation of symbols (Donald, 1991). It seems quite incredible that all of these would have evolved independently; much more plausible is Donald's concept of an "iterative loop of selection pressure originating at the cultural level" (Donald 1991: 237). But just what made language so valuable to these early human communities, when their ancestors had successfully adapted to life without language for over a million years?

I propose to unpack this question in several steps, the first of which is not concerned with language at all, but with imagination.

Parable: The Birth of the Imagination

The kind of knowledge of the world conveyed by straightforward narrative perception, as described above, might fairly be described as "literal ". To perceive many episodes of picking up a glass as instances of a single kind of activity is simply to identify a useful kind of regularity in nature—to focus awareness on the action's reliably meaningful aspects, without comparing it to anything else. This kind of cognition is reliable, extremely adaptable, and yet fundamentally limited. The only scope it allows for innovation is that of accident, meaning that the cognitive culture of all social animals, including apes, tends to evolve extremely slowly by human terms (Donald 1991).

In *The Literary Mind* (1996), Mark Turner sets out to show that much of human cognition is *non-literal*, and accomplished by projecting one narrative schema onto another, or elements of both onto a “target space” where they are blended into something new. A committed Cartesian, as already noted, Turner views meaning as being “in the head”, and thus his central metaphor also involves projecting such creative ideas onto the quantum-dynamic fog of reality. Through blending, he claims, we *impose* meaning rather than discover it; our encounters with the world bear no direct relationship to our perceptions, for the latter are conjured up through the creative workings of our uniquely human brains. But the ecological paradigm offers a quite different interpretation of Turner’s work—one that enables us to sort out the conceptual confusions in the following passage, for instance:

There is a general principle that may help to connect the study of the brain with the study of the mind: Blending is a basic process; meaning does not reside in one site but is typically a dynamic and variable pattern of connection over many elements. Our conscious experience seems to tell us that meanings are whole, localized, and unitary. But this is wrong. Blending is already involved in our most unitary and literal perception and conception of basic physical objects, such as *horse* and *horn*, and in our most unitary and literal perception and conception of small spatial stories, such as *horse moves* and *horn impales*. When we pay close attention, most mental events appear to involve blending of one sort or another. Whenever we see something *as* something—when we look at the street and see *a woman getting into a car*—we are blending our sensory experience with abstract conceptual structure (1996: 112).

Turner is talking here about something real and important, but since the Cartesian paradigm offers no easy way to distinguish between perception, conception, description and meaning, he manages to conflate all four. In the ecological perspective, the differences are stark. *Meaning* is not in the head,

nor even in the body as a whole; it emerges from an organism's adaptive fit to the world. *Perception* corresponds to the schematic network in the organism that constitutes a dynamic state of awareness of meaning; as we noted previously, such networks consist of complex associations between many different schema representing different possible encounters with a particular world affair. Thus neither meaning nor perception is "whole, localized and unitary," but this does not imply a disconnection between perception and reality. On the contrary, normal perception is exquisitely well adapted to reality, by virtue of both phylogeny and ontogeny—the adaptation of both species and individual to the world. There is nothing arbitrary, nor uniquely human, about such perception: it is given to all creatures with the gift of life.

Conception and *description* are different matters entirely. To watch a horse move, or a woman get into a car, is not the same as to think, say or write the words "horse moves" or "a woman getting into a car." In everyday uses of thought and language, meaning, perception, conception and description are associated so closely and efficiently that we are unaware of the distinctions; the Cartesian paradigm does little to challenge this illusion. In the ecological paradigm, however, Turner's work can be seen as supplying a theory of conception—a theory of the imagination—on which a theory of description, or language, can be built.

The cognitive ability that Turner terms "parable" consists of the projection and blending of narrative schemas in novel, creative ways. If we consider that every individual has an incredibly rich store of such schemas derived from their direct, literal perception of the world, the potential of such a system becomes apparent. Recall that higher animals display the mode of cognition we have termed "prospective awareness," in which acquired

narrative schemas are activated to prepare the organism for possible developments and courses of action arising from a given situation.

Prospective awareness based on literal perception is limited to ensuring the animal's continued achievement of familiar meanings and values in the here and now. If, however, the schematic knowledge of *other kinds of situation* can be selectively brought to bear on the problem at hand, the potential range of awareness and action increases abruptly. In the framework of ecological psychology, we might term this type of prospective awareness *imaginative awareness*.

The imaginative mode of cognition is almost uniquely human, as Donald shows in reviewing the "episodic culture" of the higher apes (Donald, 1991). Imaginative problem-solving can be sporadically observed in individual apes, but never as a constant or generally shared activity. All humans, by contrast, *routinely* use imaginative awareness to guide their efforts towards meaning and value: this is the central message of Turner's work. As one would expect, the most common kinds of imaginative projection involve what Turner calls "small spatial and bodily stories" derived from our direct encounters with the world. Some of these are the following:

- **EVENTS ARE ACTIONS.** Stories familiar from human interactions are projected onto events lacking such agency. Thus, a photocopier can "chew up" documents; the wind can "tear down" trees or "mercilessly beat" a ship; a tidal wave can "sweep" a town away; a path can "lead" us somewhere; fear can "drive" us to action; in the *Odyssey*, the god Apollo can be said to "take" from the crew the day of their return. As these examples show, projection can be familiar and everyday, to the extent that we do not even notice that analogy is involved, or poetically fresh and

therefore noticeable. The important idea, however, is that it is not first and foremost a *linguistic* phenomenon, but a *schematic* one, in which our literal knowledge of one world affair is drawn on to achieve imaginative awareness of another one.

- **EVENTS ARE ACTIONS** is also commonly applied to human situations, using general projection categories such as **ACTORS ARE MOVERS** and **ACTORS ARE MANIPULATORS**. By applying the first, someone can be said to “enter” or “leave” a job, “head towards” or “turn away from” a personal goal, be “paralyzed” or “immobilized” with indecision; using the second, we can “grasp” at opportunities, “take” the lead, “hold” a position for someone, “juggle” a crowded agenda. Both categories are widely used for thinking about thinking:

For example, when we wish to tell the action-story of a mathematical or scientific discovery, we can say that the thinker *began from* a certain assumption, *was headed for* a certain conclusion, *stumbled over* difficulties, *moved faster* or *slower* at various times, had to *backtrack* to correct mistakes, *obtained part of* the solution but was still *missing* the most important *part*, had a notion of *where to look for it*, began at last to *see it*, *followed it* as it *eluded* her, finally *got one finger on it*, *felt it nearly slip away*, but at last *got it*.

(Turner, 1996: 43-44)

- **EVENTS ARE ACTIONS** overlaps in part with another large general category of projections, **EVENTS ARE SPATIAL STORIES**. This includes projections that do not involve actors, as when a building “falls” into disrepair, the stock market “crashes” or the economy “sinks”, a drought “goes on” or “comes to an end”, time “flows by”. Often different projections are coupled, for instance if someone says “The sky’s been thinking about raining all day, and now it looks as if it’s finally getting around to it.” Here **EVENTS ARE ACTIONS** (the weather is the sky thinking) is combined with **ACTORS ARE MOVERS** (thinkers get around), yielding a projection in the category of **EVENTS ARE SPATIAL STORIES**.

Turner concludes that, although *all* abstract thought and reasoning may not be grounded in spatial and bodily stories, the latter certainly play a vital role:

We may say comfortably that our understanding of spatial and bodily stories is so rich, and our powers of parable so developed, that imagination can project spatial and bodily stories at will to any point of the conceptual compass. We may also say comfortably that for many abstract concepts, the spatial and bodily instances are the archetypes. Everyday thought contains conventional projections of spatial and bodily stories onto stories of society and mind and onto abstract reasoning. Their traces are routinely carried in language. (Turner, 1996: 51).

Language, indeed, is at the center of Turner's interests (hence his title, *The Literary Mind*), and we consider further aspects of his analysis shortly. Of present interest, however, are the evolutionary implications of his "archeology of the mind." Imaginative awareness appears to be so rare in nature that it is clearly a risky gambit, and it is not difficult to understand why. Literal cognition encourages the organism to remain within known confines, while imaginative awareness projects the familiar on the unknown with potentially catastrophic results; literal cognition rests on ecological integration, but imaginative awareness is built on private schematic projection *within* the individual. Taken together, these observations suggest that imaginative awareness becomes a viable evolutionary strategy only when a means can be found for *sharing* such private projections.

Consider the difference between isolated individuals exploring the world by means of imaginative awareness, and a community with a collective public store of imaginative stories. In the first case, even when an individual discovers that a particular projection "fits" reality—that is, it proves a reliably useful guide for efforts towards meaning and value—the discovery will be of

no lasting significance unless it can be passed on to the next generation. Moreover, many, many projections are likely to prove a very poor fit to reality, thereby decreasing the adaptive fit of the most imaginative individuals. It is difficult to see how the capacity for parable could ever gain a hold in such conditions. If, however, individuals are able to communicate with one another about their imaginative discoveries, then information on both fit and lack of fit can be passed on, and the collective store of useful projections will grow over time.

In essence, I think this is what language does. Without imagination, we would have no use for language; without language, we could never harness the projective potential of the brain. Of course, we have other means of making our inner visions public: graphic art, sculpture, dance, theatre, music, all may derive their importance to human character and human life from the same basic mechanisms of parable that underlie language. But oral language, along with the other external symbolic storage systems that depend upon it (Donald 1991), is unique in its symbolic power and flexibility. This implies, as Turner suggests, that the “transcendent story of the mind” beloved of modernity, privileging “basic, sober and literal” reason over the riotous jungle of the imagination, is just “wrong at its core” (Turner, 1996: 113). We need language *because* of our capacity for imaginative awareness: because it is the best means we have of sharing, cross-checking and refining our imaginative perceptions of what the world is, and thus of what it could become.

Mimesis: The Discovery of Knowledge-Sharing

The problem with linking the emergence of oral language to the appearance of parable is that such an evolutionary leap appears too sudden to be plausible. There is a huge gap, as Merlin Donald argues (1991), between the "episodic" or "literal" cognitive cultures of non-human species, notably apes, and the oral and literate cultures of humans. This has led Donald to postulate an intermediate stage, lasting for perhaps a million years, which can no longer be directly observed but whose traces are still clearly visible in the communication patterns of modern humans. Quite independently of the detailed validity of his hypothesis, Donald's account is invaluable for thinking about the genesis of a collective communicative system that need not have the specific characteristics of oral or written language.

Communication, in the ecological perspective, is fundamentally concerned with collective effort toward meaning and value: the co-ordering of awareness and action among two or more individuals. Not all co-ordering implies communication *per se*. Individuals of the same species occupying the same habitat will display similar styles of encountering the world, not because they communicate directly with one another, but because the abilities and tools at their disposal and the problems they confront are similar. There is, however, a continuum of awareness of *social meaning* stretching from the most individualistic creatures to the most communal. Social meanings are those ecological meanings that emerge within the populated environments of a given species; they differ from other forms of ecological meaning chiefly in that members of the species not only use them to guide their efforts towards value, but participate in their production as well (Reed, 1996a).

In all animals specialized in collective efforts towards meaning and value, such as apes, there is a strong selective advantage for those individuals who are skilled at the interpretation and manipulation of social meaning. Literal cognition nonetheless limits the use of such skills to the immediate context of time, place, and objective. Communication is situation-bound, geared to immediate consequences, and therefore fleeting. When signals of general utility appear, they are usually common to many unconnected communities and individuals, and therefore instinctual rather than conventional. It is only with the first stirrings of imaginative awareness that communication begins to assume the status of an emergent system, one dependent on the willed co-ordering of awareness and action by groups of individuals.

We met the notion of emergence earlier, when meaning was said to emerge from the system of organism and environment. The implication is that the phenomenon of meaning cannot be fully understood through the study of either the organism or the environment: it is the way the two interact that yields meaning. Similarly, communication can only be understood in terms of the interaction of the individual with the communicative environment embodied in other individuals. Language, for instance, is properly reducible neither to individual psychology nor to an objective system standing apart from its speakers, although these two theoretical orientations have been easily the most popular in the age of modernity. Language consists of individuals encountering a system *inherent in* the ongoing co-ordering of the linguistic acts of other individuals, doing their best to acquire and employ the system for their own purposes, and

thereby changing the system itself in infinitesimal or sometimes more dramatic ways.

Donald's idea is that "mimesis," communicative systems of facial and bodily expression, must logically have preceded the development of the complex cognitive, vocal and auditory apparatus needed for true speech. Mimesis could span the gap between instinctual communicative systems and conventional ones; its long evolutionary history would show the gradual emergence of a range of prototypical languages, albeit more visual than vocal, more concrete than abstract. Mimesis would have begun as imitation and role-play and developed increasingly sophisticated normative forms that were passed from generation to generation within particular communities. As the communicative environment grew in complexity and subtlety, increasing skills of mimetic interpretation and production would have been selected for. And the overall motor of this evolutionary leap would have been the collectivization of efforts toward meaning and value: the "discovery", through natural selection, of a range of ecological niches not yet occupied by any other species, requiring both the flexible coordination of many individuals and the stable transmission of social and ecological knowledge through time.

Mimesis, according to Donald, would have enabled the development of complex social structures, the elaboration of play and teaching, and a range of other activities with potentially strong adaptive value for the community; indeed, it is "still far more efficient than language in diffusing certain kinds of knowledge; for instance, it is still supreme in the realm of modelling social roles, communicating emotions, and transmitting rudimentary skills" (Donald 1991: 198). Indeed, as he points out, mimesis shares many of the

properties of language, including intentionality, generativity, and communicativity: that is, it is typically referential, creative, and public. The first two of these properties clearly reflect the necessity of imaginative awareness in mimetic communities, though it is difficult to assess the limits of such cognitive development, given the relative difficulty of mimetically expressing abstract concepts. It seems likely, at least, that *Homo erectus* culture, if it did involve mimesis, would have also extended to simple pictorial art, to dance, and to ritual.

The third of these properties, communicativity, is crucially implicated in emergence. As a public, shared means of communication, mimesis would link the complex, evolving schematic knowledge of many individuals into a single multidimensional network far surpassing the limits of a single person. Anticipating Donald's argument in a later chapter of *Origins*, one can see mimesis as the prototypical "external symbolic storage system", long antedating techniques for aural or visual symbolic representation. For the first time, one could speak meaningfully of the community possessing knowledge that particular individuals did not, and of this knowledge being progressively refined and built up over time. As one consequence, the communicative system would quickly become a vital collective resource, to be cherished and tended as zealously as the communal fire. Just as rapidly, its origins would come to seem mysterious or divine, since no one could trace the historical layers of invention, transmission and reinterpretation that had produced its current form.

The stage has now been set for the entrance of language itself: a change in medium, more than a change in kind. As we have seen, relatively complex systems of mimetic communication could have evolved from simple non-

arbitrary indicational gestures, through an iterative loop between culturally encoded knowledge and the increasing biological capacity for imaginative awareness. It could well be that certain arbitrary verbal signs were a normal part of these systems. The paleontological record suggests, however, that the transition to oral language took place in a dramatic burst of selective adaptation ending around 100,000 years ago. Among the hallmarks of this astonishing period of innovation were a change in posture, complex alterations to the vocal and auditory organs, and the expansion of the neocortex to previously unheard-of dimensions (Donald 1991).

The most mysterious aspect of this adaptive burst is that it does not appear to have been linked to a change in ecological niche. Language-using humans and mimesis-using humans would both have possessed integrative cultures, and one is left to speculate whether the former simply displaced the latter, or whether the discovery of oral culture was transmitted from group to group, creating similar selection pressures in all. In any case, this selection pressure was clearly cultural in nature (Donald 1991), driven by collective efforts towards the same meanings and values that had characterized mimetic culture. Language was thus as much a technological discovery as a biological innovation. One might say that, as they laboured to develop orality over thousands of years, thereby ensuring the spread of the appropriate genetic traits for speaking, listening, and imaginative projection, modern humans invented themselves.

Language: A Natural Philosophy

What held for mimesis, holds for language. The change in medium, from gesture to sound, undoubtedly speeded up the pace of communication

and unfettered the imagination, but the same epistemological conditions continue to apply. Modernity was premised on a denial of these limitations on symbolic representation, a denial whose philosophical expression is “meaning rationalism,” or the conviction that clear and logically connected ideas constitute “meaning” in themselves (Millikan, 1984) . We shall see in a later section how this premise acquired its hegemonic status in Western philosophy, and what some of the consequences have been in linguistics and education. Here I want to briefly summarize the naturalist alternative, based on the preceding arguments in this chapter and on the brilliant philosophical analysis supplied by Millikan herself.

The central puzzle in the epistemology of language has been to understand how words can be “about” things—how sentences can be true or false, or how knowledge and meaning can be represented in texts. The technical term for “aboutness” is *intentionality*, classically conceived as a kind of mapping relationship between sentences and the world. Typically, also, public-language sentences (spoken or written) have been taken to be mere externalizations of inner-language sentences, so that intentionality in public language should simply reflect the intentionality of “thinking about” something in words. Thinking is held to go on in the head, hence the epistemology of language has focused on the relationship between “the head” (inside) and “the world” (outside). From this point, it is easy to construct various pictures of the relationship between language and reality that are entirely “in the head,” with the connections to the world either being denied (in what Ben-Ze’ev terms “constructive idealism,” the idea that we invent the world we live in: (Ben-Ze’ev, 1995: 50) or mystified (versions of his “naive

realism,” in which the language of thought is usually said to “cut up” reality in one of an infinite number of valid ways).

The ecological paradigm offers an entirely different account of intentionality, in which the embodiedness of the subject and the emergent nature of language and meaning are never lost from view. Language *devices* (the term is Millikan’s) are regarded as no more than tools for the guidance of human awareness and action in the actual physical world. Our knowledge of reality is not primarily linguistic but schematic and dynamic, derived from direct encounters with that world and constantly open to modification based on experience. Language devices function *only* in this context of embodied, active, knowing users; their most important role is to enable imaginative schematic perceptions of the world to be shared, tested and refined by groups of individuals. Tens of thousands of years of such testing and refinement have yielded highly complex systems of language devices, which cannot properly be said to “cut up” reality; rather, they help to co-order their users’ collective efforts towards meaning and value. (I do not mean to imply that such co-ordering is always beneficial, either for individuals or for groups; matters are a great deal more complicated than that, as the next chapter in particular will make clear.)

In keeping with the nature of emergence, language is fundamentally a public phenomenon, preexistent and external to any individual, even though it consists in nothing more than the co-ordering of the linguistic interactions of many individuals. This means that individuals never really “acquire a language” in the sense of incorporating the whole system in all its dynamic complexity. Individuals learn to use *elements* of the system, comprising various natural groupings and sub-systems of public language devices, for co-

ordering their own awareness and actions and those of others in ways that are useful to them. It is true that an individual's private stock of language devices constitutes a system of its own, but the ontology and epistemology of this private system differ strikingly from the emergent phenomenon of public language.

In learning to use the public language system, individuals integrate their schematic knowledge of "doing language" with the rest of their dynamic schematic knowledge of the world. Since no one's linguistic or bodily experience is identical, each individual has their own unique inner system of *intensions* (another of Millikan's terms, equivalent to that individual's set of schemas and schematic networks) to use in the interpretation and production of language devices. As Turner, Millikan and many others have recognized, any language device typically shares many intensions: this is what lies behind Turner's observation that "blending is already involved in our most unitary and literal... conception of basic physical objects, such as *horse* and *horn*, and in our most unitary and literal... conception of small spatial stories, such as *horse moves* and *horn impales*" (Turner 1996: 112). Roughly speaking, a person's intensions for "horse" comprise all those schemas relating to past encounters with horses, and with the public language token "horse," that are available for projection in the processes of imaginative awareness that make language possible. Each schema contributes to a differing extent to the schematic network that constitutes that person's *concept* of "horse"; when "horse" is linked to another concept such as "moves," the two networks combine in a complex fashion, reducing the contribution of some schemas (such as those related to smell or touch) and increasing the contribution of others related to horses moving. Concepts thus occupy a middle ground

between experience and language, or—in the terms we used earlier in analyzing Turner’s work—perception and description. Although we often speak as though concepts were public devices, they are not: they are the private schematic networks underlying individuals’ use of public language devices.

If intensions and concepts are private and schematic, they are incommunicable: hence the importance of public language, but also the difficulty of understanding intentionality. Millikan (1984) dedicates a good part of her book to demolishing the idea that the intentionality of “ideas, beliefs and intentions” determines or explains the intentionality of public language terms, and to proposing a naturalist, evolutionary theory of the latter. Consider, she says, the following question posed by a lay person in conversation with a zoologist: “What are monotremes?” (1984: 153). The speaker may know nothing whatsoever about monotremes, except that “monotremes” is a plural noun sometimes used by zoologists; he may even have completely erroneous ideas about them. The zoologist, in contrast, may know monotremes intimately through a lifetime of study. The private intensions of the two speakers for the word “monotremes” could not differ more; yet these two individuals can meaningfully communicate using the same public language term. The latter’s intentionality is thus independent of its users’ ideas, beliefs and intentions. Individual users can investigate this meaning empirically by finding out what experts on monotremes say about them, or ultimately by studying monotremes themselves, but their relationship to the meaning of the public-language term is always an external one.

We are confronted again with the reality of emergence: the paradoxical fact that the interactions of individual elements can give rise to new forms of order that differ qualitatively from any forms of order in the elements themselves. Of course, life itself shares this property: genetic units have order that is unrelated to the order of individual atoms, and similarly for organisms in relation to genes, communities in relation to individuals, and ecosystems in relation to communities. One of the important contributions of Millikan's work is to provide a formal description of the evolutionary process underlying all of these varieties of emergence. Her "theory of proper functions" (Millikan 1984) shows how the public language system, like other complex natural systems, necessarily evolves and adapts by natural selection based on differential reproduction. In this case, the replicated entities are language devices, rather than genes, organs, or organisms, and the replicating mechanism is the individual speaker/hearer, rather than cells, organisms or communities. Despite the differences in context, the parallels are truly striking, and show why metaphors of life can be so plausibly applied to language, even if such use is frequently misleading.

Millikan suggests that all knowledge of language begins from the observation that a given language device *has* a meaning, i.e. that it functions, within real utterances, either to get hearers to act in certain ways purposed by speakers, or to clarify speakers' thoughts and intentions in ways that hearers find acceptable. Virtually all of our uses of language (allowing for a small degree of innovation, whether intended or accidental) therefore consist in reproducing language devices that we have already observed in communicative action. Of course, such reproduction is carried out in an individual and creative fashion, dependent as it is on the imaginative

projection and blending of narrative schemas. However, in the many situations where the satisfactory use of language devices depends on eliciting the desired response in others, people quickly adapt their private intensions and concepts to maximize the productivity of their public language behaviour. In doing so, they are unconsciously making use of the “stabilizing proper functions” of public language terms: roughly speaking, their ability (under what Millikan terms Normal conditions) to direct awareness to meaningful features of the natural or social worlds or to guide actions that have natural or social value.

In her elaboration of the theory of proper functions, Millikan shows how language devices can be reproduced even though communication does not always succeed from the point of view of either speakers or hearers, even though speakers may choose to use language devices in atypical ways, and even though no two people share exactly the same set of intensions for any language device. It is enough that language devices perform a “stabilizing function” in a critical mass of cases, just as genes can continue to be reproduced even if they only occasionally confer selective advantage. One of the basic stabilizing functions of language devices is to *refer* to natural or social meanings, as “monotremes” refers to a certain class of organisms: this, then, is where intentionality in the classic sense can be said to reside. But many other kinds of stabilizing function can exist; Millikan shows how such problematic cases as “is” and “exists,” “not” and “all,” can be understood in terms of their role in guiding users’ awareness of the world without having any direct referential function (Millikan 1984).

The implication is that *we do not necessarily know what we mean* when we use language—or even, as Millikan puts it, *that we mean, let*

alone... that what we mean is true" (1984: 93). This is because the relationship between language and the world is not mediated in our heads, but in the evolving collective life of the community of embodied and active language users. To know what a language device means is to know what it *does* in the world. Since every user's experience of language is limited and situated, "armchair reflection" (essentially the testing of imaginative schematic projections for conceptual coherence) is not a reliable guide to the connections between language and the world; in particular, it tends to substitute abstract simplicities for organic complexity.

The armchair conception of "knowledge" is a case in point. Language has always been a technology of action, just like our other ways of "knowing"; its most reliable contribution to human knowledge has been its ability to mediate the efficient co-ordering of people's active encounters with the world, through co-ordering of the imaginative projections they use to guide their actions. Words themselves are just words; "knowing" is one of the things we do with them. But only one—for we also use words to legislate and persuade, to confuse and deceive, to gladden, amuse and inspire. All these uses are woven into the texts so celebrated by the apostles of armchair knowledge, as Walter Fisher and other rhetoricians have demonstrated (Fisher, 1987; 1995). Merely encountering such texts, or reproducing selected language devices drawn from them, need not entail any knowledge beyond the rhetorical. To know what the texts *mean* involves understanding the ways of encountering the world they support, the human actions that they help to guide.

This brings us back to Dorothy Smith and her insistence, with Marx, on "returning to what people do, on seeing how social forms are produced by

actual living individuals... not to a theoretical but to an empirical examination of the social production of ideology" (Smith, 1990a: 57). With the replacement of "social" by "linguistic," we arrive at a concise statement of what critical realism implies for the study of language. Theories of language as an impersonal, abstract system available for the expression of objective truths have been "worked up" from reality by situated, embodied individuals. One task of the present work is to supply an alternative theory that treats the reality of such individuals as central, rather than as an irrelevant detail.

The other side of this project, as implied by Smith and by our naturalist epistemology of language, is to understand what this and other theories can *do*: what kinds of awareness and action in the world they support or hinder. It is not enough merely to hope, or to assert, that a speaker-centred theory is emancipatory while modern structuralist theories are hegemonic. At the least, this must be argued on the basis of existing textualized evidence; better, it should be shown how the theory might productively be brought into contact with reality. This task will occupy us later, in the Third Turn.

Encountering Language

As an emergent feature of the human environment, language may be thought of as a specialized system of social signs that evolves through natural selection on the basis of its efficacy in coordinating people's efforts towards meaning and value. Because public language devices are typically shared, the question of whether specific linguistic features will proliferate or disappear is not determined by the fate of particular individuals, but by that of the language *community* in which such features are reproduced, in the same way

that the natural selection of genes takes place primarily at the level of the organism (the phenotype) and not—*pace* Richard Dawkins—at the level of individual genes (Mayr, 1988). For this reason, the ecology of language communities, or more broadly cultural communities, will occupy us at some length in Chapter 7, at the start of the Third Turn. This will, however, require some further groundwork to be laid.

If any twentieth-century theorist grasped the profound implications of a materialist account of language, it was the Russian literary critic Mikhail Bakhtin. Long silenced under Stalinism, Bakhtin was rediscovered towards the end of his life, in the Brezhnev era, and his influence on Western thought has grown apace in the years since then. Beginning with the epochal work *Marxism and the Philosophy of Language*, published under the name of a colleague in 1930 (Voloshinov, 1973), Bakhtin developed a far-reaching theory of literature and the imagination based on what he called “dialogue”, but which would now (under French influence) more typically be termed “discourse” (Bakhtin, 1981). Particularly germane to the present work is Bakhtin’s theory of “speech genres”, elaborated in an essay written in 1953 (Bakhtin, 1986). In the remainder of this chapter, I will suggest how Bakhtin’s work can be integrated with the ecological epistemology of Edward Reed, and consider some of the immediate implications for our thinking about language.

Dialogue and Genre

Bakhtin begins with an observation that makes his affinities with the epistemology of Marx and Smith abundantly clear:

Speech can exist in reality only in the form of concrete utterances of individual speaking people.... As compared to the boundaries of the

utterance, all other boundaries (between sentences, phrases, syntagmic units, and words) are relative and arbitrary. (1986: 71)

In contradistinction to these latter units of grammatical analysis (of which untutored speakers are typically unaware), Bakhtin argues that the utterance is defined by a *material fact*, the change of speaking subjects, when “the speaker has said (or written) *everything* he wishes to say at a particular moment or under particular circumstances” (1986: 76). That is, the utterance is the natural unit of linguistic communication. It should be pointed out, perhaps, that in certain speech genres it is permissible for a single utterance to be interpolated with interjections or queries from other speakers; in such cases, the speaker’s intention is more relevant to determining what constitutes an utterance than the “material fact” of uninterrupted speech. Yet Bakhtin’s central point is the same as Millikan’s: that language devices are meaningful only in the context of actual communication, not as isolated and abstract signs.

Utterances are public-language devices made up of smaller language devices down to the level of individual sounds and marks, selected and arranged for the purpose of directing the hearer/reader’s awareness or actions in a particular way (or in many ways, sometimes contrasting or contradictory). As Bakhtin recognized, they are extremely diverse, particularly in length, ranging “from the single-word rejoinder to a large novel” (1986: 81). Yet the social contexts in which utterances are produced and interpreted are considerably less diverse, because linguistic communication relies on *the prior achievement of shared awareness* by the participants. Linguistic signs are not interpreted automatically, simply by virtue of their availability in the environment. Hearers or readers must perceive them as meaningful and

deliberately include them within the scope of their awareness. And this process builds in turn on a still more basic feature of human interaction.

As Reed argues, learning when and how to achieve shared awareness with another person is a vital skill that children begin to acquire soon after birth (Reed 1996). By the age of nine to twelve months, children are able to enter into “triadic interaction frames” that include a caregiver and an object or event; to do so, they must master “what appear to be highly complex cross-modal perception and action skills” (Reed 1996: 129). In other words, our specialization as a communicative species has entailed the evolution of an ability to use contextual clues in others’ actions to guide our own: we follow a gaze or a gesture, respond to a facial or bodily expression, learn through observation as much as through doing. “Language acquisition”, which develops rapidly throughout the second and third years, depends fundamentally on this predilection. First, the child learns to interpret linguistic signs as she does other contextual clues, to achieve shared awareness (typically with a caregiver) of immediately relevant world affairs; as time goes on, the child increasingly encounters situations where the third element in the triadic interaction frame is no longer the actual object or event itself but the public language device that refers to it. In this way the preexisting public language system scaffolds the development of imaginative awareness in the child through the mediation of increasingly diverse and sophisticated interaction frames. Of course, many of the more specialized linguistic interaction frames are only mastered much later in life, if at all.

From the viewpoint of one of the individuals involved, there are two important dimensions to this social structuring of communication: the *interpersonal* dimension, i.e. the cues that tell us who is speaking, why they

are speaking to us, what they may wish to achieve, and so on; and the *intentional* dimension, i.e. what they are speaking *about*. It is the first of these dimensions that corresponds to the Bakhtinian speech genre, and it is an inescapable feature of human communication.. As Bakhtin puts it, “like Molière’s Monsieur Jourdain who, when speaking in prose, had no idea that was what he was doing, we speak in diverse genres without suspecting that they exist” (1986: 78). In the range of everyday interpersonal interaction frames, “we cast our speech in definite generic forms, sometimes rigid and trite ones, sometimes more flexible, plastic, and creative ones (everyday communication also has creative genres at its disposal).” And the reason for this is that all of the language to which we are exposed is itself produced within the selfsame interaction frames:

We know our native language—its lexical composition and grammatical structure—not from dictionaries and grammars but from concrete utterances that we hear and that we ourselves reproduce in live speech communication with people around us. We assimilate forms of language only in forms of utterances and in conjunction with these forms. The forms of language and the typical forms of utterances, that is, speech genres, enter our experience and our consciousness together, and in close connection with one another. To learn to speak means to learn to construct utterances (because we speak in utterances and not in individual sentences, and, of course, not in individual words). Speech genres organize our speech in almost the same way as grammatical (syntactical) forms do. We learn to cast our speech in generic forms and, when hearing others’ speech, we guess its genre from the very first words; we predict a certain length (that is, the approximate length of the speech whole) and a certain compositional structure; we foresee the end; that is, from the very beginning we have a sense of the speech whole, which is only later differentiated during the speech process. If speech genres did not exist and we had not mastered them, if we had to originate them during the speech process and construct each utterance at will for the first time, speech communication would be almost impossible (1986: 78-79).

Unless contextual clues are wholly absent, we are rarely forced to “guess” the genre of someone’s speech: the interpersonal interaction frame will tell us. The exceptions arise when we encounter wholly unfamiliar situations, for instance in a foreign language. As many second language learners have discovered, the purely grammatical and lexical description of a language gives little insight into what native speakers will *actually* say in a given situation. Even speakers who “have an excellent command of a language” may “feel quite helpless in certain spheres of communication precisely because they do not have a practical command of the generic forms used in the given spheres” (Bakhtin 1986: 80).

Thus, a speaker is given not only mandatory forms of the national language (lexical composition and grammatical structure), but also forms of utterances that are mandatory, that is, speech genres. The latter are just as necessary for mutual understanding as are forms of language. Speech genres are much more changeable, flexible, and plastic than language forms are, but they have a normative significance for the speaking individual, and they are not created by him but given to him (1986: 80).

Now we turn to the second dimension, that of intention. In a triadic interaction frame, communication is structured not only by the relationship of the communicators, but also, semi-independently, by the object of their joint attention. The interpersonal relationship and its attendant speech genres display evolutionary continuity over time: that is, each encounter builds on and modifies the frame developed in previous interactions. Exactly the same is true of the language tokens used to co-order the imaginative awareness of the interlocutors with regard to a particular topic. Intergenerational continuity ensures that language users entering a particular field of meaning often find it already mapped and cultivated in the form of

established complexes of language terms that are reproduced as a coherent subsystem. Since the stabilizing functions of language devices have in general to do with co-ordering the awareness and actions of speakers and hearers, these linguistic complexes are sustained by correspondingly complex social practices—systems for perceiving, acting in and communicating about the world. Once again, Bakhtin provides a wonderfully clear description:

The topic of the speaker's speech, regardless of what this topic may be, does not become the object of speech for the first time in any given utterance; a given speaker is not the first to speak about it. The object, as it were, has already been articulated, disputed, elucidated, and evaluated in various ways. Various viewpoints, world views, and trends cross, converge, and diverge in it. ... The utterance is addressed not only to its own object, but also to others' speech about it....

But the utterance is related not only to preceding, but also to subsequent links in the chain of speech communion. When a speaker is creating an utterance, of course, these links do not exist. But from the very beginning, the utterance is constructed while taking into account possible responsive reactions, for whose sake, in essence, it is actually created. As we know, the role of the *others* for whom the utterance is constructed is extremely great. We have already said that the role of these others, for whom my thought becomes actual thought for the first time (and thus also for my own self as well) is not that of passive listeners, but of active participants in speech communication. From the very beginning, the speaker expects a response from them, an active responsive understanding. The entire utterance is constructed, as it were, in anticipation of encountering this response (1986: 93-94).

In current social science theory, the ready-made term for these structured fields of meaning and practice is *discourses*. Because nearly all acts of communication draw on the previous experience of the participants, both genres and discourses can be viewed as evolutionarily continuous subsystems of language devices which utterances draw on, reproduce and modify.

Although the complete set of language devices within a language community (see Chapter 7) themselves constitute a system—"a language" in the general linguistic sense—it is the subsystems of genre and discourse that play a greater role in co-ordering awareness and action in concrete situations. This parcelling up of the linguistic space is what Wittgenstein (1953) referred to as "language games", and the ecological perspective confirms that it is only by mastering such *practices* that one can acquire a sophisticated command of linguistic *meaning*.

Bakhtin (through his translators) referred to this property of natural language as *heteroglossia*. Because meanings (in the sense of stabilizing functions) are always shared between two or more people, socio-ideological "languages" develop: "language of social groups, 'professional' and 'generic' languages, languages of generations and so forth" (1981: 272). These in turn are subject to "forces working toward concrete verbal and ideological unification and centralization" at the national (or pan-linguistic) level, embodying the ideal (although never the full reality) of a common unitary language (1981: 271). Language thus evolves between the poles of heteroglossia and unification: such is its essential nature. "Language—like the living concrete environment in which the consciousness of the verbal artist lives," Bakhtin wrote in 1935, "is never unitary."

It is unitary only as an abstract grammatical system of normative forms, taken in isolation from the concrete, ideological conceptualizations that fill it, and in isolation from the uninterrupted process of historical becoming that is a characteristic of all living language. Actual social life and historical becoming create within an abstractly unitary national language a multitude of concrete worlds, a multitude of bounded verbal-ideological and social belief systems; within these various systems (identical in the abstract) are elements of language filled with various

semantic and axiological content and each with its own different sound (1981: 288).

But language is only part of the complexity of “actual social life”. To anchor Bakhtin’s insights firmly in a critical realist framework, we need to consider more carefully the relationships between genre, discourse, and the non-linguistic world.

Discourse and Experience

As I have emphasized throughout, language does not exist of and for itself, but as a means of coordinating people’s efforts towards meaning and value in their lives as embodied, historically situated beings. One of the most difficult challenges for the linguistic sciences is to study language as a system without losing sight of its material (natural, biological, social) foundations. In order to facilitate the switching of perspective between these two worlds, I propose—adapting an ingenious convention from James Paul Gee (1991)—to distinguish between purely *linguistic* structures called utterances, genres, and discourses, and the *material* circumstances of their production, which for convenience we can call Utterances, Genres, and Discourses.

Utterances are, quite simply, *meaningful acts*. They include the Austinian idea of “speech acts” as well as their written equivalent, “texts” or *écrits*, but in both cases I wish to lay greater emphasis on the material and social context than has been usual in any version of pragmatics. Similarly, whereas the terms genre and discourse were used above to refer to the interpersonal and intentional dimensions of a *linguistic* interaction frame, Genres and Discourse refer to the same dimensions in *any* interaction frame. Any act of human communication, therefore—linguistic or otherwise—can

be regarded as an Utterance in which one or more Genres and Discourses intersect and blend. Whatever the biological basis for individual creativity, *cultural* creativity depends crucially on this blending of Genres and Discourses to yield new forms and new content—to co-order interpersonal and intentional awareness and action in novel ways.

Focusing only on the linguistic component of communication often serves to mystify the processes involved. For example, the words of the present work constitute an *utterance* within the *genre* of dissertations; they draw upon the *discourses* of (naturalist) philosophy, (ecological) psychology, and several others. Sophisticated techniques exist for analyzing genre and discourse in this strict linguistic sense, just as similarly sophisticated techniques exist for analyzing more basic units of language such as morphemes, words and syntactic structures. But because such strict linguistic approaches screen out much or all of the material and social context, they are of only limited utility for the study of linguistic ecology. There is no reason to suppose that we can understand the behaviour of *any* linguistic system on the basis of linguistic evidence alone, when the people responsible for the reproduction of language tokens are aware of and acting in a far more complex material and social environment than any text can capture.

A far richer understanding of this particular utterance would come from examining its status as an Utterance: a text authored by a specific individual within a specific institutional and intellectual environment, shaped by specific objectives and constraints. This is a messy world, far more difficult to pin down than the crystalline certainties of the written Word (one can conduct pure linguistic analysis sitting at one's desk), but central to the project of a *naturalist* linguistics which aims to uncover the social and

material regularities underlying language-in-use. The insights and methods of abstract linguistics are always available to be drawn upon, but only as an adjunct to the investigation of language as an observable, socially and materially situated reality. One promise of this approach is to show how the sociology of language can become more *sociological* (cf. (Williams, 1992); a complementary one is to suggest how sociology could (and why it should) become more *linguistic*.

A fundamental concern in this effort is to understand the variable relationship between language and experience. In Edward Reed's ecological theory (1996), firsthand experience is that obtained directly through "encountering the world", through the evidence of the senses and the immediate feedback of the world on our efforts towards meaning and value. Thus, when one observes and listens to a speaker, or handles and scans the pages of a book, one is absorbing—largely unconsciously—a great deal of contextual information that has not been prefiltered in any way. Secondhand experience, in contrast, is conveyed through language or other representations: in our examples, by engaging skills of imaginative awareness to understand what the text or speaker *means*. What makes the latter experience secondhand, Reed explains, is that "one has to take information that is selected by someone else":

When one is examining the world for oneself there is no limit to the scrutiny—one can look as carefully as one wishes, and one can always uncover new information. But this is emphatically not the case with secondhand information. A description of a scene—even a photograph or videotape of a scene—necessarily *selects* information; unless one is able to investigate the original scene, there will always be an externally imposed limit to one's scrutiny of it. This selection makes secondhand experience crucial to the sharing of experience, but what is gained in the ability to

focus and point another's attention to something is lost in comprehensiveness and openness (Reed, 1996b: 94).

Discourses vary greatly with respect to the importance they accord firsthand experience. Many informal Discourses of the home and community, as well as the Discourses associated with the traditional skills of many indigenous peoples, emphasize practice; language is used as an adjunct, not as a substitute for doing. On the other hand, very many Discourses in the modern world downplay firsthand experience, or even render it invisible, as Dorothy Smith has argued (1990). This sets up a tension in every Discourse: primary experience yields the subject matter, but the use of language (and other means of representation) *forces* the selection of secondhand information, which—through the Bakhtinian process of dialogue—may be reproduced almost indefinitely *as a substitute for experience*. This is particularly true when language can be decontextualized and preserved in written form (Smith 1990)—but it should be stressed that highly textualized and standardized (disciplinary) Discourses represent merely one end of a continuum, and that even they differ greatly in the importance they accord to primary experience.

Take, for instance, any discipline within the natural sciences. In the early stages of training (socialization) as a professional scientist, great emphasis is placed on secondhand information—the great store of existing textual descriptions of the natural world, painstakingly accumulated over generations. Non-scientists often assume that mastery of this material is the most important and most difficult aspect of being a scientist. But excellence as a scientist in fact relies on a wholly different kind of talent: the fine discrimination of firsthand experience. Good scientists acquire a sensitivity

towards the object of their study that goes beyond anything they will ever put into words. The success of the natural sciences has rested upon the institutionalization of dynamic and complex feedback loops between firsthand and secondhand experience, both in the work of individual scientists and—equally importantly—in science as a social institution. Just how complex this feedback is was first suggested by the work of Bachelard in France and Kuhn in the U.S., who both pointed out that theories tend to be retrospectively constructed to make the process of discovery appear rational, while in fact important new discoveries tend to appear unexpectedly and to be initially discounted by most of the scientific establishment. It is the latter's ability to tolerate, accommodate, and finally assimilate such triumphs of primary over secondary experience that has insured the continuing vitality of the natural sciences; but it is a far more conflictual and uncertain relationship between reality and discourse than is usually recognized.

If even the natural sciences are beset by the dangers of discourse, it is hardly surprising that the human sciences have been its perennial victims. Repeated, precise observation of natural phenomena is demanding enough, and it has the advantage of being able to build on centuries of experience with essentially the same materials. In the human realm, everything is in perpetual flux, implying that few observations can be repeated under the same conditions. The observable phenomena—human behaviour—are inextricably intertwined with subjective beliefs and historical patterns of discourse, neither of which can be directly observed but only inferred. Furthermore, people can be changed by theories, or even by empirical investigation, as the natural world (at least at superquantum levels) typically cannot; conversely, researchers too can be changed by their research, an

unsettling prospect for many. Several factors thus combine to encourage the “hasty escape” from reality in which, according to Dorothy Smith, many social scientists have taken refuge. The ties to primary experience are weakened, and with them the possibility of naturalism; instead come the factional wars between Discourses, each having staked a claim to one bounded perspective on one small corner of reality.

An additional complication comes into play when language-in-discourse becomes the *object* of discourse in itself, giving rise to discourses with an even more attenuated relationship to the material world. Despite their relative abstraction, such discourses are as effective as any others in modifying the awareness and actions of speakers and hearers. If, for instance, one is exposed to a discourse which makes persistent use of the linguistic sign “nation”, one tends to accept this as referring to a fact about the world (nations really exist, even if their definition is problematic) rather than a fact about language (people talk and act as if nations really existed)—and thus one becomes implicated in reproducing this discourse oneself. To adapt an argument from Gee (1992), this “cooptative” property of discourse may arise from our need to *react* (often rapidly) to linguistic information, even if the value of this reaction lies in social acceptance rather than environmental adaptation. We cannot afford to “bracket” indefinitely certain terms that we are unclear about, let alone question or deconstruct them à la Socrates or Derrida. Instead, we construct a series of what Millikan calls “language-based intensions”, which allow us to participate in the discourse without necessarily having a clear idea of what we mean (or whether we mean anything at all).

Consider the parallels between such “linguification” of experience and the “commodification” of labour studied by Marx. The essence of commodification is that what people do or produce acquires an “exchange value” which is independent of its direct “use value”, and the distribution of social goods is then tied to the system of exchange values *alone*. Similarly, the more that material relations are organized on the basis of linguistic descriptions of reality (whether written or spoken), the greater is the potential for unspoken aspects of reality to be treated as if they did not exist. Accordingly, the struggle for truth *within* established discursive norms, like the struggle for a fair distribution of goods within a capitalist economy in a particular stage of development, encounters limits that are set by the overall system. The greater struggle is to *expand* or *alter* the system norms to better reflect reality, or the construction of a sustainable and just society. Where Marx, influenced by Hegel, viewed such processes as leading to a definite endpoint, it is more plausible to suppose that they are never-ending, each change in norms leading to new exclusions and imbalances.

Discourses, therefore, are never wholly static or monolithic, unless they are also moribund. Because their maintenance depends on their meaningfulness, and all meanings ultimately inhere in the relationship between living, socially and historically positioned actors and their surroundings, viable Discourses must maintain a degree of openness to lived reality. This in turn ensures their eventual modification, transformation, and possible death. *Contra* James Paul Gee (1992, 1996), I believe that Discourses, however widely or narrowly defined, are very rarely (if ever) placed in a position of mutual and absolute opposition to one another. To be sure, any discourse can be formulated in abstract, ideologically pure terms so as to

exclude any possibility of compromise; but life does not tolerate purism or totalism of any kind very well. Conflict, cross-fertilization, and compromise are omnipresent features of our social and linguistic worlds, both within and between Discourses, at all levels. One should not mistake idealized descriptions for discursive reality, however useful they are in discerning order in the surrounding flux.

It should now be clear why the social theorists of “discourse” have so often focused on texts and disciplines, in contrast to the focus of linguists on oral exchanges (Pennycook, 1994b). Textualized, standardized discourses exemplify the power of language to “stand in” for reality. Michel Foucault, in particular, has convincingly demonstrated that various kinds of professional discourse exert considerable coercive power by virtue of the meanings that they create and sustain. Foucault’s insights have helped fuel the post-modern attack on the established disciplines, often to emancipatory effect. Surprisingly, however, their linguistic implications have been largely ignored (Pennycook 1994). What they reveal—as Vygotsky and his followers have long claimed—is that many features of human subjectivity can be directly attributed to the peculiar properties of language.

The Ecological Subject

A close contemporary of Bakhtin, Lev Vygotsky initiated a dramatically new approach to psychology in the 1920s and 30s, based on the notion that most of the “higher mental functions” characteristic of humans could be best understood as social and historical developments, not phylogenetic or ontogenetic ones. Drawing on the work of the French psychiatrist P. Janet, Vygotsky formulated one of his key insights as follows:

The history of signs... brings us to a much more general law governing the development of behaviour. Janet calls it the fundamental law of psychology. The essence of this law is that in the process of development, children begin to use the same forms of behaviour in relation to themselves that others initially used in relation to them.... With regard to the area of our interest, we could say that the validity of this law is nowhere more obvious than in the use of the sign. A sign is always originally a means used for social purposes, a means of influencing others, and only later becomes a means of influencing oneself.... The mental function of the word, as Janet demonstrated, cannot be explained except through a system extending beyond individual humans. The word's first function is its social function; and if we want to trace how it functions in the behaviour of an individual, we must consider how it used to function in social behaviour (Vygotsky, 1981a: 157-158).

This Vygotskian perspective, so closely allied to the ecological one, has yielded a wealth of insight into the ways that individuals are cognitively integrated with their social context. Vygotsky viewed "signs," including "various systems for counting; mnemonic techniques; algebraic symbol systems; works of art; writing; schemes, diagrams, maps, and mechanical drawings; all sorts of conventional signs; and so on," as *collectively developed and shared psychological tools* (Vygotsky, 1981b: 137). This idea foreshadows (and unites) the two celebrated metaphors of Wittgenstein's *Philosophical Investigations*, the "language game" and the "tool-box" (Wittgenstein, 1953; Wertsch, 1991: 105). The first metaphor draws attention to the collective (in Bakhtinian terms, dialogic) stabilization of linguistic function within social groups; the second metaphor focuses on the significance of such a system for the individual. Together they give us a powerful framework for understanding the entry of the subject into language.

A Vygotskian subject can be thought of as encountering language within the dialogic environment described by Bakhtin—a system of co-ordered awareness and action realized within utterances, speech genres, and discourses (Bakhtin’s “social languages”). Learning a language is therefore in no sense a unitary activity, because the language that individuals are exposed to is not unitary either. Language acquisition can *only* occur through one’s entry into particular Genres and Discourses, realized within Utterances that bear (to varying extents) the individual stamp of speaker and context. As one acquires the relevant skills, one also acquires control of (some of) the phonological, lexical and syntactic resources of the idealized unitary language; but one’s ability to deploy these resources in meaningful ways—to actually use them for communication—is always limited by the Genres and Discourses of one’s cultural milieu. Equally, one’s knowledge of the linguistic or cultural system as a whole, or even of its most important subsystems, is never complete, relying as it does on encounters with instantiations in the form of Utterances. Thus we are left to guess at the parts of the system that we do not know from experience, the range of meanings and values it affords and the constraints it entails.

Such imaginative work is pursued through the construction or appropriation of small stories, concrete and abstract, that appear to make sense of what we observe. The Genre of school exams, for instance, is typically underpinned in middle-class white society by stories about learning (students as receptacles filled to varying degrees), evaluation (tests as tools for linear measurement), achievement (attributable to individuals rather than groups) and so on. Individuals do not arrive at these small stories randomly. Initially they may construct quite idiosyncratic (and even highly perceptive) stories

about a newly perceived form of order; but over time their stories tend more and more to be drawn from the prevalent Discourses around them. This has genuine adaptive value, in a sense, because these actually are the stories that guide many other people in their discursive actions. Many middle-class people really do believe that schools put knowledge into their children, that tests provide an objective measure of learning, and that individuals are responsible for success or failure. These are cultural myths, of course; but myths (or what Gee 1996 calls “tacit social theories”) are what we live by.

As well as adjusting her imaginative awareness to the Discourses around it, the Vygotskian subject also learns to guide her *direct* actions and awareness through the self-directed use of language. This kind of learning can follow very quickly from other-directed use (as in symmetrical dialogue, e.g. the turn-taking that characterizes many kinds of play), or it may be preceded by a lengthy lag (as in asymmetrical dialogue, e.g. relating to age-dependent activities that the child can monitor but not accomplish). Whenever *both* uses have been mastered, however, the result is a paired set of skills at the subject’s disposal: she can both produce utterances *and* use those same utterances to guide her awareness and actions in the world. (Note how this relationship is potentially true of all of the “psychological tools” identified by Vygotsky, but rarely reaches the same degree of ubiquity in a population as the mastery of oral language.) Entry into language thus greatly expands the individual’s potential for autonomous action. Ecological information is no longer necessarily tied to a particular social or physical environment: it can be carried from place to place in the form of acquired linguistic and imaginative skills. In other words, as well as using *the world itself* to focus the effort after meaning and value, as all animals do, people can use *the ways they have*

developed of talking about and imagining the world to accomplish similar goals, both collectively and individually.

For Vygotsky, all of what he termed the higher mental processes were consequences of the subject's acquired ability to guide its own awareness by means of language:

By means of words children single out separate elements, thereby overcoming the natural structure of the sensory field and forming new (artificially introduced and dynamic) structural centres. The child begins to perceive the world not only through his eyes but also through his speech. As a result, the immediacy of "natural" perception is supplanted by a complex mediated process; as such, speech becomes an essential part of the child's cognitive development (Vygotsky, 1978: 32).

When we recall the natural constraints operating on the language system, however, we see that the child is in fact adapting its relationship with the world to conform with the Genres and Discourses that surround it. Another way to think about this is the following: imagine human infants as being born simultaneously into a *physical* environment, the one we share with all the living things around us, and an invisible but equally real *linguistic* environment. As reviewed briefly in Chapter 1, the physical environment is now understood not consist of independent parts in any fundamental sense, but of a web of relationships extending from the quantum level to the level of ecosystems (Capra 1996). The best model we have available for conceptualizing reality in this way is the network:

For example, we can picture an ecosystem schematically as a network with a few nodes. Each node represents an organism, which means that each node, when magnified, appears itself as a network. Each node in the network represents an organism, which means that each node, when magnified, appears itself as a network. Each node in the new network

may represent an organ, which in turn will appear as a network when magnified, and so on (Capra 1996: 35).

With a little practice, one can learn to shift back and forth between the mechanistic world view, which focuses attention on parts (things), and the “systems” view, which focuses attention on relationships. (Capra likens this to the figure/ground shift familiar from certain kinds of optical illusion.) Thus, as I sit here typing at a desk, I am simultaneously aware of myself as a bounded individual occupying a certain place in physical space, *and* as a node in the circulation of oxygen and carbon, water and energy through the biosphere. Without the life that surrounds me, I would not be here. And this same shift in perception can be applied to the linguistic environment. At one level, as I sit here typing, I perceive myself as an individual embodying a certain unique history and acting in an autonomous way. These are assuredly *my* words lining up on the computer screen, painstakingly extracted from a stream of inner speech and the imaginative projections underlying it. But at the same time they are not my words. I have learned to use them, but I did not create them. They are part of an utterance, one node in a ever-changing web of discourses and genres, without which the utterance itself could not exist. I was born into this linguistic world as surely as I was born into the physical one; my life has been shaped by efforts to extract meaning and value from its affordances. These affordances are *specific to the linguistic habitats through which I move*. Language, as it were, has its own geography—its crags and plains, its jungles and swamps; one lifetime is sufficient to explore no more than a tiny part of its domain. For whatever our technological mastery in the physical world, in the glottosphere we must make our way by dint of personal effort, each new advance in the production and sharing of utterances opening up an even vaster universe of linguistic meaning.

To the extent that my consciousness of self, my inner life, depends on language, my subjectivity itself can be viewed as a node in the web of discourse. In *Marxism and the Philosophy of Language*, Bakhtin/Voloshinov prefigured the postmodern claim that this allegiance to language is total:

Not only can experience be outwardly expressed through the agency of the sign... but also, aside from this outward expression (for others), experience exists even for the person undergoing it only in the material of signs. Outside that material there is no experience as such. In this sense any experience is expressible, i.e., is potential expression.... Thus there is no leap involved between inner experience and its expression, no crossing over from one qualitative realm of reality to another (Voloshinov, 1973: 28)

Indeed, the linguistic terms reified by discourses are not limited to abstract or fictional phenomena, but include terms for groups of people, other discourses, social practices, and other features of the human environment. Thus, when the Vygotskian subject begins to reflect on her "selfness" by means of inner speech, she does so as an *object* of discourse as well. The intensions at her disposal reflect collective judgements and expectations, the sedimented meanings and values from a river of language extending from long before her birth. Even when these intensions are contradicted by her direct experience, she may find it difficult to focus awareness on such contradictions in the absence of a suitable language sanctioned by discourse. In other words, inner speech is not entirely *ours*: it is, in a way, a Trojan horse used to smuggle the normative forces of the Other into the citadel of the self.

Nevertheless, Voloshinov's totalizing claim clearly goes beyond anything that could be justified within the conceptual framework we have been developing. It is more plausible to think of the aware individual encountering its linguistic environment in ways that parallel its encounters

with the world (Reed 1996). Genres and discourses, as well as the phonological, morphological and syntactic relations embodied in speech, endow this environment with its characteristic (multidimensional) topography. At a level of awareness well below that of inner speech, we scan our linguistic surroundings for affordances (which in the case of language *are* meanings), use them to guide our behaviour, and learn to produce them ourselves in rewarding ways. All these activities are directly comparable to other highly efficient efforts towards meaning and value, although the *combination* of information pickup, collectively oriented action, and individual tool creation is unique to human semiotic systems.

Consider an example of how our experience of the world changes as we move independently through these environments. Alone on vacation in an alien land, surrounded by unfamiliar people and Discourses, we are maximally disoriented, thrown back on our own resources. Suddenly we encounter another traveller of our own age and background: there is an immediate sense of familiarity, of being in known territory. If the two of us travel together, the entire quality of the experience changes; if, rather than a stranger, our family is travelling with us, it will be different again. So too when we move from an unfamiliar physical environment to a familiar one (say, back in the hotel), or from an entirely alien discursive environment to one whose general features we recognize even without knowing the language (say, from an animist religious ceremony to a street market). We travel in many dimensions at once, negotiating our way between the known and the unknown.

Thus, although our acquisition of inner speech has important consequences for the ways in which we interpret our experience, it is but one of the

techniques we use for extracting meaning and value from the world—even the linguistic world. Inner speech may be essential for the writer; it may be useful in many concrete situations as a means of focusing awareness on significant aspects of a task; but it is not involved in a great deal of meaningful human activity, including much that we might wish to classify as thought (Reed 1996: 173-6). It is only when the subject is actually *using* language publicly that we can locate her with certainty in the surrounding web of discourse. Even if we attempt to monitor our own inner speech, deciding *what* we are thinking is always a public act, an utterance (even if only on paper or in words heard silently in our head). And so one of the basic tenets of discursive psychology (Harré & Gillett, 1994) seems justified: that access to our private experience of language is not necessary in order to study us as linguistic subjects. On the other hand, the ecological approach roundly contradicts Harré's claim that linguistic data are *all* we need for a science of human psychology.

Each meaningful use of language forces us to position ourselves within the web of discursive relations; but that within certain limits this positioning is dynamic, unpredictable, and modifies the web itself. Thus, over time, we can—perhaps—remodel our discursive environment to better serve our needs. To accomplish this in more than an localized and *ad hoc* way, however, it is vital to understand the genesis of this contemporary environment: the broad ecology of knowledge and imagination in the modern era and its impact on linguistics and education. This is the task that will occupy us in the following chapters.

5 Knowledge and Modernity

It is no exaggeration to say that the Cartesian revolution in epistemology laid a crucial founding stone for the modernist alliance between intellectuals and the State. Like all revolutions, this one was foreshadowed. The European mind had been conditioned for a millennium by the Christian emphasis on one God, one supreme set of truths embodied in a sacred text interpreted by experts. A century before Descartes, the Reformation was born of dissatisfaction—not with this epistemology, but with the limitations of applying it. The Church was too unwieldy, too pragmatic, and often too corrupt to enforce “true knowledge,” or proper Christian belief and conduct, in the masses. So Luther proposed to transform each individual into their own self-disciplining expert, confident that the written word itself would have the power to co-order hearts and minds—and if not, then education of the masses by those who knew the true Word would set matters right.

By Descartes’ time, the Lutheran program had contributed to a Europe in turmoil, characterized by vicious sectarian wars, the final collapse of the feudal order, and increasing intellectual skepticism towards claims of universal truth (Toulmin, 1992). The “enlightened and not-so-enlightened rulers” who were seeking to establish a new order under their own terms had little use for Renaissance humanism: “When seen from the watchtowers of new ambitious powers, diversity looked more like chaos, skepticism like ineptitude, tolerance like subversion” (Bauman, 1992: xiii). Far more appealing to the would-be imposers of order was the Christian vision of one

supreme truth, as long as it might be interpreted to serve their needs. This, then, was Descartes' contribution. Christianity had already moved truth from the World to the Text; now the French philosopher moved it to the Mind, and thereby set modern epistemology on its path of conquest.

Descartes himself can have had little inkling of the wheels he was putting in motion. His epistemology is really an elaborate description of the way that the literate intellectual *experiences* knowledge. In Cartesian philosophy, certainty is to be found in reflection, in the private quest for clear ideas, which can be developed, tested and refined in the solitude of a library or study. Entirely hidden from view are all the complex natural and social processes that enable this experience: the endless renewal of air and water and living things; the equally endless labour of human beings, individually and collectively, to extract value from this natural environment; the complex social hierarchies and systems of exchange that enable the intellectual to profit from such labour of others; the emergence of language from its use in co-ordering awareness and action through many generations; the development of systems for writing, printing and distributing texts; the production and reproduction of the intellectual mode of existence itself; and so on and on. By removing the mind entirely from this mire of biological and social relationships, Descartes presented intellectuals with the most sophisticated justification of armchair reasoning ever devised.

The price was not immediately apparent; but it was a high one. As we saw earlier in our discussion of language, theories are devices that accomplish something concrete in the world. Cartesian rationalism accomplished many things, one of the most important being the social separation of knowledge and action. Intellectuals, the makers of knowledge, would henceforth be

expected to uncover the laws and regularities underlying the data collected by observers, experimenters, and social institutions of various kinds, without incurring any ethical or practical obligations of their own. After all, what higher ethical obligation could there be than Truth itself? Right action would consist simply in the applying of true knowledge, a technical affair to be confided to engineers and administrators, with teachers playing a vital role in the dissemination of knowledge outwards and downwards from the Empyrean heights. The general outlines of this scheme are still recognizable in the social organization of intellectual life today.

If Cartesian rationalism had been no more than a device for the consolation of philosophers, it would have remained but one epistemology among many, its hegemonic ambitions unrealized. As we have seen, however, the separation of knowing from acting fit all too well with the practical needs of the nascent centrist and colonialist states of Western Europe. Not only was there an increasingly numerous and disorderly populace to control at home, but vast stretches of the world were being opened up to European conquest and settlement. The maintenance of centralized rule demanded not only a *knowledge of technology* for wresting exportable wealth from the colonized territories, but also a *technology of knowledge* that could impose uniform standards and methods of administration on diverse local realities. For the wielders of State power, the development of a scientific and intellectual caste inspired by Cartesian rationalism was objectively helpful, whatever reservations they might entertain about the latter's more radical ideas. And so the modernist alliance was born.

Standard language, particularly in written and printed form, was absolutely central to this technology of knowledge; and, as Dorothy Smith has shown, the processes of standardization extend far deeper than the details of spelling, grammar and lexicon. The social separation of the production of knowledge from its application requires that particular kinds of language device be construed as *fact*: that is, that their interpretation be co-ordered across widely differing social and personal contexts. One of the key functions of modern education is to train people in such interpretation: in what Smith calls “reading the structure of the account into ‘what actually happened/what is’” (Smith, 1990a: 75). In the terms of ecological psychology (Reed, 1996a), modernity has been premised on the privileged epistemological status of second-hand “facts” over first-hand knowledge. The practices involved are ubiquitous, as Smith makes clear:

Suspending the presence of particular subjects is the accomplishment of organized practices in and of the everyday world. It is not peculiar to the domain of scientific discourse. The objectification of knowledge is a general feature of contemporary relations of ruling. The production of factual accounts in the texts of ruling is organized in a wide variety of ways specialized to the relational contexts of their use. We know them ordinarily as records, statistics, news, data, data bases, files, and so forth. Though some are the product of specialized agencies (the Census Bureau or the Registrar of Births, Deaths, and Marriages, for example), others are integral to the ongoing organization of large-scale institutions of state and business or of the varieties of academic, professional and cultural discourse. For the most part the production of factual accounts in one form or another is essential to the operation and regulation of such organizations (Smith, 1990a: 67).

In Smith’s sociological analysis of facticity, “facts are neither the statements themselves, nor the actualities those statements refer to. ... They are established... in practices of securing a stable relationship between a given

event or state of affairs and statements that can be made about it" (Smith, 1990a: 71). Such a claim indeed follows inevitably from an ecological understanding of language. The meaning of a language device, as we saw earlier, is what it accomplishes in the world; thus to call a proposition "factual" is to claim special validity for the forms of awareness and action that the device evokes under Normal conditions. Facticity is, in other words, *a linguistic technology of normalization*. Because it "subdues, discounts, and disqualifies... various interests, perspective, angles, and experience" that are not Normal for those producing the factual accounts, facticity helps to bring about the conditions that ensure its reproduction. As people orient their awareness and actions towards the same "facts," the latter take on the aspect of objective, reliable features of our social environment. Smith captures this property in a striking metaphor:

Facts mediate relations not only between knower and known but among knowers and the object known in common. Notice, next time you see that movie of wolves hunting caribou, how they attend to one another through the medium of their object. Each is oriented to that caribou and through that to each other. Thus they coordinate the hunt. A fact is such an object; it is the caribou that coordinates the activities of the members of a discourse, a bureaucracy, a management, a profession. A fact is construed to be external to the particular subjectivities of the knowers. It is the same for anyone, external to anyone, and, unlike the real caribou and the real wolves, is fixed, devoid of perspective, in the same relation to anyone. It coordinates the activities of anyone who is positioned to read and has mastered the interpretive procedures it intends and relies on. (Smith, 1990a: 67-69)

Just as the interpretation of factual accounts is an acquired skill, so their production is also a skill to be learned, this being the object of long and systematic training in all branches of the sciences. Under Normal conditions in the natural sciences, "the facticity of statements is guaranteed by generally

highly technical procedures that can reliably and precisely produce the state of affairs or events expressed in factual statements” (Smith, 1990a: 71). The more complex the system under study, however, the more difficult it becomes to reproduce a situation “reliably and precisely”—all the more when subjects are active and aware, and therefore liable to react (in various ways) to the experience of being researched. Cartesian rationalism was rescued from this unfortunate impasse by another modernist doctrine: that “human nature” was essentially uniform. At one stroke, this premise legitimated both the aggregation of data on many individuals *and* the privileged role of the armchair theorist, who could now claim to draw on factual knowledge that far surpassed that of any individual subject. But an epistemological trap had been laid.

For even though the aggregation of data can indeed point to natural forms of order that would otherwise be overlooked, and even though intellectual reflection can yield invaluable insights into the nature of such order, neither achievement is inevitable or even probable, in the absence of the critical commitment to relate such factual accounts and theories to what embodied, situated individuals do in the real world. Without such involvement in lived reality, theorists may too easily lose sight of it altogether, coming “to treat the world as instances of a [disciplinary] body of knowledge” rather than the reverse—exploring the existence conditions for the forms of imaginative awareness embodied in particular theories, and thus the real-world relationships linking theorist and theorized (Smith 1990: 15ff). In its willed blindness to such relationships, its idolatry of objectivism, modern social science threw open the gates to “ideology” (in Smith’s reading of Marx—1990: 35-37); we might paraphrase this form of intellectual practice

as the hegemony of imagination over experience. Here is how Smith, following Marx, describes the basic method:

Trick 1. Separate what people say they think from the actual circumstances in which it is said, from the actual empirical conditions of their lives, and from the actual individuals who said it.

Trick 2. Having detached the ideas, arrange them to demonstrate an order among them that accounts for what is observed.

Trick 3. Then change the ideas into a "person"; that is, set them up as distinct entities (for instance, a value pattern, norm, belief system, and so forth) to which agency (or possibly causal efficacy) may be attributed. And redistribute them to "reality" by attributing them to actors who can now be treated as representing the ideas. (Smith, 1990a: 43-44)

How this mode of reasoning works in practice may best be demonstrated by means of a specific case, and one central to the present work: the modern construction of the concept "language".

Linguistics: The Disappearing Speaker

From Context to Text

As we saw in Chapter 1, the development and spread of printing, followed by the invention of the standard grammar and the monolingual dictionary, transformed the ways in which European intellectuals experienced and thought about language. Throughout the Middle Ages, Latin had virtually monopolized the scholarly mode of language use; its reduction to a formal grammatical system and precisely delimited lexicon had been accomplished a millennium before. Now it was discovered that this could be done for the European vernaculars as well, at least in terms of defining a written standard for intellectual discourse. In the mid-17th century, the

Cartesian revolution, having already equated knowledge with the intellectual experience of knowledge, swept away the last defenders of Renaissance particularism with the audacious claim that language, too, was best apprehended in its intellectualized form. Already implicit in Cartesian epistemology, this idea was given coherence and depth in the Port-Royal Grammar of 1660 – “the most influential grammar book of post-Renaissance times” (Harris, 1981: 16).

The practical consequences of this theoretical move were manifold. First, it built upon Descartes’ equation of “true knowledge” with inner thought by equating inner thought with private language, and private language with the “refined” language of written intellectual discourse. Every one of these assumptions represents a step away from realism, as demonstrated in our previous discussion of the epistemology of language; every one of them serves to elevate armchair reflection into the primary research method of theoretical linguistics. Secondly, it legitimated a particular kind of linguistic fieldwork, in which the adequate description of a language was held to consist in exactly the same procedures as those involved in defining the European standard languages: namely, the working up of a unitary, internally consistent pronunciation guide, grammar and dictionary, technically recodified as phonology, syntax/morphology, and lexicon. Lost from view (except, perhaps, in the peripheral discipline of linguistic anthropology) was the fact that such descriptions are, indeed, only *guides*, bearing the same kind of relation to linguistic reality as maps do to topographical reality: that is, they simplify and systematize for the benefit of skilled users. Reality itself, whether topographical or linguistic, is far more complex and dynamic than the map can afford to portray it. There have

always been linguists, of course, who have succeeded in keeping reality in sight. But the main current of modern linguistics has echoed Max Müller's stirring proclamation: "We do not want to know languages, we want to know language" (Müller 1864; quoted in (Harris, 1981: 44). It is this ambition, more than any other factor, that has made linguistics one of the most ideological modern sciences.

For the conviction that language can be "known" in abstraction from its speakers and its context has had the effect of rendering both speakers and context invisible—not only in the discourse of linguistics itself, but in popular modern usage. The noun phrase "the English language," often reduced simply to "English," is an ideological construct defined with reference to particular ways of working up a written representation of verbal actions and analyzing their relationship to various authoritative descriptions of what counts as "English". Ecologically speaking, a factual statement establishing the correspondence of some individual to the English language is a testimonial to that individual's ability and willingness to participate in certain legitimate forms of collective awareness and action in particular social settings. Those settings and forms of participation are extremely diverse, likewise their social and ecological consequences; but the complex and problematic nature of this linguistic reality is subsumed by that blanket abstract noun. Entire edifices of social, linguistic and educational theory have been built on such abstractions—not accidentally, nor because they have been determined to be the "best" way of theorizing the complex regularities of linguistic systems, but because such ways of thinking about language are compatible with the social organization of modernity.

It would be attractive to pursue this argument further; to show, for instance, how the conception of languages as unitary, homogenous entities enabled modern linguistics to appropriate both the antecedent Latin grammatical tradition and, later, the more sophisticated but equally formalistic Indian tradition based on Sanskrit (Law, 1990); to dissect, with Roy Harris, the subtle transfiguring of this conception in Saussure's famous distinction between *langage*, *langue* and *parole*, and the subsequent triumph of structuralism in twentieth-century linguistics (Harris, 1981); to consider, with Peter Mühlhäusler, how the urge to draw boundaries around languages may have hindered fieldworkers from understanding or describing the nature of linguistic communication in some multilingual societies (Mühlhäusler, 1996); and so, in various ways, to demonstrate how the history of linguistics has been intertwined with the sociology of modernity. But this is a project rather different than the one now at hand. Instead, I propose to illustrate the ideological workings of modern linguistics with a single case, one particularly relevant to the theme of this chapter: Benjamin Lee Whorf's famous thesis on the relationship between "language, thought and reality" (Carroll, 1956).

Whorf: A Case Study

Whorf is important in modern thought, as Joshua Fishman has pointed out, because he took an old idea, that different languages acculturate their speakers to different ways of seeing the world, and "restated it in ways that made it intellectually exciting and testable for modern American linguists, anthropologists, psychologists, general semanticists and others concerned with the centrality of language in human affairs" (Fishman, 1980: 25). Indeed, despite the many attempts by skeptics such as Einar Haugen to

proclaim “the failure of the Whorfian hypothesis” (Haugen, 1973), Whorf’s collected essays remain provocative and compelling reading. It is therefore of some interest to ask on what kind of linguistic knowledge Whorf based his “principle of linguistic relativity,” and how this influenced his conclusions.

When Whorf began the work on Hopi grammar that inspired his most influential essays, he relied on a single informant, “a native speaker of Hopi, who then lived, conveniently enough, in New York City” (Carroll, 1956: 17). In this not uncommon form of fieldwork, the influence of Cartesian epistemology is clearly visible: no distinction is drawn between studying the public language system in its context of use, and studying the interrelationships between linguistic traces produced by a single individual relying on their private knowledge of that system. Nor is “the informant” characterized in any way; indeed, he or she is not even mentioned by name in any of Whorf’s articles, which simply refer to “the Hopi language.” There is no way of telling from these texts alone that Whorf’s entire contact with the Hopi language system *in its social context* was limited to a short stay on the Arizona reservation in 1938, after his work on “the Hopi language” had already been written up in several papers, a tentative grammar and a dictionary (Carroll, 1956: 17).

This mode of knowing imposes a particular set of restrictions on what can be known. Beyond the evident impossibility of studying dialectal or individual variation, the linguist is also unable to examine the actual features of reality to which given language devices normally refer—that is, the human and natural environment to which they are adaptively fitted. That region of reality is dimly perceived, as it were, through the linguistic traces provided by the informant. Such a situation is perfectly familiar to anyone

trained in the Cartesian mode of knowing, with its utter reliance on texts produced according to modern criteria of facticity; the language under study is thus treated as just one more text, a somewhat cryptic one, but amenable to being “read” in a way similar to other forms of textualized knowledge. To judge from the works of Whorf and many other linguists of an avowedly particularist bent, the intellectual thrill of “decoding” languages in this way has had a major influence on the kinds of problems studied and the kinds of methods employed. It is *fun*, for a particular kind of problem-solving mind, to produce a species of cryptographic key that interprets between a familiar and an unfamiliar language. Not only is this an agreeable pasttime, it can be comfortably carried out in one’s office or home, once a suitable corpus of texts has been assembled. But in such a situation, there is a constant temptation to equate the *linguist’s* imaginative awareness of reality, as mediated by this decontextualized language, with the *user’s* awareness of reality, as mediated by the language in its natural context. This really amounts to comparing apples and oranges.

Whorf falls, many times, into this kind of trap. As Einar Haugen forcefully argues, all of the formal differences between Hopi and English that he presents do not *necessarily* imply any fundamental differences in perception on the part of their speakers. Some examples simply illustrate “the way human imagination can and does see similarities between otherwise different situations;” others “confirm the well-established fact that different cultures talk about different things in nature and have applied different analogies in expanding their vocabularies from the concrete to the abstract (or vice versa);” and to Whorf’s assertion that differences in grammar influence the formulation of ideas, Haugen retorts that “the grammatical system as

such has a minimal connection with any formulation of ideas whatever” (Haugen, 1973). Joshua Fishman is gentler in his criticisms, but no more sparing: among other misapprehensions, Whorf places more emphasis on surface structure, on the unitary and stable nature of language, and on the role of language in thought, than is justified in light of our broader knowledge of language (Fishman, 1980).

In Whorf we find many symptoms of the Cartesian mode of knowing: decontextualized intellectual experience becomes paradigmatic; fuzzy natural phenomena are abstracted into crystalline categories and rules; individual and situated users disappear. There is real value in this mode of knowing, but also the ever-present risk of ideology. Whorf clearly “came to linguistics with a mystic point of view which colours even his most scientific work” (Haugen 1973: 22); similarly, “much of the interest that Whorf’s one-sided advocacy of the relativity hypothesis aroused was the result of an emotional commitment on the part of anthropological linguists” (ibid., 23). Emotions and values need not lead astray, but they need to be tempered by a commitment to realism. Linguistics of all kinds is plagued by value statements (often motivated by impulses directly contrary to those of Whorf), whose plausibility depends on allowing the gleaming linguistic automata constructed by Cartesian reason to *substitute for* an ongoing engagement with natural, contextualized language. To this temptation Whorf repeatedly fell prey.

Yet Whorf’s enduring appeal is felt also by many linguists who have not forsaken such engagement. In part, this is attributable to a confluence of values; as Fishman has eloquently argued, Whorf is the pre-eminent Anglo-American champion “of a multilingual, multicultural world in which ‘little peoples’ and ‘little languages’ would not only be respected but valued”

(Fishman, 1982: 5). Many practising field linguists share his conviction that humanity in general has been ill-served by the hegemonic monolingualism of modernity, and that it is important to preserve and appreciate the diversity of creative thought and action mediated by diverse languages. Whatever the status of Whorf's detailed claims, his passionate plea for multilingual awareness remains a beacon in the dark night of linguistic objectivism.

But there is something more. In all of his late essays (from 1940 onwards), Whorf argues for the influence of language on cognition by means of a thought experiment. Suppose, he says, that the Hopi, or the Cour d'Alene of Idaho, set about developing their own theoretical science. They would necessarily draw their most fundamental concepts from everyday forms of awareness embodied in their language: for instance, the three forms of causation routinely discriminated by the Cour d'Alene (Carroll, 1956: 266), or the obligatory indication of intended validity in Hopi (Carroll, 1956: 217). This would lead them to "different systems of rationalization," to "different, but equally logical, provisional analyses" of reality (Carroll, 1956: 244). Haugen, Fishman, and many other commentators leave this version of the Whorfian hypothesis untouched; yet it differs significantly from the claim that language determines everyday perception. It proposes, instead, that the development of *shared* awareness of *new* forms of meaning relies heavily on the cognitive tools already held in common within a public language.

Science, for Whorf, was the playground of the imagination: the area where human creativity could be developed and expressed to the full. He can thus be read, in these final works, as arguing for the interconnectedness of language and imaginative awareness in a way analogous to the theory unfolded earlier in this chapter. Imagination was a mode of cognition that

Whorf understood in his bones; it invests his essays with their characteristic energy and style. When we take account of the epistemological conditions that Whorf was working under—the Cartesian privileging of imagination and facticity over first-hand experience—then we can read his oeuvre as a long struggle to understand *his own* encounters with Hopi and other languages. To the extent that other linguists have been seized with the same sense of wonder and fascination at “the incredible degree of diversity of linguistic system that ranges over the globe” (Carroll, 1956: 217), they recognize in Whorf a kindred spirit and in his writings a struggle similar to their own.

Few have written of that struggle in more penetrating terms than anthropologist Paul Friedrich (Friedrich, 1979; 1985). No armchair theorist, Friedrich spent a good part of his life working with the Tarascan language of Mexico. His descriptions are personal, and vivid: no anonymous informants, but a panoply of remarkable individuals populate his accounts. The language, likewise, is not depicted as a perfectly articulated system of words and rules, but as many organic and overlapping hierarchies of order that, taken together, still do not fully determine the range of observable linguistic behaviour. These two characteristics of Friedrich’s style of factual description are reflected in his central theoretical stance:

Language... is always significantly a matter of the unique individual. It follows that linguistic and anthropological theory must take full cognizance of both the native speaker and the analyzer, the participant-observer. Whether as analyst or as native, the individual’s language is always to some degree linear, hierarchizing, discrete, digital, and algorithmic to some extent, but it is also just as significantly diffuse, metaphoric, appositional, and open-ended (for neurological as well as anthropological reasons). It follows that the language-using imagination,

as an analytical construct, must be conceptualized as having both an ordered and a less ordered, partly chaotic dimension. Since this language-using imagination is necessarily concerned with "language," it follows that our idea of language, especially of grammar, must include and entertain a significant degree of disorder, chaotic freedom, free play, and the like (Friedrich, 1985: 143-144).

What brings Friedrich together with Whorf, as I have interpreted him, is their shared insight into the imaginative nature of linguistic relativism. Ironically, for those trained to think of the two worlds as disparate and disjoint, Friedrich views *poetry* as "the locus of the most interesting differences between languages" (Friedrich, 1985: 17), in counterpoint to Whorf's celebration of *science*. "Language," for Friedrich, "whether at the individual, sociocultural, or some universal level, is inherently, pervasively, and powerfully poetic," and it is this "relatively poetic nature of language, formed and articulated through figures of speech, that most deeply and massively affects the imagination" (Friedrich, 1985: 17). But Friedrich himself would be the last to argue for a contradiction between Whorf's vision and his own. On the contrary, he suggests that this version of linguistic relativism occupies "a dialectal middle ground" between art and science, and can help us to understand why both yield insights into meaning (Friedrich, 1985: 160).

The ecological theory of language developed here seems to me to be entirely compatible with Friedrich's views, and thus with one version of Whorf. Beyond these theoretical agreements, it also carries deep implications for the study and practice of education, to which we now turn.

Education: The Disenfranchised Learner

The Cartesian identification of knowledge with true propositions began the process of elevating systems of textual production and verification to the status of secular religions, complementing and eventually supplanting the Judeo-Christian tradition. The forms and processes of facticity must be learned; hence formal education, largely composed of imagination-oriented Discourses and disciplinary Genres, came to play a more and more central role in social reproduction. By the time education itself emerged as an object of research, towards the end of the nineteenth century, this way of organizing knowledge had become so firmly entrenched as to be virtually invisible. We have seen the effect on Whorf; far more influential, however, has been its entrenchment in the organization of schooling and its powerful effect on the linguistic ecology of education. These issues will be examined in that order.

Knowing Education

Cartesian epistemology stalks educational theory, even in the field of administration, which one might suppose to be furthest removed from cognitive concerns. Theorists of educational administration are somewhat better placed than Whorf, epistemologically speaking: the social phenomena that they explore are part of their own society, and their general experience of the world is not strikingly dissimilar to that of the principals, school board officials and policy-makers whom they study, advise and train. However, the social separation of knowing from doing, of theory from action, has worked its fateful spell on this discipline as well. For administrators are doers: they live in a world where consequences weigh more heavily than reasons and actions speak louder than words. In the textualized world of administrative

theory, the reverse is true. Actions do not even exist for the theorist until they are worked up as factual statements; pragmatic justification is regarded as a poor second cousin to propositional reasoning. As in linguistics, the consequences are manifold.

For the factual description of schools and school practices long preceded the foundation of educational administration as a branch of social science. There are certain privileged ways of talking and writing about schooling, an apparently “natural”, preordained discourse of practice shared by teachers, administrators, policy-makers, journalists, and the rest. The language devices of this discourse are used to *accomplish* public education—to co-order the imaginative awareness and concrete actions of its many participants. It is therefore these same language devices that are drawn on, in the first instance, to develop theories of educational administration. But in treating them as objective *descriptions of the world*, rather than situated *practices in the world*, theorists “mystify” the order they seek to study (Smith 1990: 43-51). Inevitably, it is the language devices themselves that assume the status of agents in the resulting theoretical accounts. We read of “schools” rather than people working together (and sometimes against one another) to accomplish schooling; we read of “teachers” rather than of individuals negotiating their relationships with children, colleagues, administrators and parents; we read of “leadership,” “effectiveness,” “policy,” “values,” and so on, always with the assumption that these categories, appropriately defined and operationalized, can adequately capture what many different individuals do under widely varying conditions.

The practices of modernist social science are carefully designed (or, more accurately, have adaptively evolved) to bolster the apparent validity of such assumptions. As Dorothy Smith writes of her own field:

Much sociological practice and many methodological recommendations tend to preserve theory permanently in a theoretical status. Since Émile Durkheim's *Rules of sociological method*, the phenomenal universe of sociology has detached itself from the naïveté of a subject's direct encounter with the actualities of the everyday/everynight world. The sociological encounter with the world must be conceptually mediated. According to the extreme view, the theoretical model need have no relation to actuality other than predicting events (whether these are naturally occurring or contrived by the sociologist experimentally). More general is the practice of constructing observables, in the form of variables, into various kinds of formal relations, such as relations between dependent and independent variables, relations of causality, interaction, feedback, and so on; or the kinds of relations constituted in factor or cluster analyses (Smith 1990: 47).

By drawing on the wealth of factual practices involved in the process of schooling, theorists in educational administration are able to conjure up abstract variables from concrete living individuals and events with particular ease. Teachers and administrators are trained to think of and portray themselves as "teachers" and "administrators"; to treat abstract statements about education as meaningful descriptions of what they do; to participate in the transformation of individual experience into the coded scales of reports cards and test results. As a quintessentially modern activity, mass education is both premised upon the Cartesian view of knowledge and helps to inculcate it in new generations of learners and educators. The field is thus tilled and sown, with researchers—particularly of the quantitative variety—needing to do little more than decide on the direction their harvester should follow. In

retrospect, it appears surprising that modernist social science took so long to establish ownership over this fertile domain.

The turning point, it would seem, came in the mid-1940s, when Herbert Simon “set out to build a theory of administration on scientific knowledge,” and in the process threw overboard all the “past wisdom of the field—a wisdom that derived from the experience, observation and reflection of writers who were administrators, not scientists” (Greenfield & Ribbens, 1993: 135). Simon’s writings, like those of his contemporary Talcott Parsons, portray societies and organizations as intricate machines with role-playing humans supplying the cogs. In such a scheme, individual traits and values come to be regarded as mere quirks or imperfections, except in so far as they contribute to role fulfillment. As with other versions of Cartesian rationalism, this extraordinarily counterfactual idea relies for its appeal on the human longing for predictability and order. It subsequently became the central ideology of the “New Movement” in educational administration and, more broadly, of “modern organization theory” (Greenfield & Ribbens, 1993: 143-4), where it has been elaborated and justified with great sophistication. Particularly remarkable is the movement’s success in appropriating the banners of “science,” “realism,” and “empiricism”; the prestige of these terms, derived from the natural sciences, has provided an effective means of silencing, muting or confusing the critics of the modernist paradigm.

For in the light of critical realism, objectivist social science—to use one term out of many possible—appears neither realist nor empiricist, in so far as those terms can be meaningfully applied to a whole complex of competing and cooperating social practices, but idealist and ideological. It is *idealist* because it consistently relies on facticity as a substitute for reality; and it is

ideological because its plausibility, under such conditions, relies upon imaginative conformity to what Dorothy Smith calls “the relations of ruling.” The price, as C. Wright Mills observed long ago of Parsonian social theory, is to forego all insight into the diachronic dynamics of social change—most notably the diverse values and visions of individuals, from which all change stems. Moreover, since in reality such diversity is omnipresent, even when people are *attempting* to conform to their idea of a given role, objectivist social theory is unhelpful in practice as it is compelling on paper. Its hegemony is imaginative, not pragmatic. Or, in Greenfield’s damning summary:

First, administrative science does not work as science; it has not brought us increased understanding and control of organizations. ... Second, administrative science has ignored power relationships and has been content to deal with administrative problems that ignore substantive problems in education. Third, administrative science... has been content to regard organizations rather than people as the real actors in society. And, finally, administrative science... has insisted that decision-making be dealt with *as though it were* fully explainable in rational and logical terms. This has allowed administrative science to deal with values surreptitiously, behind a mask of objectivity and impartiality, while denying it is doing so. (Greenfield & Ribbens, 1993: 151-152)

Yet, as Greenfield himself concedes, such criticisms are not sufficient to fuel effective change. Because objectivism in educational theory fits so well with still-rampant popular aspirations towards certainty and control. with the knowing-apart-from-doing epistemology implicit in the organization of higher education and of schooling itself, and with similar neo-Cartesian ideologies in all the neighbouring human sciences, it cannot be readily dislodged. It is the default framework of modernity: the one that “naturally” imposes itself on the would-be neutral observer. And so, for as long as

modernity itself rules the hearts and minds of the doers of education, theorists will be available for its justification.

In educational administration, this task has recently been taken up with particular verve by Colin Evers and Gabrielle Lakomski (Evers & Lakomski, 1991). Their sweeping epistemological survey contrives to admit the weaknesses of classical positivism, recognize the strengths of Greenfield's subjectivism, and yet stake out a theoretical position that is much closer to the former than the latter. Claiming to be realists, Evers and Lakomski want to assert that "organizations are real in the same way that chairs and tables are real" (1991: 95). This they justify by postulating "relatively enduring dispositions, encoded through learning, in the central nervous systems of human beings" (p. 95), with learning taken to be the organism's genetically and developmentally determined response to environmental stimuli: "all behaviour is caused" (p. 209). All theories involving beliefs and values they accuse of implication with "folk psychology," primarily because they do *not* offer a causal account of human action (p. 132). Thus, conveniently enough, the fundamental explanatory concepts of their "coherentist" epistemology coincide with those of objectivist science: inanimate matter is real (organized in complex physical structures and causal relationships); abstract conceptual entities such as organizations are real (embodied in stable, widely-shared neuro-physiological structures); but *individual* beliefs and intentions are subjective epiphenomena, which should be eliminated from good theory as much as possible (p. 132).

Evers and Lakomski weave a dazzling discursive web around this central thesis, drawing major strands from the philosophers Karl Popper and W.V.O. Quine and the neuroscientists Paul and Patricia Churchland. If one

traces the strands outwards, however, it becomes apparent that all are anchored upon the container metaphor of mind and the epistemology of language that Millikan dubs "meaning rationalism". If "mind" is equated with neuronal structure, then everything "in the mind" can indeed, in principle, be described in terms of "fine-grained, electro-chemical, neuro-physiological processes" (Evers & Lakomski, 1991: 132). But ecological psychology denies the premise. Neuronal process is just a *mechanism* of mind; mind itself inheres in a living organism achieving meaning and value in its environment, drawing on neuronal process (among myriad other devices) to do so (Reed, 1996a). There are no empirical grounds for the belief that patterns of causality characteristic of non-living systems are applicable to describing the interaction of an organism with its world. Indeed, precisely the reverse is true: indeterminacy appears to be a fundamental characteristic of self-organizing systems, to judge from recent work in physics, chemistry and biology (Capra, 1996).

Yet Evers and Lakomski could cede this point and still prop up their theory by maintaining meaning rationalism: that is, the idea that learning to use a word necessarily entails knowing what the word means. This premise sustains their assertion that organizations are real: if people share a public language in which a myriad of terms related to organizations appear, those terms must correspond to some shared psychological (and hence social) reality which can be studied on its own terms. More generally, theories themselves are "in the head" and not just public language devices; hence, "our knowledge of our perceptual powers, or possible foundations, like our knowledge of everything, is theory laden" (Evers & Lakomski, 1991: 228). As I argued earlier, this neo-Cartesian position has evolved because, sociologically,

it effectively reasserts the authority of theory over experience, and of theorists over their human objects of inquiry. Once again, an ecological theory of mind and language rejects the foundational premise. There is no necessary identity between *private concepts*—the intensional schematic networks that govern the interpretation and production of language tokens—and *public meaning*, i.e. the stabilizing functions of public language devices. We acquire a knowledge of the latter by observing them in action and developing a set of imaginative schematic projections (intensions) that allow us to interpret and use them productively. Such schematic knowledge is unique to each individual, and co-ordered across groups only by virtue of similar experience, similar encounters with the world. The objectivist, structuralist sciences that reify such similarities might more accurately be termed *cognitive technologies of normalization*: a historically important contribution to the arsenal of modernity.

Some of the more far-reaching consequences of the ecological approach are now apparent. It implies that knowledge does not inhere in the conventional signs that we exchange for purposes of communication, whether these be thought of as a psychological or social reality. Knowledge inheres in *action*, in the successful efforts of an individual, community or species towards meaning and value. All knowledge can thus be evaluated in terms of its effects in the real world; and therefore Greenfield is right to place values at the centre of administrative science. “Neutral” knowledge is a sham, relying as it does on the social separation of “knowers” from “doers”; the two are in fact connected by a socioeconomic order that is real and accessible to discovery (Smith 1990). Whether or not this order is

problematized by the “knowers” is itself an issue of values that neatly divides objectivism from critical realism.

In common with Greenfield, critical realism takes individual diversity to be fundamental to human (and hence social) reality. Again like Greenfield, it takes seriously such features of human life as “passion, weakness, strength, conviction, hope, will, pity, frailty, altruism, courage, vice, and virtue” (Greenfield & Ribbens, 1993: 139). But where Greenfield could not see his way past the Cartesian conception of subjectivity (in one of his most characteristic essays he conjures up a wall separating human consciousness from reality), critical realism locates mind in the encounter between individual and world, and thus firmly anchors it in reality itself. On this view, it is language, not consciousness, where the trouble lies; or rather, in the willingness to let language substitute for reality. For language and imagination are intertwined, and when both are harnessed to the relations of ruling, the floodgates of power-through-hegemony (Gramsci) and power-through-knowledge (Foucault) are opened.

Logically, then, it is to the educational sociology of language that we must turn for work that might inform and extend the ecological framework developed so far.

Legitimate Language

As modernity evolved and the practices of facticity spread and intertwined, local knowledge systems were increasingly marginalized by this massive co-ordering of awareness and action. Mastery of the Genres and Discourses of facticity was especially important for the expanding urban middle class, for these were the principal tools for extracting surplus value

from human labour; by the same token, they were also soon identified by conservatives and radicals alike as potent means of worker control *and* worker emancipation. Thus formal education came to involve the mastery of “standard” language: not only its basic forms, as linguists commonly assume, but the defining genres and discourses of industrial society. Under the analytical lens of objectivism, this linguistic ecology is rendered invisible: language *must* be a neutral tool for thought, therefore the only possible significant variables are those identified in formal linguistic description, i.e. pronunciation, grammar, and vocabulary. This assumption ensured that educational linguistics remained determinedly asocial until the 1960s.

Since then, apart from the traditions stemming from Bakhtin and Vygotsky, three thinkers have been particularly influential in developing sociological accounts of language in education, at least within the English-speaking world. A brief review of their work will demonstrate its affinities with the ecological approach, as well as some of the limitations that the latter seeks to overcome.

I. Halliday

The most “linguistic” of these three traditions is that of Michael Halliday. Halliday shares the structuralist focus on language as a semiotic system: he assumes that the linguistic knowledge of a normal adult speaker is coherently self-organized in a way that reflects the organization of public language. Where he differs from the previous grammatical tradition is his interest in what language *does* as a semiotic system: that is, what *kinds* of awareness particular language devices evoke in their users. In Halliday’s terminology such awareness effects are usually referred to as “meaning”, and

language acquisition is recast as “learning how to mean”. Because of the previously noted ambiguity of “mean”, however, these terms are vulnerable to misinterpretation; they tend to suggest that meanings are either *contained* in the words themselves or *constructed at will* by the participants in a conversation. The ecological approach, by situating such co-ordering of awareness within evolving Discourses and Genres and taking account of the interaction of language with the imagination, fosters a more complex and realistic understanding of the use of language. Notably lacking in Halliday is the Bakhtinian concept of the dialogic mind, the speaker embedded in history, looking both backwards and forwards; likewise, the extra-linguistic context features rather peripherally, if at all. Despite his interest in the social functions of language, Halliday’s linguistics thus tends towards “segregationalism” rather than “integrationalism” (to use Roy Harris’s terms): it is a theory of language in use, not of people doing language.

Nonetheless, there are many practical advantages to Halliday’s approach, as shown by the growing application of his ideas in real educational settings. When one is trying to discover what is going on *within* an isolated text or discourse fragment—a frequent situation in modern classrooms and not unfamiliar in daily life—then the ecological framework most definitely needs to be supplemented by an appropriate linguistic theory, and Halliday’s is the most sophisticated on offer. The core of his proposal is laid out in the following passage:

the environment, or social context, of language is structured as a *field* of significant social action, a *tenor* of role relationships, and a *mode* of symbolic organization. Taken together these constitute the situation, or ‘context of situation’, of a text. We can then go on to establish a general principle governing the way in which these environmental features are projected onto the text. (Halliday, 1978: 143)

The affinity between Halliday's theory and the ecological framework can readily be seen if one keeps in mind the powerful influence of the synchronic tradition. *Tenor* corresponds to a synchronic view, a snapshot, of Genre; *field* corresponds to a synchronic view of Discourse. Halliday is in fact developing his own model of the linguistic interaction frame, in which the actual speakers, the speech setting, the topicalized world affair, and the chain of speech communication are only considered to the extent that their presence is reflected in the text, or utterance. This leads him to identify a third dimension of symbolic interaction, arising from the symbolic medium itself, that would otherwise risk being overlooked in the ecological account: *mode*. The existence of mode is a consequence of emergence, the self-organization of the public communicative system: it refers to speakers' ability to monitor their symbolic production and insert devices which introduce or conjoin various parts of their utterances, welding them into recognizable wholes and ensuring their fit into the conversation.

Halliday's distinctive contribution is not so much the development of this tripartite contextual framework—other linguistic theorists of the 1960s were working along the same lines (Hasan & Martin, 1989: 7)—but to link it to an essentially independent “systemic” paradigm of textual analysis that classifies the units or features of language according to their type of “meaning”, that is, according to the ways in which they are used to co-order awareness. Briefly, *field* is said to influence the language user's choice of *experiential* features of language (“that is, in transitivity, in the classes of things (objects, persons, events etc.), in quality, quantity, time, place, and so on”); *tenor* is said to be reflected in the choice of *interpersonal* features (“mood, modality, key, intensity, evaluation and comment, and the like”);

and mode tends to determine the selection of *textual* features (“theme, information, and voice, and also... reference, substitution and ellipsis, and conjunction”) (Halliday, 1978: 143-144). Lexical choices in each of these areas can influence the others, and thus the text responds to its environment *as a whole*:

The patterns of determination that we find between the context of situation and the text are a general characteristic of the whole complex that is formed by a text and its environment. We shall not expect to be able to show that the options embodied in one or another particular sentence are determined by the field, tenor or mode of the situation. The principle is that each of these elements in the semiotic structure of the situation activates the corresponding component in the semantic system, creating in the process a semantic configuration, a grouping of favoured and foregrounded options from the total meaning potential... (Halliday, 1978: 145)

The invisibility of the subject gives rise to certain problems here, for the “semantic system” can be “activated” only within an individual speaker or hearer, whose awareness is influenced not only by the text but by the entire situation, by their experience of acting within related situations in the past, and by the creative idiosyncrasies of imaginative projection (including the way they imagine this particular linguistic exchange unfolding). Halliday’s focus on “system” thus entails the same dangers as all structuralist theory, in particular a tendency towards overly mechanical and deterministic metaphors. Yet its affinities with the ecological approach suggest that it might be adapted quite readily to a speaker-centred view of language, resulting in an *integrationalist* theory of linguistic meaning.

This potential can be clearly discerned in Clare Painter’s use of a Hallidayan framework to describe first language acquisition in her second

child (Painter, 1989). The emergence of triadic interaction frames is clearly depicted, and the functions of the child's language are shown to develop out of such interactions. Painter further traces how particular linguistic structures appear in the child's speech in order to build on the linguistic functions that have already been mastered—a process technically known as *epigenesis* (Ellis, 1997). Systemic-functional theorists are generally skeptical about the form/content or syntax/semantics distinctions that have played a central role in structural linguistics: they argue that form *is* functional, so that the learning of new forms or the modifying of "incorrect" forms requires that the new forms actually increase the range of meanings available to the speaker. Painter argues this plausibly in the case of her two-year-old: "Although the child is indeed engaged in developing linguistic resources to serve his own purposes," she writes, "both the purposes and the resources are constructed through social interaction," and thus the actual nature of this interaction, the relationships it entails with people and with the world, is crucially implicated in the development of language skills. This is in exact agreement with the ecological perspective.

Elsewhere in the volume where Painter's work appears, Frances Christie offers an interesting illustration of how a classroom lesson can be critically analyzed within a Hallidayan framework (Christie, 1989). In examining the kinds of learning available to a second-grade class she draws upon the notions both of genre and discourse, suggesting that an exercise in writing a grocery list "is very representative of the curriculum genres of much early schooling" and noting the limitation of the discourse to "the knowledge of personal and family experience". She argues that "if children were permitted to enter into genuine inquiry and to develop skills of

questioning and speculation, the linguistic capacities they developed would necessarily be very different" from those revealed in the observed lesson; and she points out that "the nature of their relationship with the teacher would also be fundamentally different". The common curricular distinction between skills, knowledge and language serves, according to Christie, to restrict children's access to tools of speculation and inquiry and to constrain their classroom relationships in ways that foster a passive acceptance of authority.

It can thus be seen that Halliday's work, while overtly "linguistic" and frequently rather abstract in content, conceals a sharp critical edge in its active, meaning-centered approach to language. Its contribution to the ecology of language is worthy of far more detailed study than can be accomplished here.

II. Bourdieu

At the opposite end of the semiotic-sociological scale to Halliday is Pierre Bourdieu, whose work on language forms but one part of his highly influential oeuvre. Where Halliday is concerned with language as a system, Bourdieu wishes to analyze *society* as a system. To do so he appropriates the conceptual vocabulary of economics, extending the notions of "capital", "profit", "exchange" and so forth to other fields of human interaction such as politics, culture, and education. This leads him to conceive of language in terms of the "linguistic capital", or *habitus*, that individuals bring to their encounter with a preexistent linguistic *market*. *Habitus*, for Bourdieu, is the net product of an individual's history: the set of enduring dispositions acquired in the course of learning to act in particular contexts. The market, or *field*, is the system of attitudes and practices arising from the interaction of the *habitus* of many individuals. Within the linguistic field, different ways of

speaking are differently valued: thus the habitus acquires a capital worth that depends on the market which it encounters in any particular setting.

There are several strengths to Bourdieu's approach. Perhaps most important, particularly when contrasted with other theories in linguistics and sociology, is the fact that the individual does not disappear from view, although this is achieved essentially at the cost of portraying her as a bundle of environmentally-determined dispositions. Bourdieu views this as a necessary foundation for a "theory of practice" that avoids the epistemological traps of both subjectivism—explicating the world in terms of primary experience alone—and objectivism, in which people's actions are regarded merely as the realization of a social fact constructed by the analyst (Bourdieu's views here are closely akin to Dorothy Smith's). In his account, dispositions are actual physical realities, in the same sense as intensions in the ecological framework developed here. The body is moulded by experience, particularly in early childhood, and this provides it with a repertoire of ingrained ways of encountering the world. This theoretical strength gives rise to a heuristic one: since all action is regarded as ultimately explicable in terms of the encounter of habitus with field, researchers seeking to understand a particular social setting are required to investigate both the background of the individuals involved and the properties of the setting itself, especially the overt and covert interests that are served by particular actions. Finally, Bourdieu is notable for having integrated a sociolinguistic theory within a much broader cultural theory. "[L]ike the sociology of culture, the sociology of language is logically inseparable from a sociology of education," he observes (Bourdieu, 1991: 62), thus pointing the way to an educational sociology that encompasses all three.

Bourdieu's approach has much in common with the ecological one, in that he too regards cultural reproduction as a process in which individuals adapt, actively and often creatively, to the environment around them. However, in the same way the synchronic notion of *langue* constrains Halliday's theory (without ever appearing in that guise), the primacy of class relations in Marxist theory constrains Bourdieu's. Bourdieu's main objective is to understand how power and privilege reproduce themselves; the assumption that social practices always comply with an economic logic, which only needs to be properly unearthed and described, is well suited to this task. But it is also an objectivist assumption, one that can cloud understanding as much as advance it.

Take, for instance, Bourdieu's analysis of a speech by the mayor of Pau, in which he "greatly moved" his audience (according to the local newspaper) by employing the local Béarnais dialect. Some insight can certainly be gained by analyzing the local linguistic market "which prescribes French as the only acceptable language for formal speeches in formal situations" and noting that the mayor's ability to *profit* from his knowledge of Béarnais is dependent on his known mastery of French (Bourdieu, 1991: 68). But to term this unequivocally a "strategy of condescension", as Bourdieu does, is to impose a single, objectivist interpretation on a complex event. If the mayor did indeed succeed in moving his audience, it was presumably because the use of Béarnais was interpreted as a gesture of solidarity rather than a gesture of condescension. *How* the mayor used Béarnais—the ideational and interpersonal content of his speech, the genres and discourses on which it drew—may well have been as important as the choice of language. Yet this fact limits the explanatory value of Bourdieu's concept of linguistic field,

which focuses always on the form of communication and not on its content. It also illustrates how a theory adapted to the analysis of *vertical* power, where actors are always in competition, may neglect the possibility of *horizontal* power, where actors cooperate willingly (and sometimes despite substantially different positionings in the relevant field).

Bourdieu is in fact vulnerable to the very criticism he makes of other forms of objectivism: that they are unable to reflect on the conditions of their existence. It is a very particular kind of society where it becomes plausible to explicate all human action according to the logic of economics. One would expect, in fact, that such a theory would find its most persuasive application in highly normalized domains of social life, the ecology of facticity-oriented language being one of them. Recall Marx's (and Smith's) definition of commodification: a system in which exchange value is decoupled from use value. Because facticity creates the possibility of value inhering in *using socially sanctioned language* rather than *co-ordering awareness to the specificities of a world affair*, it leads to the commodification of linguistic acts. But non-factitious uses of language remain: poetry, of course, but also many other genres in which language is used not to substitute for the world but to bring it into focus. In other words, the more experience-oriented a speech situation, the less reliance can be placed on an economic analysis of language use. For the mayor of Pau to have touched the hearts of his hearers, he may well have invoked such a common ground of experience. To ascertain this would require empirical research; but the possibility must be acknowledged and accounted for in a non-objectivist sociology.

Related to this difficulty is a still deeper one: the issue of whether *habitus* and the maximization of profit together provide an adequate way of

depicting the psychology of individuals. While Bourdieu certainly captures the reality of internalized constraints on action, his work betrays little awareness of the complexity of human motivation and awareness, the private dialogues and imaginative projections that rework experience in underdetermined ways. Bourdieu apparently sees no way of reconciling this phenomenological world with a critical sociology, but this is exactly what the ecological approach is intended to do. Rather than *assuming* a deterministic role for the environment, it poses the empirical question: how do individuals and groups adapt to various persistent features of their world, and what are the consequences of such adaptive behaviour? Thus, the bilingualism of the citizens of Pau is not to be understood solely in terms of the status differences between French and Béarnais, but by all the human activities conducted in those languages (or, more exactly, in the local linguistic ecosystem), in all their affective and functional complexity. What features of the ecosystem bear most directly on a particular situation, such as the mayor's speech, is not a question to be answered by a priori reasoning, but by investigation.

III. Bernstein

Somewhere between Halliday's linguistics and Bourdieu's sociology lie the theories of Basil Bernstein, who acknowledges his debt to both but above all to Sapir and Whorf, on the linguistic side, and Emile Durkheim, on the sociological. The central problematic for Bernstein is the difficulty experienced by English working-class children in making sense of, and acquiring, the kind of knowledge valued in schools, and the implications of various kinds of educational and social reform for how such knowledge is structured and transmitted. In the late 1950s Bernstein first formulated the hypothesis that a key difference between working and middle class children

lies in the kind of language they are exposed to in the home. The middle class child, he argued,

becomes sensitive to a particular form of indirect or mediate expression where the subtle arrangement of words and connections between sentences convey feeling. ... Because of the importance of this type of mediate relation between mother and child a tension is created between the child and his environment so that there is a need to verbalize his relations in a personal, individual way. Thus the child at an early age becomes sensitive to a form of language-use which is relatively complex and which in turn acts as a dynamic framework on his or her perception of objects (Bernstein, 1971: 28).

Particularly significant for Bernstein was the idea that in a middle-class environment, "space, time, and social relationships are explicitly regulated within and outside the family group" (ibid, 29). As the child becomes aware of this invisible (imaginative) ordering by listening to the language used by the surrounding adults, the focus of her perception begins to shift from the world of immediate experience to the realm of abstract conceptualization. Although different children benefit from this to different degrees, generally the middle-class child is being prepared for a successful entry into school, "where every item in the present is finely linked to a distant future" (ibid, 29). By contrast, working-class children grow up in a social environment oriented to the here and now, where little value is placed on verbal explicitness and other forms of mediate relation. Objects are perceived in terms of their *content*, not their role in some invisible ordering of the social world; and this limits the children's ability to perceive and respond to the invisible orders of the school.

Bernstein was soon hailed, and condemned, for what many perceived as the argument that working class children were either linguistically impoverished (the deficit hypothesis), or intellectually handicapped by

speaking a non-standard dialect or distinct language (the difference hypothesis). A closer reading of his work, however, shows that his point was rather that schools are ill-adapted to teaching working-class children, and that this lack of fit cannot be overcome by superficial changes since it is rooted in (among other things) the linguistic identity of the middle class. Bernstein is less concerned with *forms* of language than he is with *uses* of language, and with the way that patterns of language use fit with and reinforce other patterns of social action. Thus, his subsequent theoretical work moves towards concepts that are equally applicable to language, social life, and education, showing how regularities in each field are related to regularities in the others, and how well-meant interventions in one area may be frustrated by the system's overall resistance to change.

Although many nuances in Bernstein's thought are worth exploring, exigencies of space dictate that I simply summarize his theory as developed in his classic 1974 collection *Class, Codes, and Control*. As I read Bernstein, he conceives of society roughly as a region of space-time composed of human actions and the objects of human perception, education as *the process of learning* the geography and physical laws of this region, and language as *the means by which such knowledge is transmitted*. The organization of this knowledge is therefore one of the fundamental characteristics of a society: it constrains both the process and the form of its cultural reproduction. Organization can be thought of as the establishment and maintenance of *boundaries*, both among the contents of knowledge ("classification") and among the contexts of its transmission ("framing"). Boundaries may range from strong, indicating a high level of societal control, to weak, indicating a high level of individual or local control. Educational settings with strong

classification and framing establish what Bourdieu refers to as a “field”, in which knowledge is treated as “private property with its own power structure and market situation” (Bernstein, 1971: 213) and acquired through socialization within a discipline. Unlike Bourdieu, however, Bernstein sees this as a historically contingent and limited form of social organization, co-existent with many settings in which classification and framing are weaker and the transmission of knowledge less oriented towards “the maximization of profit.”

Persistent social inequalities, such as the class system in Britain, are reproduced through strong classification and framing of knowledge, among other means. This is reflected linguistically in Bernstein’s (in)famous distinction between elaborated codes (where knowledge is “linguified,” or made as explicit as possible) and restricted codes (where context is relied on to supply a good part of the meaning). Every person in modern society learns to use a restricted code—in ecological terms, the use of language to co-order awareness and action in the here-and-now. In middle-class families, this code is linked in a continuum to the elaborated code of strongly framed and classified knowledge; children are ideally positioned to move up this continuum, never experiencing a fundamental clash between the knowledge of the home and the knowledge of the school. Children from working-class families, in contrast, are barely exposed to elaborated codes; the latter simply do not have a social function in their daily environment. School knowledge is thus mystified for the working-class child; and equity in education is shown to depend, to a great extent, on the relationship between the knowledge codes of the school and those of the cultural communities in which its children are raised. An issue that Bernstein explores at some length is the consequences of

relaxing classification and framing in schools to produce what he terms “integrated” educational codes; I will return to this in Chapter 8.

Where Halliday’s and Bourdieu’s ideas have been filled in and refined with the thoroughness of the studio painter, Bernstein’s bear closer resemblance to charcoal sketches: “the implications,” as Donald MacRae notes in his Foreword to *Class, Codes and Control*, “are not, perhaps even in his own head, fully developed... and what is most important, his work is open: to me the most important of these papers are chronologically the first and the last” (Bernstein, 1971: xii). Of these three thinkers, he displays the most creative and profound sociological imagination, a view Halliday himself seems to share:

To me as a linguist [his work] is crucial for two reasons... [Firstly as] a theory of the social system with language embedded in it,, so that anyone who is asking, as I am, questions such as “what is the role of language in the transmission of culture” ... finds in Bernstein’s work a social theory in the context of which one can ask these questions. In the second place... to answer the question: why is language as it is? (Halliday, 1978: 37).

From the ecological perspective, Bernstein’s work shares some of the limitations of the other two theorists, and indeed of the modernist tendency to privilege theory over reality *à la* Whorf. The widely misunderstood term “code,” for instance, was probably inspired by the desire to have a linguistic equivalent for “class” (in the Saussurean, semiotic sense of “langue”). Had Bernstein been more interested in issues of gender, or ethnicity, then he might have avoided the connotations of a fixed, static system in favour of a more dynamic concept. And as Bernstein, “harried by the linguists... attempted to define the code in linguistic terms” (Halliday, 1978: 88), he was drawn away from his broadly ecological ideas about language to an unhelpful

preoccupation with form and syntax. His work lacks a clear vision of the structuring of communication above the level of phrase and sentence, which is exactly what is needed to bridge the gap between Halliday's meaning-centred *linguistics* and Bernstein's meaning-centred *sociology*. In the ecological theory this structuring is interpreted as genre and discourse, as defined on the basis of the ecological concept of interaction frames; and the distinction between elaborated and restricted codes emerges from the variable relationship between discourse and experience. In the Third Turn these ideas are used to build a theory of linguistic ecology that yields many points of contact with Bernstein's ideas.

Yet if Bernstein's theory is overly structuralist in parts, overall it offers some challenging insights into the ways that genres and discourses may interact to constitute broader social systems, and the role of education in perpetuating or modifying such systems. For Bernstein has a deep belief in the emancipatory potential of education, if only teachers and administrators can come to understand what education *is*, what children bring to their experience of schooling, and what is accomplished through particular ways of organizing knowledge and language in schools. The following passage, written in 1969, still rings with conviction and relevance:

It is an accepted educational principle that we should work with what the child can offer: why don't we practice it? The introduction of the child to the universalistic meanings of public forms of thought is not compensatory education—it *is* education. It is not in itself making children middle class. The implicit values underlying the form and contents of the educational environment might. We need to distinguish between the principles and operations, that is our task as teachers to transmit and develop in the children, *and* the contexts we create in order to do this. We should start knowing that the social experience the child already possesses is valid and significant, and that this social experience should

be reflected back to him as being valid and significant. It can be reflected back to him only if it is a part of the texture of the learning experience we create. If we spent as much time thinking through the implications of this as we do thinking about the implications of the Piagetian developmental sequences, then possibly schools might become exciting and challenging environments for parents, children and teachers. (Bernstein, 1971: 199-200).

Having reached the halfway mark on our winding staircase, it is time for us to take up this challenge in earnest.

6 The Linguistic Ecology of Knowledge

For reasons presented in the two preceding chapters, I claim that the dubious contribution of social science to human emancipation rests, in large part, upon a misleading theory of mind and meaning and upon social systems which separate the discovery of knowledge from its application. It follows that an important task for critical theory is to elaborate a more realistic epistemology and to work through its implications for the organization of critical social science itself. It is the latter challenge that will occupy us in this chapter, prefiguring a more complete synthesis in the concluding chapter of this work.

First, however, I wish to dwell briefly on the implications of the ecological epistemology developed here for critical theory as a whole. As briefly outlined in Chapter 3, there exists a broad range of approaches to critical social science—so broad, indeed, that its various branches frequently appear to be as much at odds with one another as with objectivism. It is as if the latter alone has grown a sturdy trunk, to which any beleaguered objectivist can turn for support, while the disparate offspring of critical theory are engaged in a constant struggle for sunshine and soil under its heavy shade. Whatever the intellectual delights of metaphysical diversity, it undoubtedly restricts critical theorists' ability to draw from each other's work and thus to mount a consistent, cross-disciplinary challenge to legislative reason.

If such a challenge is indeed feasible (and not all critical thinkers would presently agree that it is), it will surely be based upon a naturalist epistemology and critical realist ontology akin to the one developed here. Only an epistemology of discovery can accommodate the methodological eclecticism characteristic of critical theory; only a non-naïve realism can provide the common ground that allows discoveries to be shared. This combination not only defines the *ecological* approach to social science; it also precisely coincides with the ecological approach to *natural* science—thereby demolishing one more of the dualisms with which modernity has saddled us. Because critical theorists have largely accepted objectivism's claim to represent the so-called exact sciences, they have often felt impelled to defend a separate epistemological status for the human sciences. I am suggesting, instead, that objectivism in both domains should be seen for what it is: a cognitive technology of control.

Critical science is about understanding, first and foremost, rather than control: "interpretation" rather than "legislation", in Bauman's terms (1987, 1992). Critical science recognizes that *a priori* commitment to a search for causal certainties is overly restrictive of domains and methodologies of inquiry, and that this commitment itself yields *uncertainty* at higher system levels, as each control-oriented technology of knowledge gives rise to unforeseen and undesired "side effects" within the social system of the knowers. For critical science, there are no "side" effects, for the social context of objectivist inquiry is not regarded as something separate from the inquiry itself. It follows that critical science seeks to develop social contexts in which the search for knowledge is self-correcting and self-limiting, in the same way that natural systems develop feedback mechanisms to maintain a dynamic

balance among many different forms of life and the inorganic processes on which they depend. Critical science, if it could be freed from the modernist spectres that still haunt many of its theorists and practitioners, would in fact be none other than ecological science in the broadest sense of the term.

If the age of ecological science is at hand, as Fritjof Capra has argued in a number of works (Capra, 1982; 1991; 1996), then linguistic ecology will surely emerge as one of its key components. It matters immensely, in all aspects of human life, what imaginative conceptions of the world are widely co-ordered through language and what kinds of action they promote or hinder. It matters, too, what forms of language are available for this co-ordering; for language systems, as we shall see, have evolved under very different conditions, and offer very different kinds of tools for encountering the world. And it may be that applied linguistic ecology—an approach to social policy that takes realistic account of the possibilities, limitations, and dynamics of natural language—will prove to be one of our most useful guides in the open-ended quest for human emancipation... in part by convincing us to limit our epistemological dependency on language itself.

Many current strands of debate in the social sciences are relevant to this endeavour. Among them are:

- increasing interest in interdisciplinary or multi-method approaches to research, although these always run the risk of straying into a kind of haphazard eclecticism that does little to reveal deeper sources of order;
- increasing emphasis on language and discourse, although as previously noted this can err towards an exclusive preoccupation with texts and ideology;

- increasing awareness of the need for reflexivity, or the explicit examination of the researcher's own biases, motives, assumptions and hopes, although the tradition of objective, impersonal discourse styles still weighs heavily on scientific writing throughout the English-speaking world;
- increasing concern with the implications of research for the communities under study, and with various approaches to including them in the evaluation and application of research results.

To some extent, these orientations can be integrated with a wide range of qualitative research methods, including interviews, focus groups, ethnographic observation, discourse analysis, historical or "genealogical" analysis, and so on; and these methods can in turn be used to "triangulate" or lend depth to more quantitative or objectivist methods such as surveys and statistical analysis. Yet the complexity of the social world and entrenched institutional traditions consistently work against the development of a genuinely ecological science. It is my purpose, in the remainder of this chapter, to sketch two broad *systems* of knowledge—one programmatic, the other pragmatic—that offer complementary visions of such a science. In keeping with the focus of this work, both emphasize the role of language and education; however, in place of the disciplinary and conceptual boundaries imposed by modern linguistics and educational studies, these visions call for a much broader, naturalistic conception of both, in which such emergent, semi-autonomous sub-systems as individuals and communities retain meaning and explanatory power, and in which real-world contexts are never ignored.

The Critical Ethnography of Language

The first system of knowledge to concern us was first advanced as an alternative to the Chomskian “revolution” in linguistics—a rhetorical and methodological movement that cemented an ahistorical, asocial, impersonal conception of language within the thinking and discourse of many linguists and linguistic institutions. To many linguistic scholars, particularly those who had worked closely with Native American communities in the traditions of North American linguistic anthropology, this represented a willful and misguided narrowing of linguistic inquiry. It fell to one of their number, Dell Hymes, to respond with a counterproposal: that the science of language be conceived of and developed as “the ethnography of speaking” or, more broadly, “the ethnography of communication”.

“From antiquity,” Hymes asserted in a seminal article in 1973, it has been the mark of a true science of man, of greatness in a science of man, to attempt to comprehend the known diversity of cultures and history. ... The study of language has had a checkered career [in this respect]. It first became a self-conscious activity, and to a great extent has developed since, as an instrument of exclusion and domination. The analysis of Sanskrit in ancient India, of classical songs and writings in ancient China, of nascent national languages in the Renaissance (e.g., Nebrija’s grammar of Castilian), were all in the interest of cultural hegemony. It is only in our own century, through the decisive work of Boas, Sapir, and other anthropologically oriented linguists (as components of the general triumph of “methodological relativism” in the human sciences), that every form of human speech has gained the “right”, as it were, to contribute on an equal footing to the general theory of human language.

The present situation of linguistics in the United States is quite mixed, where it is not obscure. Chomskyan theory holds out the liberation of mankind as an aspiration, but its practice can contribute only

conceptually at best, if it does not in fact stand as an obstacle to the kind of work that is actually needed. [I have] argued for the study of speech communities as actual communities of speakers. In this way we can go beyond a liberal humanism which merely recognizes the abstract potentiality of all languages, to a humanism which can deal with concrete situations, with the inequalities that actually obtain, and help to transform them through knowledge of the ways in which language is actually organized as a human problem and resource. (Hymes, 1980: 54-56)

As this passage makes clear, Hymes was arguing for critical realism in the study of language (compare Corson 1997). While many researchers have sought to realize elements of his program in the three decades since it was first put forward, it is his conception of an ethnographic linguistics taken as a whole that will be examined here. In this regard, his thinking remains as original, radical and relevant as ever.

An Ethnolinguistic Program

Ethnography, according to Hymes, must remain the central methodology of a naturalistic and emancipatory linguistics. Although the ethnographic label has sometimes been applied to “anything that involves direct contact with people as a source of information,” he proposes a more rigorous conception in which the researcher “steers” between situated, personalized *discovery*, “inquiry that is open to questions and answers not foreseen,” and generalized, disciplinary *theory*, “the systematic, comparative knowledge of phenomena and systems like those under study” (Hymes, 1980: 73-74). The ethnographer is thus cast in the role of a mediator between the local, often tacit knowledge of a “speech community” and the distributed, extensively verbalized knowledge of “the community of scientists”, with “the

age, sex, race, talents” of the ethnographer serving as instruments of inquiry, “for both good and bad” (Hymes, 1980: 99).

It is in the nature of ethnography to be open-ended, to admit of no final crystallized state of knowledge. The collection of valid first-order data, the description of what happens and what exists, does not determine any particular second-order analysis. Indeed, Hymes suggests, “some of what we believe we know resists interpretation in terms of structure. It seems to require, instead, *presentation*” (Hymes, 1980: 97). Photographs, films, and narrative can all achieve a depth of presentation that analysis lacks; thus the ethnographic account itself may cycle back and forth between “showing” and “telling”—between community allegiances, in fact, using one medium to make manifest the implicit experiential knowledge of the community under study, another to appeal to the explicit discursive knowledge of disciplinary peers. All ethnographic practice, in fact, may have the potential to open new channels of communication, not only between the communities of researchers and researched, but also among the latter—for instance, between a neighbourhood and its school.

In this way, Hymes argues, ethnographic research can itself help to break down barriers of communication of understanding. He suggested that all social interventions, often designed and implemented by outsiders, might benefit from a practice of “cooperative ethnographic monitoring” in which the staff of a program and representatives of the community participate in an ongoing evaluation of “the working of the program, of its successes and failures, strengths and weaknesses, in relation to their hopes for it” (Hymes, 1980: 115). Particularly where such a process aids the participants themselves

to gain ethnographic skills, it “has the potentiality for helping to overcome division of society into those who know and those who are known”:

Such a vision of a democratic society would see ethnography as a general possession, although differentially cultivated. At one pole would be a certain number of persons trained in ethnography as a profession. At the other pole would be the general population, respected (on this view of ethnography) as having a knowledge of their worlds, intricate and subtle in many ways (consider the intricacy and subtlety of any normal person’s knowledge of language), and as necessarily having come to this knowledge by a process ethnographic in character. In between—and one would seek to make this middle group as nearly coextensive with the whole as possible—would be those able to combine some disciplined understanding of ethnographic inquiry with the pursuit of their vocation whatever that might be. From the standpoint of education, obviously one wants to consider the possibility of adding ethnographic inquiry to the competencies of principals, teachers, and others involved with schools. But on the one hand, there is no reason not to seek to extend a knowledge of ethnographic inquiry to everyone. And, on the other hand, there is no reason to think professional ethnographers privileged. In their own lives they are in the same situation as the rest—needing to make sense out of a family situation, a departmental situation, a community situation, as best they can. (Hymes, 1980: 99)

On the basis of his extensive work in linguistic anthropology, Hymes proposed an “initial heuristic schema” to guide early explorations in the ethnography of communication. His basic social concepts include those of speech community (defined as a social group with shared norms of interaction *and* a common linguistic form), speech field (the total range of communities sharing those norms and forms), and speech network (the specific linkages of individuals in those various communities). His basic linguistic concepts include speech situation, event, act, style, and way of speaking, and he proposes to analyse speech acts in terms of settings (both

physical and psychological), participants (persons and roles), ends (goals and outcomes), act sequences (message form and content), keys (the tone, manner, or spirit of an act), instrumentalities (channels and verbal resources), norms (of interaction and interpretation) and genres (categorical forms of speech act) (Hymes, 1988). All in all an intimidating typology, whose attempt at comprehensiveness may have worked against its widespread application.

There exists, however, a more fundamental discontinuity between Hymes' broader ethnographic vision and the specifics of his proposed methodology. At its root is Hymes' sense that the "etics" of his project—"a general theory and body of knowledge within which diversity of speech, repertoires, ways of speaking, and choosing among them find a natural place" (Hymes, 1988: 40)—has scarcely been developed, and thus "the primary concern now must be with descriptive analyses from a variety of communities" (ibid, 52). In thus casting ethnography as situated *description* rather than situated *action*, he loses the critical edge that characterizes his general essays, and which I have suggested to be integral to naturalist social science. Consider, for instance, the sharp anti-establishment bite cloaked within these graceful cadences:

The tempo of ethnography is in some respects conservative; its results are the better for ripening in the mind; insofar as it makes local practice intelligible, it may lessen impetus or optimism for change. By legitimatizing the knowledge of the participants in educational settings and by giving weight to the universal human need for self-worth, ethnography is likely to make it difficult to argue solutions that take for granted the fault or failure of teachers, of parents, or of some other category of scapegoat. Ethnographic inquiry is likely to show people doing the best they can with what they have to work with, given what it is possible and reasonable for them to believe and do. The ultimate result of ethnography, of course, may be radical. It may suggest that some

desired outcomes are impossible, given what the society is willing to spend on schooling, and the consequences in what children must find in schools, in terms of resources, meaningful activities, minutes of meaningful guidance, and communication. To empower teachers as having legitimate knowledge may disrupt some practices. Just so, too, for principals in systems where principals are treated by those above them, not as instructional leaders, but as hired hands. By making particular situations palpable, credible, a living part of the imagination, ethnographic accounts may make it more difficult to impose uniform general solutions that are arbitrary in local settings. When some charge that ethnography does not permit generalization, they may be shrewder than they know. Whose power is hurt if the pretense of theoretically generalizable results is stripped away? If educational practice is found to require, not the application of general theory, but the discovery of new, local knowledge?(Hymes, 1980: xii)

This view of ethnography as practice and as praxis, consequential far beyond the domain of academic theory, is genuinely ecological. It suggests that the “etics” most appropriate to an ethnographic project is that which traces the real linkages between people and settings; and for this, it is not necessary to await the accumulation of linguistic data from many independent cases. Instead, the tracing of linkages can and should be part of the ethnography itself. Hymes stops just short of proposing this, as it has no precedent in the anthropological research on kinship systems that he takes as his model. But the ecological framework requires it—requires, that is, that the ethnography of communication be reinterpreted within the developing tradition of *critical* ethnography.

The hallmark of critical ethnography is that it combines traditional ethnographic observation, as described by Hymes and many other researchers, with analysis of the social structures that constrain action in that situation. For most of the history of the modern human sciences, these two research

orientations have been regarded as mutually incompatible. As Gary Anderson puts it:

Critical ethnography in the field of education is the result of the following dialectic: On the one hand, critical ethnography has grown out of dissatisfaction with social accounts of "structures" like class, patriarchy and racism in which real human actors never appear. On the other hand, it has grown out of dissatisfaction with cultural accounts of human actors in which broad structural constraints like class, patriarchy and racism never appear. Critical theorists in education have tended to view ethnographers as too atheoretical and neutral in their approach to research. Ethnographers have tended to view critical theorists as too theory driven and biased in their research. And so it goes. (Anderson, 1989: 249)

Yet critical ethnography need not be thought of as a compromise between accounts of structure and accounts of agency, or an unwieldy fusion of the two. In my view it is much more appropriately conceived of along the lines proposed by Hymes, that is, as a process of mediation between very different communities of knowledge and practice that may result in transforming both. Lawrence Angus identifies this "dialectic between data and theory" as a key characteristic of critical ethnography (Angus, 1986), although it appears from Anderson's review that many critical researchers have been more concerned with the latter than the former, at least in their published accounts. This is not, indeed, surprising, given that such accounts are produced for a theoretical audience informed by the "critical" tradition. Methods and standards of "empowering informants" (including use of oral histories, informant narratives, and collaborative research) have nonetheless been receiving increasing attention (Anderson, 1989). I will argue that such empowerment is one essential test of validity for critical ethnographic work.

Beyond the Local Context

The rise of critical ethnography has helped to spur efforts to define and describe critical research methodology in general. These have been thoughtfully reviewed by Phil Carspecken in the context of his own highly readable guide to “critical ethnography in educational research” (Carspecken, 1996). Much as in the ecological framework, Carspecken regards a rigorous epistemology as the key to defining a “critical” from a “non-critical” research orientation; values commonly shared by critical researchers are important, but neither necessary nor sufficient for critical research itself. His approach draws upon the phenomenological and post-structural traditions to reject the “givenness” of the world to perception: a familiar post-modern stance, and one often interpreted as undermining any kind of realism, critical or otherwise. Carspecken, however, is closer to critical realism (or to pragmatism, which he cites) in regarding thought and action as effective, though fallible, sources of knowledge. Thus the sophisticated epistemological model that underpins his methodological argument has many features in common with the ecological framework.

Carspecken takes awareness to be holistic and implicit; the “apperception” (simultaneous perception) of background and foreground is integral to our experience of the world and thus to any co-ordering of awareness we achieve through language or other means. In particular, he proposes, “we only understand an idea against a horizon from which that idea is brought forth” (Carspecken, 1996: 103). This has important implications for the ecology of communication: it implies that every act directed towards the co-ordering of awareness and action is “backgrounded” by what Carspecken calls a “pragmatic horizon” of “claims and references”,

but which I prefer to think of as *interpretive conditions*. Carspecken, following arguments developed by Jürgen Habermas, identifies the following five categories, which can be regarded as highlighting different aspects of the triadic interaction frame:

- intelligibility, i.e. participation in a public communication system;
- appropriateness, i.e. participation in mutually accessible Genres and Discourses;
- subjectivity, i.e. relatedness to actual lived awareness of the speaker;
- identity, i.e. physical/social situatedness of the speaker;
- objective validity, i.e. relatedness to ecological meaning and value.

The advantage of the ecological framework is that it places these conditions in relation to one another and furthermore draws attention to the dialogic aspect of communication. Speakers do not “claim” or “reference” only their own subjectivity and identity, but those of their hearers as well, using means (such as language devices) drawn from Genres and Discourses: the middle three conditions of Carspecken’s list are thus intimately bound up with one another. Because Genres and Discourses are conceptualized as *evolving and adaptable systems* of devices for co-ordering awareness, they possess both the “temporal” and “paradigmatic” dimensions that Carspecken introduces as separate axes (Carspecken, 1996: 105-110). The two models, or frameworks, are essentially homologous: only the imagery is different. In one, a particular Utterance is visualized as “foregrounding” a particular idea, or claim, with layer upon layer of backgrounded claim and reference receding on all sides to a distant “pragmatic horizon”. In the other, each Utterance is

viewed within the context of an evolutionarily structured interaction frame, defined by the intersection of Genre and Discourse, such that much of the work of co-ordering awareness takes place independently of the Utterance itself. In practice, the first image can be helpful for visualizing the layers of meaning that may be conveyed by a single phrase or turn in a conversation (Carspecken provides many examples of this). The second image, however, helps us to perceive these meanings as not merely transient products of particular Utterances but as part of a cultural warp and weft that speakers and hearers constantly draw on in the process of communication.

Carspecken is well aware that such a background tapestry exists. He observes that critical ethnography “brings attention to ambiguities, cultural drifts and shifts, and even to contradictory claims made in everyday life. We do not end up with a single reality but a field of reality claims consistently made by the participants of study. In most studies, however, one will find that such fields are limited in number and display bounded qualities: we do not discover an infinite number of possible realities” (Carspecken, 1996: 188). Identifying and analyzing these cultural patterns is a vital part of critical ethnography because they condition action in the research setting, both as resources and constraints: one cannot understand why people act as they do unless one understands the cultural themes they draw on (191). But where Carspecken reserves this work for the later phases of research, to be carried out after data collection and analysis has already produced a plausible narrative (“stages four and five,” which many of his doctoral students never reach: 206), the ecological approach does not. As similarities of “claim and reference” emerge in the social settings under observation (as they generally will, very quickly), it is essential to begin to sketch the main Genres (systems

of interpersonal relationship) and Discourses (systems of awareness and action in the world) that are present and to trace their evolutionary relationship with broader cultural patterns. It is this linking of local settings to wider systems that “gives critical qualitative research its specifically critical bite” (Carspecken, 1996: 206), and that justifies its characterization as “ecological”—or “anthropological/ethnological”, as Dell Hymes terms his ideal:

I want to stress the danger of letting the anthropological perspective on education become equated in other minds with just a mode of field work. The result will be dozens of people called “ethnographers” because they have observed, although with little or no training in cultural analysis; attempts to insert “ethnographic components” in helter-skelter research designs; a brief vogue for the name “ethnography”; and at the end a heightened immunity to the true challenge of an ethnographic, anthropological mode of thought.

Ethnography, as we know, is in fact an interface between specific inquiry and comparative generalization. It will serve us well, I think, to make prominent the term, “ethnology,” that explicitly invokes comparative generalization. And it will serve schooling in America well. An emphasis on the ethnological dimension takes one away from immediate problems and from attempts to offer immediate remedies, but it serves constructive change better in the long run. Emphasis on the ethnological dimension links anthropology of education with social history, through the ways in which larger forces for socialization, institutionalization, reproduction of an existing order, are expressed and interpreted in specific settings. The longer view seems a surer footing. (Hymes, 1980: 121)

There is, indeed, little eco-psychological value to be found in observation for its own sake. At the least, critical ethnographers should work with the community of practice under study to foster skills of *self*-observation, leading to a broadening of the range of awareness available to local actors. In ecological terms, such an increase in *embodied* knowledge may

improve the community's adaptive fit, its ability to access resources and overcome constraints, while an increase in *textualized* knowledge offers nothing to the local community and relatively little to the community of researchers. The involvement of "research subjects" is thus an imperative that goes beyond Carspecken's recommendation to "make the project as democratic as possible"—it goes to the heart of what critical ethnography is *by definition*. Not by coincidence, the ecological framework also points to the invaluable contribution to be made by participating subjects, whose knowledge of their own personal and group history will greatly assist in tracing the local genealogies of Genre and Discourse. Once again, Hymes shares this conviction:

In the study of a language, a kinship system, or the like, one is to a great extent seeking to make explicit in a comparable framework what others, in a certain sense, already know. Speakers of a language, participants in a network of kinship, are not merely objects, but, as sources of information, partners in inquiry as well. This tradition suggests that the appropriate strategy for school personnel who seek advanced degrees is to capitalize on what they know where they are. Often enough they have been made to believe that a legitimate contribution to knowledge, and advanced degree, requires methodology and subject-matter disconnected from their experience. Anthropological tradition suggests that they can capitalize on their experience, and make a far more valuable contribution to knowledge by doing so. (Hymes, 1980: 122)

But simply *involving* local actors in the research is at the low end of the critical ethnographic ideal. According to Carspecken, the ultimate ideal is to have researcher and researched working towards a consensus on the explanatory theory that best links the local setting with broader social patterns: "an expansion and fusion of meaning horizons between subjects' culture and researcher culture" (196). As elsewhere in the book, this

conception may place too great an emphasis on colloquy and unanimity (the influence of Habermas can be felt throughout), in place of a realistic acknowledgement of disparity of interests and the open-endedness of interaction. More in keeping with the ecological perspective, I think, would be an ideal of the local community developing a locally grounded *critique* of researcher culture, from which the researcher herself could learn. This critique would, of course, be formulated according to local norms: it might take the form of narrative rather than analysis, it might be allusive rather than explicit, and it would probably not be written (except in so far as the researcher wished to use it to edify her peers). Nonetheless, such a process might go far towards establishing the “equal power relations” that constitute another key ideal of critical ethnography.

Critical ethnography is, of course, a problematic enterprise. Hymes notes the vulnerability of communities, as seen in “suspicion rooted in past experience; concern about exposure and embarrassment; demands that research and the researcher be useful to those studied; ... [and the fact that] not everyone wants everything known, or even to know certain things at all” (Hymes, 1980: 122). Carspecken points to the vulnerability of researchers, who “must be prepared to become hurt through their work; to allow their contact with others to threaten and perhaps alter their usual ways of conceiving of themselves” (Carspecken, 1996: 167). But such possibilities seem preferable to the no-risk dead end of objectivism, whose promise of epistemological security for the few has legitimized epistemological oppression for the many. If the quest for certainty has given us the world of modernity, then learning to accept and live with *uncertainty* and vulnerability is a necessary part of any alternative (Bauman, 1992; 1995).

Dell Hymes writes, in the context of the loss of linguistic vitality in indigenous communities, that objectivist theory offers “an Edenic vision of the equality of languages and their uses that is contradicted by everything we know about the history of the past hundred years, probably the most vicious and destructive hundred years in the history of the human race. We must despair a little if we are to do much good” (Hymes, 1980: vii). But despair is a poor motivator. I prefer Chickasaw educator Eber Hampton’s call “to understand both the statistics of pain and the rays of hope;” to learn the hard lessons of endurance and wisdom associated with the cold dark North: “It is not enough to be good, or smart. The north demands knowledge” (Hampton, 1995). Critical ethnography, in an ecological framework, offers one of the most promising routes to such knowledge.

Language and Indigenous Knowledge

The limits of ethnography are partly determined by the vitality and depth of engagement of the cultural communities involved. Communities that have been socialized into a very restricted view of their identity, their significance, and their potential for action, who are suffering from direct physical, economic, cultural or political oppression, or who have experiences a long and negative history of outsider interventions, will not initially be in a position to participate fully in a critical ethnographic project. Conversely, as an ethnographic relationship develops in the sense proposed above, among the looked-for consequences are the rediscovery and elaboration of cultural authenticity, greater self-assertiveness against external authority, and greater willingness to collaborate with outsiders on equal terms. In short, cultural communities that cultivate self-knowledge can offer the most to critical

ethnography, and critical ethnography offers greater cultural self-knowledge as one of its greatest rewards.

Because modernity has been built on the substitution, over several centuries, of other-knowledge for self-knowledge, the best existing models of the latter—of *sustainable systems* of cultural self-knowledge—must be sought among indigenous peoples. Despite the terrible toll exacted on them in the name of progress, many tribal communities still cultivate sophisticated and diverse forms of ecological awareness and action. These cultural traditions speak to all of human history prior to urbanization; they point to dimensions and potentials in the human-nature relationship that objectivist science renders invisible; they contest the significance of virtually every knowledge claim in modern philosophy. So great is the epistemological gap that indigenous thinkers are still widely ignored in the human and natural sciences, or filed away under labels such as “ethnic” or “native”. Many such thinkers, of course, find modernist discourse and educational institutions so oppressive that they turn away in self-defense, before their voices can be heard even by those who listen. But some make it through. Read Eber Hampton’s call for redefinition (1995), Gregory Cajete’s “ecology of indigenous education” (1994), Angayuqaq Oscar Kawagley’s “pathway to ecology and spirit” (1995), and you will find brilliant, passionate, tough-minded educators engaged in a common project of breathtaking scope.

For as Cajete makes clear, what is at stake is not just better education for indigenous people, even though the latter embody both the most desperate need *and* the greatest opportunity of developing schooling “for Life’s Sake”. Indigenous education is fundamentally about

the universals of the educational process from the perspectives of traditional American Indian thought. Its foundation lies in the applicability of its perspectives to the whole process of teaching and learning—not just that of American Indians. The universals that are explored may be viewed as archetypes of human learning and as part of the Indigenous psyche of all people and cultural traditions. ...

Traditional systems of Indian education represent ways of learning and doing through a Nature-centred philosophy. They are among the oldest continuing expressions of “environmental” education in the world. Taken as a whole, they represent an environmental education process with profound meaning for modern education as it faces the challenges of living in the twenty-first century. These processes have the potential to create deeper understanding of our collective role as caretakers of a world that we have thrown out of balance. (Cajete, 1994: 18-20)

Indigenous epistemologies are *ecological* epistemologies. They not only anticipate the naturalist–critical realist philosophy developed in this chapter, but demonstrate how it can be practically and sustainably integrated into human communities and languages. Contemporary indigenous education is centrally concerned with the conflict of modernity versus ecology, reductionism versus holism, ideological discourse versus critical realism, epistemologies of control versus epistemologies of emancipation. As its theorists-practitioners struggle to transform the oppressive realities of most indigenous schooling, they simultaneously open up a new route out of the cul-de-sac of modern education—one that complements and enriches critical ethnography by showing how communities and individuals can develop their own tools for knowing.

Language, as the preeminent (though far from the only) means for co-ordering imaginative awareness, is a vital part of this endeavour. Indigenous people who retain the ecological vision of the world are well aware of this; as

concern grows in many communities about the fate of indigenous languages, schools are increasingly expected to play a central role in ensuring their maintenance and renewal. Yet in the absence of a critical-realist theory of language, some vital tools for thinking about and managing this process are missing. Because modern linguistics has specialized in the development and description of the standard written languages that underpin the dominant social systems of modernity; its epistemological and ontological premises run directly counter to indigenous linguistic ecologies. The value of indigenous languages for their speakers lies precisely in their integration with a complex, ecologically aware way of life. A ecological science of language, one that takes such integration to be central, not peripheral, will better serve both the needs of indigenous communities and, on a larger scale, the maintenance of diversity in the global linguistic ecosystem.

The first task, then, is to explore the connections between indigenous philosophies of knowledge and the account of language developed here. As for the other encounters with indigenous thought in these pages, this exploration is undertaken in a spirit of deep respect for the diversity and dynamism of indigenous cultures. The examples and conclusions I present are intended to be suggestive rather than definitive; linguistic ecology by its very nature resists formulation in terms of universal rules and is wary of speculative generalizations. English, with its typically modern reliance on nouns and adjectives, makes it difficult to avoid the suggestion of essentialism, as if clear boundaries could be fixed between the “indigenous” and the “modern”; although this is not the intention, like any other text the present work could be read “deconstructively” as entrenching the divisions it argues against. Only through the intimate situated negotiation implied in

critical ethnography can the emic and the etic be brought into a dynamic (and therefore unstable and evolving) balance—a vital task, the present work suggests, for all ecological theory. Yet for the time being, disembodied texts such as this one are still needed to get the process underway.

Thinking Ecologically

According to Gregory Cajete and many other sources, spirit and nature are the basis of indigenous knowledge: not as two different realities, but two different aspects of the same reality. “Participation mystique,” the projection of the human “sense of soul” upon the entire natural world, is as fundamental to indigenous cosmology as the machine metaphor has been to modernity (Cajete 1994: 83). It is vital to understand that such a universal foundation could hardly have arisen through accident or ignorance, as modernist accounts have typically assumed. On the contrary, for any subsistence culture it plausibly represents the *sanest* and *most sustainable* cognitive relationship with the natural world. The reason for this can be summed up in a single word: emergence.

Consider, with Rupert Ross (1992), the situation of a hunter-gatherer eking out a living in the untamed wilderness (or, with equal validity, a subsistence farmer likewise dependent on her relationship with nature for survival). The challenge of living requires constant awareness of “the innumerable variables [presented by] each season, day and hour. ... Reading those patterns to determine ‘when the time was right’ was the essential life skill” (Ross, 1992: 70). As Ross illustrates from his own work as a fishing guide, such “pattern thought” is largely an unconscious process developed and refined through long experience. Conclusions present themselves, not in

the form of logical or verbal reasoning, but as emotions—excitement, satisfaction, wariness, fear—attached to particular states of awareness. Generally speaking, the longer one practices “pattern thought,” the more reliable it becomes as a predictive tool.

The hunting enterprise most clearly demonstrates the necessity of those predictive skills. Those who do not hunt tend to think of it as going *after* something. While that is indeed part of the process, it is actually of secondary importance. The more important task involves predicting what your quarry will do so that you can put yourself in a position where, waiting with your gun or bow, you can *receive* it. It is predominantly a task of accommodating yourself to an intensely dynamic and fluid reality, reading the signs, trying to anticipate the most appropriate place to be at the most critical moment. It is a matter of asking, “What will this animal do, on this trail, with this wind, at this time of the day and year, in this kind of slough, coming up to that hill and tree-line, with its particular skill and experience at avoiding danger, if I were to do A, B, or C?” At every step, the task is to collect all observations, read all patterns, sift through all experiences and rank all possibilities in order of likelihood. In short, it is a task of mental anticipation. (Ross, 1992: 77).

Indigenous epistemology thus revolves around an intense awareness of *transcendent order* in the world: order that can be sensed and used, but resists description or analysis. The skilled hunter, Ross suggests, spent considerable time “imaging” the world of his quarry; “during such visits he would experience all the sounds, smells, feels, tastes and sights of those times and places *in his mind*... there was life on two planes, equally vibrant, equally full, and, to a large degree, equally accessible” (Ross, 1992: 81). *Everything* in the world can potentially exist on the imaged, spiritual plane as surely as it exists in the directly perceived material plane; and its meaning in the spiritual dimension of awareness can transcend whatever is accessible to our everyday senses. In other words, indigenous epistemology is acutely sensitive

to the reality of emergence: to the tendency of complex systems to behave in ordered ways that cannot be predicted from an understanding of their parts. The combination of *ecological adaptiveness* and *individual indeterminacy* that characterizes individual people is ubiquitous in nature as well. Things and events fit together, they display order, but on multiple interacting levels simultaneously. Nature can therefore best be understood by treating it, in all its manifestations, *as if it were persons*—plant persons, animal persons, wind persons, earth persons, each with its own individuality, yet all unified within a great natural community characterized by its own personhood.

If this description captures something of indigenous perceptions of the sacredness of nature, then it may shed some light on indigenous philosophies of language. As Cajete paraphrases Navajo teachings: “Language itself is a sacred part of the life of the People, a form of the Holy Wind or breath of life that unites humankind with all of the world around it” (Cajete 1994: 53). The ecological theory we have been working with reconfirms this *emergent* nature of language, its status as a highly (but incompletely) ordered system rooted in the ecological and social history of particular human communities. It also justifies one of the central indigenous teachings regarding language: “The use of language and symbolic words carry a responsibility because they cause things to happen. They evoke; they instruct” (Cajete 1994: 53). When one considers the importance of pattern thought to indigenous ways of life, language’s ability to co-order imaginative awareness indeed constitutes a powerful and potentially dangerous technology. Hence the insistence, found across indigenous cultures, that particular language devices, be they words, phrases, songs or stories, be used only at the appropriate time and by qualified people. Hence, also, the great reluctance among Elders in many cultures to

allow language to be written down, since this increases the risk of inappropriate use. When language is regarded as an *aid* to direct awareness, rather than a *substitute*, its cultural significance changes drastically; this single difference does much to explain the incompatibility of indigenous and modernist philosophies of knowledge.

It follows that indigenous education is emphatically not *language-centered*, in contrast to the modernist version that now prevails in schools. The central purpose of indigenous education is to help the individual correctly perceive themselves as an integral part of natural reality, a skein of relationships within a web of relationships, a personhood connected to a infinity of other personhoods both human and non-human. Note that word "correctly". The ontology of indigenous education is itself critical realist, emphasizing the necessity of encountering the world as it is, striving to overcome our simplistic projections, dedicating our lives towards greater awareness of a reality whose complexity will always defy full understanding. Ross comments perceptively on the emotional and spiritual force of this conception of human development:

[Indigenous people's] lives did not centre on building things but on discerning things. Life's challenge lay in observing and understanding the workings of the dynamic equilibrium of which they were a part, then acting so as to sustain a harmony within it rather than a mastery over it. One aspired to wisdom in accommodating oneself to that equilibrium, and that pursuit quite clearly promised unlimited scope for exploration and self-development.

Further, I suspect that they sought that wisdom not only to better insure survival but also as an end in itself, as something in itself, as something in itself exhilarating. ... We who focus so much on building, accumulating, erecting monuments, and so on have a hard time seeing that there might be other sources of self-esteem, of pride in achievement. In fact, each

hunter-gatherer may have had more opportunities of achieving an expanded sense of self than most of us will ever know. I have worked in an office in Toronto, and I have worked as a fishing guide. My achievement horizons in Toronto were visible almost from the outset, my days filled with repetitive tasks which, once mastered, held no further interest and posed no further challenge. While it might appear that going out each day to take tourists fishing is similarly repetitive, I did not perceive each day that way. The variables of weather within which I had to operate and the process of pattern-thought which guided me showed both immense variety and an almost limitless scope for challenge and for improvement. (Ross, 1992)

This ramifications of this philosophy of education have been explored in considerable depth by Gregory Cajete (1994). In his interpretation, one's natural environment, one's human community, and one's own "emotional response to learning, living, growing and understanding" together constitute the complex reality that indigenous education seeks to comprehend. Integrative awareness leading to harmony of action and spirit is sought primarily through myth, vision, and art (Cajete 1994: 37-41). The primary role of language in such an education is as an "integrative mind tool," in Merlin Donald's apt phrase (Donald, 1991: 216): it must not merely describe the world on the physical plane, but reflect its dynamism, complexity, and "personhood" on the spiritual plane. The linguistic ecology of education therefore needs to explore how this task is accomplished within the entire language system, and in particular the kinds of imaginative projections that the system makes most readily available to its users.

Such exploration might begin with the five "types of thinking and knowing" described by Cajete (1994: 47-49). Even the limited range of examples presented here may serve to indicate the enormous linguistic riches on which indigenous education can draw, and the curricular challenges this

will pose. They are also intended to throw new light on the use of languages as *objects* rather than as *means* of teaching, as “whats” as opposed to “hows” or “whys”.

Knowing Place

Cajete’s first way of knowing has to do with *situatedness*, with one’s knowledge of physical place. In his words, “Indian people interacted with the places in which they lived for such a long time that their landscape became a reflection of their very soul” (1994: 84). Thus, place names and species names will often serve far more sophisticated ends in indigenous languages than merely “labelling” the world.

Keith Basso, for instance, has described how in Western Apache storytelling “oral narratives have the power to establish enduring bonds between individuals and features of the natural landscape, and... as a direct consequence of such bonds, persons who have acted improperly will be moved to reflect critically on their misconduct and resolve to improve it” (Basso, 1983: 23). By attaching cautionary tales to familiar everyday landmarks, the Apache invest their environment with moral force: “Mountains and arroyos step in symbolically for grandmothers and uncles... inviting people to recall their earlier failings and encouraging them to resolve, once again, to avoid them in the future. Grandmothers and uncles must perish but the landscape endures” (Basso, 1983: 43).

Likewise, anthropologist Eugene Hunn has described the multiple forms of knowledge evoked by Sahaptin place names as “entries in a mental encyclopedia” (Hunn 1996: 20). According to Hunn, naming serves the Sahaptin “as a framework for cultural transmission and moral instruction, as

a symbolic link to their land, and as a ground for their identity" (Hunn, 1996: 4). Named landmarks evoke knowledge not only of the physical environment, but also of daily human activities, historical events, social relations, ritual, and moral conduct.

Plant and animal names play similar roles. Gary Paul Nabhan and Sara St. Antoine reviewed the "transcribed and published corpus of O'odham and Yaqui stories, ceremonial orations, and songs" (Nabhan & St. Antoine, 1993: 235). Over one hundred different taxa are referred to in the recorded literature of each language, where they are incorporated into complex rain symbolism (O'odham) and in the teaching of reverence towards the "wilderness world" and "flower world" (Yaqui). Knowledge of names is thus transmitted *within* a broader web of stories about ecological relationships linking knowers and known.

Perhaps of equal importance is the *way* naming is performed. Basso describes how each Apache place name consists of a full descriptive sentence, such as "water runs downward over flat rocks" or "horse fell down into water"; he believes that this characteristic "makes the mere pronunciation of place names a satisfying experience" (Basso, 1983: 27). Rupert Ross quotes Cheyenne lawyer Sakéj Henderson on how trees are named in Mi'kmaq: "They are 'called' by the sounds that are made as the wind goes through the branches, in the autumn, during a special period just before dusk" (Ross, 1996: 116). In addition to the inherent poetry of such names, they are of course specific to the particular region and people involved: the Apache would not be disturbed if the Navajo named the same places or plants in quite a different way.

The places and creatures that are prominently featured in modern education, by contrast, are named authoritatively and uniquely over their entire range of distribution, and only distantly and fragmentally related to the learners' experiential world. Some of the potential consequences are explored by Nabhan and St. Antoine, whose study on O'odham and Yaqui names was cited above. The researchers interviewed 52 O'odham, Yaqui, Hispanic and Anglo children from the same region of southwest Arizona, "living in a 25-mile radius of two national parks" and representing "a cross-section of urban and rural desert communities" (1993: 240). Fifty percent or more of each group identified books, television and school as their main sources of information about plants and animals; high proportions did not know the answer to simple questions about their natural environment, and yet were convinced "that they were learning more about plants and animals in school than their grandparents ever learned" (245). Nabhan and St. Antoine's telling phrase, "the extinction of experience," aptly sums up this transition from ecological realism to modernist facticity.

Linguistic knowledge of place, then, goes far beyond the mere "labelling" that is central to the modernist curriculum, to encompass relationships, stories, and knowledge of right action. In making this point, Nabhan and St. Antoine quote Yaqui educator Felipe Molina: "'We might learn about plants in science,' he explained, 'how to name their parts or how they grow. But we never went the next step, which was to talk about how to *care* for them.' Yaqui legends, he said, cultivated this kind of ethic" (1993: 244).

Knowing Relationships

Cajete's first way of knowing thus naturally fuses with his second, "consciously understanding the nature of one's relationships to other people, other life, and the natural world" (1994: 48). His description of this central feature of indigenous realism is worth quoting at greater length:

"We are all related," is a metaphor used by the Lakota in their prayers. It is a metaphor whose meaning is shared by all other Indian people. It is a guiding principle of Indian spiritual ecology reflected by every tribe in their perception of Nature. It is a deeply spiritual, ecological, and epistemological principle of profound significance.

Guided by this metaphysical principle, Indian people acknowledged that all living and non-living entities of Nature have important inherent meanings within the context of human life. Based on this understanding, American Indians symbolically recognized their relationship to plants, animals, stones, trees, mountains, rivers, lakes, streams, and a host of other living entities. Through seeking, making, sharing and celebrating these natural relationships, they came to perceive themselves as living in a sea of relationships. In each of the places they lived, they learned the subtle, but all important, language of natural relationship. With this awareness, tempered by intimate relationships with various environments over a thousand or more generations, Indian people accumulated and applied their ecological knowledge. (Cajete 1994: 74-75)

As modern, Western-trained ecologists come increasingly to appreciate the depth and subtlety of indigenous ecological knowledge, they are also belatedly coming to grips with the equally subtle relationship between ecological knowledge and indigenous languages (Maffi, 1999; Maffi, Skutnabb-Kangas, & Andrianarivelo, 1998). The challenges inherent in properly conceptualizing and describing this relationship have been elegantly detailed by linguist Andrew Pawley, on the basis of more than three decades of painstaking interdisciplinary work with the Kalam of the northern-central

highlands in Papua New Guinea (Majnep & Pawley, 1999 (in press); Pawley, 1999 (in press)). Building on the naturalist lexicography of anthropologist Ralph Bulmer, Pawley has concluded that much linguistically-encoded knowledge is not about entities per se, but about natural processes and relations among entities. To convey such knowledge, speakers make use of the whole tool kit their language puts at their disposal, employing not only the smallest lexical and syntactic devices (names, ways of expressing spatial, temporal, and causal relations, and so forth), but also more complex formulas including set phrases, specified ways of building sentences or even whole discourses, narratives, and so on. The difficulty of making this knowledge accessible in a different language is vividly conveyed by Pawley's Kalam colleague Ian Saem Majnep, who worked with Bulmer to translate his own work on traditional game mammals, called "kapuls" in Tok Pisin:

Translating the Kalam text into English was often extremely difficult. Ralph was an expert in birds but he did not know nearly as much about kapuls, and what they eat, where they sleep and how they think. Part of the difficulty was that many Kalam words I used were not yet in our Kalam dictionary and there are no Pidgin words to translate them, and indeed there are no English words to translate some of them. So when Ralph asked me what these Kalam words meant I had to stop and think, and sometimes I got really worried and began to sweat with embarrassment and ask myself what could have possessed me to take this work on! Ralph sometimes had to wait as long as five or six minutes, and I felt very ashamed. But eventually I would come up with an explanation.

There are many advantages that Bulmer and I gained from working together. If you are an outsider, such as an anthropologist or biologist or linguist, it is very hard work indeed to gain an accurate understanding of local knowledge of wildlife and the environment generally. It's much easier to record such knowledge if you are an insider. You already know the language, you already know a lot about traditional custom, and you

can ask your relatives and other friends about things that you yourself don't know. A foreigner will have problems with the language and often won't know when he or she is getting reliable information. But even for an insider, like me, it can be very hard work to record information about wildlife, because much of it is well known only to certain experts. Sometimes people give you inconsistent accounts. You have to check many things both by asking a range of informants and by your own observations (Majnep & Pawley, 1999).

Majnep takes it for granted that the purpose of language is to aid correct awareness of reality, without ascribing such awareness to the language itself. He emphasizes the need for both *direct knowledge* of local reality and for *critical interpretation* of others' accounts of such knowledge. And he is both emphatic about the *difficulty* of adapting English to describing Kalam reality and optimistic about its *possibility*, at least in the context of a written and heavily annotated translation. His account makes it evident, however, to what extent the Kalam language is adapted to the ecological niche of its community of users, exactly as one would expect in light of the evolutionary account of language presented earlier in this chapter. Language devices are reproduced because they productively co-order people's awareness and actions within the web of ecological relationships that defines a particular mode of existence. Language itself is thus *part* of this web, and given sufficient intergenerational continuity will evolve as a complex adaptive system in its own right.

The standard languages of modern education have their own ecology, of course. In contrast to indigenous languages' "ecology of context," they embody an "ecology of text"—an extremely complex web of factual practices that link language users with distant expert discourses in science, law, administration and journalism. If Ian Saem Majnep finds it to be "very hard

work” to ascertain what constitutes true expert knowledge within a localized language community of some 15,000 people, the challenge in modern language communities is greater by orders of magnitude. Indeed, what is true knowledge in one context may be inapplicable to other, superficially similar contexts within the same language community. As I argued earlier, the reproduction of standard language devices has been integral to the spread of characteristically modern forms of awareness and action, including the denigration and suppression of local ecological knowledges and their associated languages. Indigenous education, then, with its profound respect for knowledge of natural relationships, *must* seek to renew and further develop these languages.

Fortunately, as Cajete and other indigenous educators have suggested, much still remains of the cognitive ecologies underlying indigenous linguistic ecologies, even where the languages themselves are presently little used. Mi’kmaq educator Marie Battiste expresses it this way:

[L]anguage loss is not purely linguistic; it involves more than just the sounds, but involves the socialization of language and knowledge, ways of knowing, nonverbal and verbal communication, and these processes are not easily dissolved. For me this means that the spirit of languages is resilient, and in many of the communities who have in the last generation or two merged to the colonial languages, the spirit and socialization of Aboriginal languages are still embedded in the succeeding generations. Aboriginal languages have a spirit or soul that can be known through the people themselves, and renewing and rebuilding from within the peoples is itself the process of coming to know (Battiste, 1998).

Knowing Through Wisdom

This “process of coming to know” aptly sums up the indigenous understanding of human existence, according to Cajete: “For Indigenous

people around the world, education in nature is life itself" (1994: 87). Because direct experience is central to this process, it follows that Elders hold a uniquely important place in indigenous education. Cajete describes this as "the kind of knowing that has long experience with all aspects of human life," and elaborates:

This way of thought requires a learning that comes only from maturity. It leads to a knowing that includes, but also moves beyond knowing just through the physical senses towards wisdom. Wisdom is a complex state of knowing founded on accumulated experience. In Tribal societies, wisdom is the realm of the elderly. (1994: 48)

Rupert Ross (1992) has situated such wisdom in the context of what he calls "pattern-thought," emphasizing the impossibility of fully analyzing or verbalizing such multidimensional awareness of reality. To the expert pattern-thinker, Ross suggests, conclusions present themselves with emotional force rather than logical clarity, and such knowledge cannot simply be transmitted by linguistic means. The customary means by which Elders teach is therefore through storytelling, relying on their listeners to do the work of interpretation in much the same way as they are expected to foster a keen awareness of the world around them. But in order to work, this form of education relies crucially on *continuity*: on the younger generation honing its awareness on a world substantially similar to the world the Elders knew. As Ross puts it:

Even when [Elders'] powers of observation began to fail, they possessed two things younger people lacked: a reservoir of experience (or, in the predictive enterprise, of memory-images), and sophisticated skills in pattern-thought which others were only developing. Because of those skills and attributes, older people remained of inestimable value long after their physical powers had deteriorated. Their stories of days gone by were not just wistful reminiscences; they were mines of information

which would, without question, be of value at some time in the future. After all, the world which their children and grandchildren would inherit would be precisely the same world they had survived. No technological revolutions would make their skills redundant and no massive construction projects would change the face of the landscape to make their memories of it irrelevant (Ross, 1992: 80).

Most complex systems, of course, resist such rapid change. Ecosystems endure, people and their cultures endure, even in the face of massive intervention and dislocation; the knowledge of the Elders is perhaps of even greater value today than it was in traditional times. Yet there is no doubt that “knowing through wisdom” has been placed under immense strain in most communities, caught up as they are in the juggernaut of technological innovation, short-term economics, and textual (or televised) facitivity. Indigenous education, clearly, needs to recreate contexts for the encounter with wisdom; and language may provide a key.

By virtue of the very same skills in pattern-thought already described, Elders have the greatest understanding of the “spirit” of their language, its internal dynamics as an emergent system based on the co-ordering of human awareness and action within a web of natural relationships. The depth of this knowledge is obscured if one thinks of language within the synchronic structuralist framework of modernity, as merely a combination of grammar with lexicon (Pawley, 1999 (in press)). In reality, languages contain multiple overlapping and interacting levels of order and disorder that surpass the limits of verbal analysis (Friedrich, 1985); as in the case of the natural world, linguistic knowledge is best transmitted and acquired by modelling and experience. Thus, if an indigenous language is made central to the curriculum, and if its modernist definition is replaced by an ecological one,

“knowing through wisdom” will naturally come to define what “knowing the language” actually means. Consider Battiste again:

Indigenous languages offer not just a communication tool for unlocking knowledge; they offer a process of orientation that removes us from rigid noun-centred reality and offers an unfolding paradigmatic process for restoration and healing. It reflects a reality of transformation and change in its holistic representations and processes that stress interaction, reciprocity, respect, and non-interference. ... For Indigenous researchers much is to be gained by seeking the soul in the languages and in the knowledge bases of their peoples. (Battiste, 1998: 24-25).

Knowing Through Vision

By its very nature, the “soul in the languages” resists simple perception or description. Glimpses are available, however. In *A Yupiaq Worldview*, A. Oscar Kawagley observes how one polysemic word can help transmit a view of the world as suffused with consciousness:

To understand the Yupiaq worldview it is necessary to understand the multiple meanings of a word that epitomizes Yupiaq philosophy. This word is *ella*, which is a base word that can be modified to change its meaning by adding a suffix or suffixes. ... Variations of this one word can be made to refer to weather, awareness, world, creative force or god, universe, and sky. The key word is awareness, or consciousness. ...

[*Ella*] epitomizes the Yupiaq worldview of interconnectedness, so that you cannot exclude the consciousness of the human observer. Our mystical knowledge cannot have been gained merely by observation, which is the main basis for rational knowledge. To obtain mystical knowledge, observation must be coupled with the participation of our whole being—mind, body, and soul—with the universe. (Kawagley, 1995: 15, 33)

Cajete, too, speaks of a “dimension of thinking... that starts with wisdom and evolves beyond it to understanding and knowing the spirit

directly with all one's senses" (1994: 48). Such understanding is the highest goal in his philosophy of indigenous education, a "profound transformation of self" leading not to "adjustment" or to a static inner peace, but to a dynamic sense of one's own unique self participating in a universe of unique selves. This kind of awareness runs directly counter to the desacralized discourses of modernity, where it has been exiled to the marginal realms of philosophy, psychology and religion. Yet if Cajete is correct in suggesting that it was deliberately cultivated in indigenous cultures for millennia, it is not implausible that the epistemology of "knowing through vision" be reflected in the basic lexical and grammatical categories of indigenous languages.

This has in fact been strongly argued by Australian linguist David Wilkins (Wilkins, 1993), on the basis of his long study of the Mparntwe Arrernte language. Vision, or "dreaming," plays a central part in the worldview of Australian indigenous peoples; land, community, spirituality and individual identity are all considered to be one in the Dreamtime domain, even though they are known through the senses as separate material phenomena. Wilkins shows that in Mparntwe Arrernte the rules governing kin possessive pronominal suffixes, naming verbs, noun classifiers and question words all reflect this philosophy: one uses the same or similar language devices to talk of the place-of-belonging, the people-of-belonging (kinship), and the animals-of-belonging (totems), and when other devices are used to talk of people, places and animals, the meaning changes completely. Extrapolating from this discussion, Wilkins then poses the important question:

Is the Dreamtime philosophy and the theme that kinship, land, and totemism are inextricably linked to one another necessarily shared by all speakers of Mparntwe Arrernte or not? ... Can people learn to speak

Mparntwe Arrernte and not subscribe to the world view in which the language is embedded? To a certain extent, yes, they could come to “know the language” at a fairly abstracted level. However, they could not fully understand the meaning of all the lexemes and constructions, they would not be privy to all the levels and registers of the language, they would not be able to use language to manage social relations in precisely the way a Mparntwe Arrernte person would, and while they might be able to pick up on the cultural themes and play with them, they could not use the language creatively, meaningfully, and convincingly, since to understand how to extend the language, make understandable metaphors and use the contextually appropriate rhetorical style requires a degree of acceptance of the implicit socio-cultural philosophy of the group. (Wilkins, 1993: 87)

Wilkins’ conclusion must appear entirely uncontroversial, indeed self-evident, to the speakers of indigenous languages themselves, but the reigning modernist discourse on language as a neutral instrument of reason and communication requires that this point be made again and again. We are *all* the inheritors of ancestral visions, reflected in such basic linguistic traits as the English preference for nouns (“a language” rather than “*linguaging*”, “a mind” rather than “*mind*ing” or “*think*ing”; see also Ross 1996) as surely as in the kinship pronominals of Mparntwe Arrernte. Indigenous education, however, seeks to foster a conscious engagement with such visions, while modernist education denies their relevance. Although neither wisdom nor vision can be explicitly *taught*, the readiness for both can be cultivated; and the spiritual ecology of indigenous languages offers unequalled resources for doing so.

Knowing Right Action

The third among Cajete’s “ways of indigenous thought”, taken up here as a final unifying principle, “involves applying the capacity to think things

through completely, to make wise choices, to speak responsibly for purpose and effect, and to act decisively to produce something that is useful and has spirit”—in other words, acting rightly (1994: 48). Just as the other four ways of thought are in reality four aspects of a *single* (ecological) mode of knowledge, the same is true of doing. “Knowledge and action are considered parts of the same whole. Properly contexted and developed knowledge leads to balance in terms of action” (Cajete 1994: 226). It is this principle, perhaps more than any other, that divides Cartesian from indigenous epistemology.

As argued in earlier sections of this turn of the work, the ecological conception of knowledge always refers to the ability to act productively in the world. The meaning of “productively” rests upon a *valuation* of the consequences of such action. But since each act, however small and mundane, takes place within a web of natural relationships, valuation poses the same challenges as other kinds of knowledge: the perception of wholes in a world where we can only ever see the parts. Valuation always demands an imaginative leap—the projection and blending of a story about possible and desirable futures on the basis of a fragmentary knowledge of the past and present. From what has already been said about indigenous education, one would expect a frank acknowledgement of these human limitations, and a methodology of decision-making designed accordingly. This is indeed what Cajete recommends:

Therefore, to assure the integrity and rightness of an action, a great amount of time is spent reflecting and seeking information and understanding before forming an opinion or taking an action. Prayer, deep reflection, patience, and “waiting for the second thought” are regularly practiced in Indigenous decision-making (1994: 226).

It is through its role in “seeking information and understanding” that language must be considered essential to this mode of knowing. In seeking to know the consequences of an action, one relies not only on direct experience, but also on the reported experience of others, and on their own imaginative understandings of the world. Take, as an example, the ecological impact of human actions. Assessments of simple acts such as killing a plant or animal, of complex practices such as crop agriculture, or of a massive transformation of the landscape such as a hydro dam, will differ widely depending on the experiential and imaginative resources available through language. And here the factor of adaptation over time comes into play.

According to Jared Diamond, archaeological evidence strongly suggests that a range of ancient human societies were destroyed when they failed to understand the ecological consequences of their everyday practices. Among the clearest examples are Easter Island, where the Polynesian settlers who arrived around 400 A.D. ended up completely destroying the native forest that sustained their agricultural and fishing technologies; and the Chaco pueblos of the American southwest, where over 300 years the Anasazi people converted a fifty-mile swath of pinyon-juniper forest into a arid, treeless wasteland before finally abandoning the site. As Diamond comments, “preindustrial peoples who couldn’t sustain their resources were guilty not of moral sins, but of failures to solve a really difficult ecological problem” (1992: 337). And he suggests some lessons to be drawn:

It’s still true that small, long-established, egalitarian societies tend to evolve conservationist practices, because they’ve had plenty of time to get to know their local environment and to perceive their own self-interest. Instead, damage is likely to occur when people suddenly colonize an unfamiliar environment (like the first Maoris and Easter Islanders); or when people advance along a new frontier (like the first Indians to reach

America), so that they can just move beyond the frontier when they've damaged the reason behind; or when people acquire a new technology whose destructive power they haven't had time to appreciate (like modern New Guineans, now devastating pigeon populations with shotguns). Damage is also likely in centralized states that concentrate wealth in the hands of rulers, who are out of touch with their environment. And some species and habitats are more susceptible to damage than others—such as flightless birds that never had seen humans (such as moas and elephant birds), or the dry, fragile, unforgiving environments in which both Mediterranean civilization and Anasazi civilization arose (Diamond, 1992: 335-6),

Centralization and colonization, massive population movements, the transformation of ecosystems and the wide-scale introduction of new technologies have all been consistent hallmarks of modernity—and all accompanied by the spread of facticity as a technology of normalization, as reflected in the linguistic forms conventionally referred to as “standard language”. Over the last five hundred years, the language devices that depict land and life as indefinitely and impersonally exploitable resources have thoroughly colonized the ecology of the major industrial languages. The impact of this legacy is apparent in indigenous communities, as they struggle to establish an economic niche and in the process learn the language of resource extraction and commodification; as they struggle for political autonomy, and in the process learn the language of representation and bureaucratization. “Right action” is now still more difficult to know, given this collision of utterly different epistemological and value systems.

In the final turn of this work, the nature of this struggle will become clearer, and it will be seen to involve us all, both as individuals and as members of our respective cultural communities. Those of us born to the middle classes of the industrialized societies need to develop a critical

awareness of the ways in which our languages are used to obscure ecological reality, substituting and propagating such towering fantasies as the homogenous nation, the autonomous individual, the objective scientist/intellectual, and the value-free administrator; and to challenge such imaginative hegemony from within. Those born to different linguistic ecologies need to learn to value, strengthen and defend them against the modernist tsunami. Between these two poles of what I have called a critical applied linguistics (Chapter 3), there is much common ground and a great need for dialogue. The theoretical and methodological approaches sketched in the last three chapters may help this work to proceed.

**Third Turn:
Communities and Schools**

7 Negotiating Community

Whatever theoretical stance one adopts as a linguist or educator, the word “community” is bound to figure in it somewhere. Indeed, the word is endemic in the human sciences: one researcher traced 43 different meanings in the sociological literature, and rhetoricians have labelled it an “aerosol word” for its ability to endow almost any proposition with a sheen of authenticity. Community carries connotations of harmony and homogeneity: people living and working together, sharing a common set of goals and principles, “loving their neighbours”. Used adroitly, it can obscure the gap between objectivist categorization and individual variability, between structure and agency. Linguistics has made particularly flagrant use of this device, equating “language” (theoretical construct) with “speech community” (real people) in many theoretical guises, ranging from Herder’s vision of a world of independent one-language one-culture units to Chomsky’s invention of the ideal speaker-hearer (cf. (Hymes, 1980: 24-27).

In this final turn of the work, I shall propose a much more variable and dynamic conception of community—one built firmly on the theoretical work of the preceding turn. Community will be developed less as an explanatory concept than as a topic of investigation, like Discourse and Genre before it. The ecology of language and the ecology of community will be shown to be very closely intertwined, so that the study of one must necessarily involve the study of the other. Particularly salient to such exploration is the issue of boundaries, raised so provocatively in Bernstein’s

work and further elaborated in these final three chapters. Fittingly enough, the boundaries *between* chapter topics that were clearly drawn at the start of the work here become increasingly blurred, as naturalist, critical, indigenous, and ecological perspectives interweave.

The Ecology of Community

I argued in Chapter 4 that communication is naturally structured in evolutionarily continuous Genres, or patterns of relationship between people, and Discourses, or patterns of relationship between people and the world about which they communicate. Genres and Discourses thus *link* people into groups or networks sharing similar forms of awareness about particular aspects of the social or natural world. Furthermore, individuals with joint membership mediate the diffusion of communicative devices *between* such groups, linking them together within a communicative system that incorporates many different, mutually influenced, evolving patterns of awareness and action. Such systems are what we call cultures, and the situated co-ordering of awareness with the help of symbolic communication lies at their very heart.

But Genres and Discourses not only bring people together, they concomitantly *divide*—insiders from outsiders, knowers from non-knowers. The stronger such boundaries (whether cultural or material or a combination of the two), the more autonomous the system they circumscribe. In oral, subsistence-based societies lacking technologies of long-distance transport or communication, every settlement or clan necessarily possesses a distinctive culture, typically linked by common descent and subsequent contacts with

various neighbouring groups, but evolving in response to local needs and local invention. Within such boundaries, communicative devices—and language devices above all—are constantly reproduced and recombined, in a situation analogous to the reproduction and recombination of the genetic material within a biological community. The logic of natural selection then ensures that differential reproduction drives the evolution of the system as an adaptive whole, even though many individual features may be less than ideally suited to their role.

This, then, is the ontology of language as a semiotic system, Saussure's *langue*: a common communicative currency allowing exchange between the Genres and Discourses enclosed by the relatively tight and stable set of boundaries defining a *cultural community*. As an ideal type, the latter must be considered not simply as a "speech community" defined by its linguistic system, but as a *Gemeinschaft* in the sense elaborated by the German sociologist Ferdinand Tönnies (1957). Here are the three dimensions, or stages, of *Gemeinschaft* that Tönnies considered crucial:

The *Gemeinschaft* by blood, denoting unity of being, is developed and differentiated into *Gemeinschaft* of locality, which is based on a common habitat. A further differentiation leads to the *Gemeinschaft* of mind, which implies only co-operation and co-ordinated action for a common goal. *Gemeinschaft* of locality may be conceived as a community of physical life, just as *Gemeinschaft* of mind expresses the community of mental life. In conjunction with the others, this last type of *Gemeinschaft* represents the truly human and supreme form of community. Kinship *Gemeinschaft* signifies a common relation to, and share in, human beings themselves, while in *Gemeinschaft* of locality such a common relation is established through collective ownership of land; and, in *Gemeinschaft* of mind, the common bond is represented by sacred places and worshipped deities. All three types of *Gemeinschaft* are closely interrelated in space as well as in time. ... Wherever human beings are related through their

wills in an organic manner and affirm each other, we find one or another of the three types of *Gemeinschaft*. (Tönnies, 1957: 42)

Tönnies' description can readily be recast in ecological terms. Kinship relations are a mode of Genre, a way of "being together"; locality involves particular modes of Discourse, or ways of "being in the world"; and because Genre and Discourse are also *communicative* frames, they entail the collective negotiation of "mental life" that Tönnies sees as distinctively human. In other words, the ideal of *Gemeinschaft*—the never-quite-attainable pole of collective organic unity—arises from maximal participation in shared Genres and Discourses that have evolved in a particular group of people living in a particular place for a long period of time. Conversely, the less time people spend together, the less attention they give to the world around them, and the less effort they invest in making sense of the world in terms of their shared experience, the weaker the ties of community become... with consequences that will shortly be explored.

Tönnies' classic description of community has much in common with the Romantic tradition epitomized by Johann Gottfried Herder, whose vision of a world of autonomous ethnic units, each developing its own kind of cultural authenticity in its own language, summarizes a long tradition of Judaic and European thought that remains influential today (Fishman, 1982). Herder's emphasis on language appears fully justified in the ecological framework, for the linguistic system represents a kind of hologram of a community's history, affording its speakers a strong sense of continuity and identity and enabling sophisticated forms of imaginative awareness to be transmitted across generations. The kind of language that corresponds to the ideal *Gemeinschaft* may be termed the *ideal vernacular*: ideal because it

supposes a lack of metalinguistic awareness that is unlikely to characterize any human community, and additionally a completeness of boundary closure that has now gone for good.

Two immediate challenges thus confront linguistic ecology. The first is to understand what competing forms of social organization arise from the eco-psychological framework, and how they modify *Gemeinschaft* in real-life settings; second, to understand what happens when different types of community or society encounter one another and the boundaries between Genres and Discourses gradually leak and dissolve. A theory that can describe such processes will represent a long step towards an adequate sociolinguistics of modernity.

Gemeinschaft, Gesellschaft, Vereinschaft

Tönnies' work was constructed around a double dichotomy that he used to analyze the ongoing transformation of rural Germany through industrialization and modernization. How were people changing, he wondered, as old boundaries disappeared beneath a flood of new technologies and ideas? What sort of a society was replacing the old one? At the psychological level, he thought, a shift in emphasis was taking place from "natural will" to "rational will"—from the acceptance and unconscious, evolutionary transformation of "the inherited mode of thought and perception of the forefathers" to a state "in which the thinking has gained predominance and come to be the directing agent" (Tönnies, 1957: 247). This cognitive shift both reflected and propelled a corresponding social transition from "*Gemeinschaft*" to "*Gesellschaft*"—from a collective order where

natural will had proven adaptive, to one where the conscious calculation implied in rational will was ever more highly rewarded.

Tönnies thought of rational will as the phenomenological antithesis of shared identity: a necessarily solipsistic mode of thought. In the pre-Freudian high noon of Cartesian psychology, this is understandable; it also enabled him to paint a dramatic picture of the new type of society that he saw arising:

The theory of the *Gesellschaft* deals with the artificial construction of an aggregate of human beings which superficially resembles the *Gemeinschaft* in so far as the individuals live and dwell together peacefully. However, in the *Gemeinschaft* they remain essentially united in spite of all separating factors, whereas in the *Gesellschaft* they are essentially separated in spite of all uniting factors. In the *Gesellschaft*, as contrasted with the *Gemeinschaft*, we find no actions that can be derived from an a priori and necessarily existing unity; no actions, therefore, which manifest the will and the spirit of the unity even if performed by the individual; no actions which, in so far as they are performed by the individual, take place on behalf of those united with him. In the *Gesellschaft* such actions do not exist. On the contrary, here everybody is by himself and isolated, and there exists a condition of tension against all others (Tönnies, 1957: 64-65).

Such a description resonates with features of modern society with which we are all familiar: family breakdowns, housing tenements, industrial workplaces, and the impersonal tyranny of free-market capitalism. And yet, Tönnies' belief that the most alienating aspects of modernity are the product of *rational* will reflects an odd combination of faith and pessimism, a Cartesian belief in the disembodied "rational" mind coupled with a Nietzschean irony towards its antics. Neither attitude sits well with the premises of ecological psychology. Rather than postulating a fundamental change in cognitive strategy and tailoring its description to a particular,

historically contingent social setting, the ecological approach implies a search for underlying principles that are realized in different forms and to different degrees in all group environments. A consideration of Genre and Discourse boundaries points to a way of adapting and extending Tönnies' insights that is in keeping with this idea.

Take Genre first. In the two limiting cases, two persons communicating can share a Genre completely—that is, they have a precisely reciprocal understanding of each others' roles, social identity, communicative goals, and so on—or they can share nothing but an awareness of one another as communicating and presumably rational beings. The latter condition characterizes Tönnies' *Gesellschaft*: in essence, Genre boundaries have weakened and collapsed inwards until they become coterminous with individuals. People are organically related only to themselves. The focus of communication is therefore always on *what* is said, not *how* it is said; as Tönnies expresses it, ends are completely separated from means (1957: 248).

Consider, however, the former possibility: a society where every communicative act is tightly framed by Genre, so there is no ambiguity of relationship whatsoever. Here the focus of communication is on *how* people speak, on appropriateness of conduct; means are once again separated from ends, but to very different effect. Genre boundaries have strengthened and expanded to the point where every social act is regulated by a ubiquitous normative code. This possibility does not seem to have occurred to Tönnies, although his own society surely afforded as much evidence of its influence as it did of *Gesellschaft*. The German sociologist was undoubtedly swayed by the linear conception of development (natural, social, scientific) that held sway

throughout the nineteenth century: if *Gemeinschaft* represented the past and *Gesellschaft* the future, what place could there be for a third ideal?

The answer becomes clearer when Discourse is introduced into the picture. In the *Gesellschaft*, communication loses many of its familiar dimensions: humour is gone, irony is gone, shared joy and shared frustration are gone. Language is reduced to a cybernetic code—an information-sharing system between isolated CPUs. This means placing a premium on objectivity, for all references to private states, to subjective experience, are inaccessible to evaluation in the absence of a shared Genre. What Tönnies conceptualized as rationality can be regarded alternatively as *experience-distant communication*: an objectifying stance towards every aspect of Being. This implies that terms in the *Gesellschaft* language must be defined by their use in objectivist discourse; therefore, *all intensions are language-bound*. The only communicable experience is that of talking about experience. There is no sharable access to a reality “beyond the wall” of language. Or, as Wittgenstein concluded in the *Tractatus*, which might be regarded as an exhaustive epistemological investigation of *Gesellschaft*: “Whereof one cannot speak, thereof one must be silent.”

What now of our new ideal type, the Genre-bound society? Here discourse is not objectivist but subjectivist, for nothing can be construed as a fact outside the appropriate social context, and the ultimate truth is simply the perspective of those with the right to speak. We might phrase its ruling maxim thus: “Whereof one *may* not speak, thereof one must be silent.” And this control does not appear as something imposed from without, for the boundaries of the self have expanded to become coterminous with the group as a whole. In *Gesellschaft*, experience is always private and incommunicable;

in its Genre-bound twin, experience is always public and therefore irrelevant for communication. Of course, experience cannot be shared directly, for physical boundaries still exist; but if imaginative awareness is perfectly co-ordered, then every private act is experienced as if it were a public one.

This leads to an interesting observation: in both Gesellschaft and its twin the imagination reigns supreme. In the former, it is defined by the objectivist standpoint, each individual projecting his awareness to a position outside of experience. The language of the Gesellschaft would have no place for the embodied "I" or "you": all actors would appear in the third person. The truth value of a language device would be measured by its success in fostering a shared outsider perspective; Tönnies' "rational will" represents a commitment to negotiate all situations on these grounds. In the Genre-bound society, individual awareness is subsumed in group awareness; the reigning pronoun is "we", and the truth value of a language device is measured by its contribution to social cohesion and control. This standpoint, too, is an external one, where the imagination is engaged in an unceasing effort to transcend the boundaries of self. To emphasize its symmetry with Tönnies' vision, I propose to call this effort "transcendent will" and the ideal type of society that embodies it "Vereinschaft", the society-that-is-one.

The purpose of Tönnies' schema was to shed light on certain aspects of modernity; this tripartite alternative, derived from the ecological concept of Genre, illuminates the terrain still more brightly. Consider, for instance, the parallels between Vereinschaft and Benedict Anderson's concept of "imagined communities" (Anderson, 1983). According to Anderson, it was the invention of printing in the context of Europe's emerging capitalist economy that first enabled large numbers of people to apprehend the lives of

others in places and periods far removed from their own. Print literacy and language standardization were accompanied by the construction of a new kind of community in which, in utter contrast to the classic theory, *no direct contact* was required between individual citizens – only a continually renewed leap of the imagination. Here one can see transcendent will at work, in the readiness to believe that unknown others are essentially like oneself; while the operative ideal of imagined community, the perfect nation, is one in which local identities, class identities, family identities, are all subsumed within a willed homogeneity—in a word, *Vereinschaft*.

In place of Tönnies' innocent linear continuum between local authenticity and universal reason, we now confront a triangular field riven by ideological conflict and existential doubt—for in all real human associations, as Tönnies pointed out, these theoretical constructs are interwoven. Where he saw modernity as essentially a one-way progression along the continuum from *Gemeinschaft* to *Gesellschaft*, we can see it as a struggle between three fundamental kinds of human society that arise from the constraints on symbolic communication between embodied persons. In particular, it becomes apparent that modern societies, based on massive systems for co-ordering imaginative awareness, will display tendencies towards both *Gesellschaft* and *Vereinschaft*—tendencies that may appear contradictory, since these two social types are overtly ideologically opposed, but at a deeper level may reinforce one another. Appearing in one guise as nationalism, *Vereinschaft* can also manifest itself as a cult of religion, science, or any other activity that entails a distancing from everyday experience; and all of these forms of distancing can *also* be developed into objectivist systems of reasoning and rational action. Thus the religious experience is elaborated

into both theocracy and theology, or the enforcement of social norms gives us both the system of law as a shared normative system and the theory of law as a rigorous field of study, and each tendency can draw legitimation from the other even while maintaining a critical stance toward its excesses.

Normalized language, and particularly written language, is an essential instrument of such distancing; but it also inevitably becomes its object. Just as *Gemeinschaft* provides the social realization of the perfect vernacular, so *Gesellschaft* and *Vereinschaft* are premised on their own versions of the perfect language. For *Gesellschaft*, this ideal is the philosopher's language dreamt of by Descartes and Leibnitz: the perfect language of thought, its structure and lexicon corresponding exactly to the structure of the world, filtering out all the errors imposed by the observer's subjectivity. For *Vereinschaft*, the corresponding ideal is a language of transcendence, in which every word and phrase is sanctified by tradition, conjuring up an unsullied heritage surrounding the hearer and bearing him or her onwards into a certain future. As these two tendencies work upon the linguistic systems of modern societies, we see both the proliferation of so-called "special languages", the languages of distinct professional and technical fields, and the hardening of norms in the so-called standard language, the bearer of the ruling lexemes and metaphors in a society. Naturally, these processes are never complete, for the pull of *Gemeinschaft* maintains a degree of flexibility and innovation in both standard and special languages; nonetheless, the effect is to multiply the linguistic challenges inherent in education, as will be discussed in the following chapter.

When Communities Collide

Cultural communities—if we can use that word to refer to all the social collectivities encompassed between *Gemeinschaft*, *Gesellschaft* and *Vereinschaft*—exist and evolve within stable Genre boundaries, at any level. Thus communities can overlap, intersect, and nest within one another; the number of people involved can vary from a handful of families to hundreds of millions; the intensity of their communicative interaction can range from weak to strong; their history can be numbered in years or in millennia. Since human society is built of people's active relationships with one another and with the world, it can perhaps be thought of as a chaotic system of Genres and Discourses oscillating among three strange attractors in response to the variable flux of ecological, technological, demographic and other inputs (cf. (Capra, 1996) for an analogous description of living systems).

Although these three ideal system types were introduced in terms of the relationships between *people* that they entail, they also apply at higher levels to the relationships between communities themselves. A group of *Vereinschaft*-type communities, for instance, can constitute a higher-order *Gesellschaft*-type community (think for instance of the limited communication and uneasy cooperation between political entities such as municipalities, provinces, or states), which in turn can evolve towards a *Gemeinschaft*-type community as ties of Genre and Discourse strengthen, creating the conditions for a potential transition to a higher-order *Vereinschaft* (as has happened in a number of federal states, including the U.S., and appears to be occurring in the European Union). The logical outcome of this cycle is, of course, the creation of more and more encompassing forms of community; but the increase in number of members

is often vitiated by the weakened intensity of interaction. Thus a large-scale *Vereinschaft* may not be able to maintain the strong framing necessary to prevent an inner drift towards *Gemeinschaft* and *Gesellschaft*, particularly over the long term; this weakening may in turn inspire new efforts to establish *Vereinschaft*-type communities on a smaller scale, leading to fragmentation of the larger society.

While this framework invites a deeper exploration, I will limit myself here to analyzing the situation typical of indigenous education: the encounter of a cultural community close to the *Gemeinschaft* pole with a cultural community in which the influences of both *Gesellschaft* and *Vereinschaft* are extensive and well entrenched. Indigenous cultures are very diverse, of course, and even so-called Western societies are more varied than is often acknowledged in sociological analysis; nonetheless, the dynamics of contact appear to be consistent enough to bear the weight of a little general theory. The same is true of the encounter of indigenous languages with their modern counterparts, a problematic that will assume an increasingly central place in these final chapters.

The initial contacts between the indigenous and colonizing cultures were generally of two kinds, involving traders and missionaries. At once one notes the curious complementarity of these professions: the first a typical representative of *Gesellschaft* or rational will, the second an emissary of *Vereinschaft* or transcendent will. As a rule, indigenous peoples had no difficulty grasping the general nature of both professions, and were willing to engage in barter and listen to sermons; often, to develop extensive trade networks or to convert to some form of Christianity. It is important to note, however, that such imported Discourses play a very different role in a

Gemeinschaft than they do in the originating culture. A Gemeinschaft is by nature both flexible and highly conservative: its openness to experience and vision allows experimentation by individuals, but the high value placed on tradition and accumulated wisdom means that such innovations affect the cultural core very slowly. Change may have been accelerated in the many cases where contact was followed by epidemics with a high fatality rate; nonetheless, it is a widely attested fact that indigenous peoples have maintained many deep-rooted cultural traits and practices to the present day, however convincing the appearance of conformity to modern ways.

If this is not widely understood, except by anthropologists and some of those who work closely with indigenous peoples, it is because the extensive co-ordering of imaginative awareness in modern societies is visible only to the critical eye. Just as we have come to think of meaning inhering in words rather than in the world, so we think of actions and practices as carrying their meaning, their pragmatic horizon, with them. But actions and practices are framed by Discourses and Genres that have evolved, little by little, within a situated cultural community, and are thus sustained by many overlapping and intersecting Discourses and Genres. History is ever present in any social setting, because it informs the cognitive devices people use to interpret the actions of others and of themselves. To this, Gesellschaft is systematically blind, for history implies Genre, a chain of social relationships stretching back into the past; and Vereinschaft is deaf, for only shared Genres are admissible, others being treated as irrelevance or threat. Since racism, like nationalism, is inspired by Vereinschaft, while liberalism and economism draw their strength from Gesellschaft, it appears likely that some of the most powerful

ideologies in modern society are incapable of coming to grips with indigenous realities.

This in turn has implications for the continuing confrontation between indigenous and modern cultural communities. The ultimate stake here is worldview, or what I would call the imaginative ecology of a culture. Change indigenous worldviews and assimilation will follow, ending the challenge that such peoples pose to the ideologies of the dominant society; leave them intact, and no amount of surface conformity (or non-conformist misery) will assuage the symbolic affront to the relations of ruling. Ironically, however, it is these very ideologies that make assimilation impossible and accommodation unlikely. A *Gemeinschaft*-type culture cannot imagine itself from the standpoint of either *Gesellschaft* or *Vereinschaft*; it can take elements from each, but only in so far as they can be incorporated within the processes of *Gemeinschaft*. In the next section we will begin to look at how this can play itself out in community schooling; first, though, consider its manifestation in language.

Like *Gemeinschaft*-type cultures, vernacular languages tend to be open to innovation on the periphery (borrowing, coining, code-switching) and highly conservative at their core (phonology, syntax, core lexicon). This enables them to coexist and adapt to cultural change while preserving their fit with traditional Discourses and Genres, and thus potentially to persist, gradually evolving, for many generations in a contact situation. The Australian linguist R.M.W. Dixon has proposed a model of linguistic evolution in which lengthy periods of such relatively peaceful contact are interspersed with sudden ruptures as new Genre boundaries form and new cultural communities come into being, with the linguistic variety of each

then embarking on its own course of development (Dixon, 1997). Such a “punctuated equilibrium” model corresponds to what would be expected for *Gemeinschaft*-type communities experiencing periodic stress due to population growth or environmental pressure (to take two evident examples). The need for discipline and self-sacrifice strengthens *Genre* and *Discourse* framing, pushing communities towards *Vereinschaft* and possible schism and the areal culture towards *Gesellschaft*; as conditions improve, framing relaxes, boundaries weaken, and both community and areal cultures drift back towards *Gemeinschaft*—although this process may well take much longer.

Now consider the impact of a colonizing “modern” language on such an areal ecology. As economic and religious *Discourses* spread across the area, each indigenous community encounters and incorporates them on its own terms, thereby becoming weakly interlinked with the originating colonial culture. Over time, with increasing settlement, resource exploitation and commodification, and ideological activity, a new areal culture develops in the colonial language (or, very occasionally, in a local one adopted for the purpose, as in the case of Paraguay). This early colonial culture is essentially of the *Gemeinschaft* type, but how it develops depends crucially on the boundaries between it, the originating culture, and the indigenous cultures. In the English-speaking countries of the present day—the U.S., Canada, Australia, New Zealand—the boundaries between the colonial and originating cultures were typically weak while those between the colonial and indigenous cultures were typically strong, so that indigenous cultures were essentially surrounded and isolated from one another by a matrix culture evolving in the colonial language and strongly influenced by European-derived tendencies towards *Gesellschaft* and *Vereinschaft* at various levels.

The need to negotiate with the matrix culture, often coupled with enforced submersion education in matrix-type schools, exposes members of indigenous communities to the externalist imaginative projections entailed in both rational will and transcendent will: that is, through the matrix language they may learn to see themselves both as isolated individuals and as units of a stereotyped collectivity. These perspectives, so alien to *Gemeinschaft*, can only be taught through language, though of course they are transmitted primarily at the level of Genre and Discourse rather than at more elemental levels. As they become integrated within the community's overall way of life, the organic unity of the *Gemeinschaft* begins to disintegrate. The traditional language, which emerged from and helped sustain this unity, becomes the object of both *Gesellschaft*- and *Vereinschaft*-type discourses: the first portraying it as an unnecessary relic of the past whose functions can as readily be fulfilled by the matrix language; the second identifying it exclusively with a "traditionalist" or "authenticist" political-cultural orientation. At the same time, the traditional language itself is likely to be losing important Genres and Discourses as practices and relationships are altered or abandoned, thereby weakening its fit to community life.

In Chapter 9 I shall be examining possible policy responses to this situation, which is more or less universal in indigenous communities around the world and may lead to the loss of 90% of our present linguistic diversity. Why it is an *educational* concern, in particular, will be made clearer in Chapter 8. One important point should however be stated here: the loss of a language does not imply the loss of a cultural community. Genre and Discourse boundaries can remain, and even be strengthened if one result of language loss is to push the culture towards *Vereinschaft*; in any event, many

threads of *Gemeinschaft* can and will be transferred to the matrix language. Indigenous cultures will change and endure in the future as they have changed and endured in the past. The choice the matrix culture faces is between denial and acceptance of this reality. Acceptance implies a willingness to change the matrix culture itself, to a point where *Gemeinschaft* is no longer treated as invisible, irrelevant, or inimical, but valued on its own terms as a source of groundedness and adaptation.

This, in my view, is or should be the postmodern project; *transmodern*, I would call it, though terms such as “critical” and “ecological” will serve as well. It is a project that inevitably must draw on all three ideal types of cultural community as it strives to move the balance back towards the centre, closer to the *Gemeinschaft* pole. As this claim implies, we need to find new opportunities for people to relate to each other, relate to the world, and communicate about such experience; we need to make rational discourse more self-critical, or “ironic” as Rorty and other postmodernists prefer; and we need visions of transcendence that are more accepting of diversity, indeed that celebrate it in idea and in practice. These imperatives have far-reaching implications for language and education that will gradually emerge in these final three chapters.

The Cultural Negotiation of Schooling

The dynamic model of community developed in this chapter applies to all bounded cultural settings, of which schools are an obvious and intriguing example. Particularly relevant for the ideas explored in the present work is the way that culture is negotiated in indigenous schools: that is, schools

where the great majority of the students are drawn from a particular indigenous community. One would expect very different Genres and Discourses to interact and combine in such settings, which given enough time, continuity and intensity could give rise to a mixed-type culture that would mediate, in dynamic fashion, between the local and the dominant societies.

This idea has been explored by Arlene Stairs, one of the most sensitive Canadian chroniclers of experiments in indigenous education, under the rubric of “cultural negotiation”. She suggests that:

Indigenous schools... do not directly reflect either a formal education ideal or the local community, but are new cultural creations – “third cultural realities” in Malinowski’s sense. The rich diversity of educational designs developing in indigenous settings worldwide... evidence the creative potential of culturally negotiated schools. A cultural negotiation perspective redefines education as “culture-in-the-making” at multiple levels. School becomes a forum for negotiation among surrounding cultures, between itself and the community, and in the personal negotiations of students with their cultural worlds, including the school culture, as they construct and reconstruct identity (Stairs, 1994: 156).

To gain insight into this process of negotiation, Stairs argues for the systematic expansion of what we think of as *context*, *meaning* and *process* in education, and exploring these dimensions “through moving back and forth between micro-study and model-building... It is in a comprehensive awareness across cultural dimensions... that hope lies for the survival of indigenous schools and their communities” (Stairs, 1994: 157). Though she does not use the term, this vision is closely akin to the ideal of critical ethnography described in Chapter 6. Like the framework developed in these chapters, then, Stairs’ concept of cultural negotiation is intended to help

inquirers see a particular area of human life “steadily and whole”, in Dell Hymes’ phrase; or, as Stairs herself expresses it, to “help us beyond momentary preoccupations” by “mak[ing] visible certain dimensions to which both insiders and outsiders in indigenous settings have often been culturally blind” (*ibid.*, 169).

Context, Meaning, Process

The challenge confronted by Stairs is to conceptualize the making of a classroom or school culture in a manner that gives due weight to the perceptions, roles and creativity of the participants, yet makes clear their connectedness to external, complex, relatively stable cultural systems of knowing and doing. The ecological framework developed here proposes treating classroom and school as partially bounded systems of Discourse and Genre whose connections with local or distant cultural systems can be explored through the critical ethnography of communication. At the same time, it proposes analyzing the dynamics of cultural negotiation *within* a bounded system in terms of the contribution of the three ideal types of cultural community sketched earlier in this chapter. Drawing on a broad background in cultural psychology and education, Stairs proposes a different triad of concepts for this latter purpose: namely, context, meaning, and process.

The dimension of **context** concerns the level of *social order* involved in the negotiation of community. In Stairs’ examples, this ranges from classroom/teacher through school/community and region/educational system to the state/nation; other stepwise classifications could of course be employed. In the ecological framework, such levels of social order are treated

as nested communities or nested sets of overlapping communities: the greater the range of communities affected by a particular negotiation, the higher the context level. One can also imagine a *context boundary* dividing all communities affected in some way from those not so affected: the higher the context level, the more inclusive the context boundary. Context is thus *an index of implicative scope* in cultural negotiation, with low-context negotiations leading to more localized and specific outcomes than high-context ones.

Often there exist relatively strong Genre and Discourse boundaries between communities at different context levels, as Stairs points out:

Deeply negotiated educational policy at a national or regional level does not insure deeply negotiated indigenous educational practice to individual schools and classrooms. There is presently, for instance, serious debate in Nunavik [Northern Quebec] over local subversion by some Inuit educators and politicians of the original indigenous school board vision for Inuit education.... Neither does a superficially negotiated or exclusively Euro-North American school system policy always preclude the cultural negotiation of indigenous education within the classroom or local school (Stairs, 1994: 159).

This strongly suggests that the best strategy for achieving a sustainable cultural community in a local setting is *not* to isolate it, but to gain support for it in as many contextual zones as possible; that is, to establish or strengthen those Genres and Discourses that cross context boundaries and are consistent with the negotiation of local norms. Isolated teachers and isolated schools cannot resist assimilationist discourses as effectively as systems, networks and coalitions of indigenous schools and indigenous educators. One sees, in fact, that the most consistently successful indigenous schools also play a clearly *political* role; that is, they deliberately involve themselves in higher-

context negotiations. A convincing illustration is offered by the Hualapai school in Peach Springs, Arizona:

[D]uring the program's first years, the staff convened many public meetings. One of the questions raised repetitively at meetings was, 'Why have the schools failed to educate our people?' ... In discussions like this, the staff and other community members gave voice to the fact that formal education had been imposed on the Hualapai people. In essence, there *were* no community values in formal schooling. Gaining community support for the bilingual-bicultural program thus required some 'reverse brainwashing'. Parents were provided with opportunities to critically assess the history of formal education for Hualapai people, and to consider how the values and knowledge embodied in Hualapai culture were valid and indeed preferable to commercial curricula (Watahomigie and McCarty, 1994: 38).

This is an example of school-community negotiation, the most essential cross-context linkage for securing the relative cultural autonomy of the school. But indigenous schools may participate in high-context negotiations at the regional and national levels as well. One reflection of this is in the curriculum, as at the Rock Point school on the Navajo Reservation, which began operating as a community-controlled school in the late 1960s:

From the outset, the Board and the school took the development of the Navajo Social Studies component very seriously. ... At the high school level, students took four half-years of Navajo Social Studies: a semester each of Navajo History, Navajo Social Problems, Navajo Government, and Navajo Economic Development. Rock Point students were among the few students on the Reservation who left high school with some formal preparation for participation in the Navajo political process (Holm and Holm, 1990: 178).

Another reflection is the participation of local educators in negotiating overarching standards and objectives for indigenous education. On the

Navajo reservation, one example is provided by Pfeiffer and Holm's challenging vision of "Diné education in the year 2004" (Pfeiffer and Holm, 1994), which is deeply informed by the Rock Point experience. Similar processes of building effective multi-community alliances in education are underway all over North America, and would be worthy of a separate study. Such high-context work does not come easily to communities imbued with a deep conviction of their own sovereignty, but it is increasingly an integral part of establishing effective low-context control over education.

Stairs' second dimension of **meaning** refers to the level of *cultural order* under negotiation, ranging (in classroom settings) from language and content (changes in *what* is learned) through environmental and social relationships (changes in *how* learning is accomplished) to changes in the values and worldview embodied in the school (reassessment of *why* learning is worthwhile). In the ecological framework, this dimension (the vertical one in Stairs' model) corresponds to a movement of imaginative awareness outwards from the here-and-now to encompass past and future, nature and culture, the causes and the consequences of actions. I therefore propose to treat meaning as *an index of imaginative scope* in cultural negotiation. Note that this is distinct from context: negotiations in a high-context setting, such as the formulation of national policy, can nonetheless suffer from extreme narrowness of vision; while negotiations in a low-context setting, such as a classroom or school, can display great imaginative depth. It is also not to imply that the latter alone is a sufficient measure of value or authenticity. Exclusively high-meaning discourse risks losing its grounding in present realities and thus being ineffective as a guide to action.

Stairs' particular concern, however, is with widespread low-meaning practices in low-context settings, or what her Inuk colleague Betsy Annahatak calls "floating lessons":

[S]he offered the example of a unit in traditional tool-making for intermediate Inuit boys. The students were involved and enjoying the lesson she felt, but dealing with the tools as toys. They were not aware of the survival values carried by the tools – detailed attention, patience, right relationship to people, animals and the world. These same values might be conveyed using contemporary tools such as computers, but students were not relating actively to either in terms of their own decisions, responsibility, and futures (Stairs 1994: 165).

What is missing from such pedagogy, Stairs and Annahatak feel, is a vision of the world from "a perspective we would call 'moral', that is, teaching within the value model of the culture" (Stairs 1994a: 164). Ecological psychology suggests, indeed, that in the absence of such teaching the students necessarily acquire a very limited understanding of the tools' meaning. Recall, from Chapter 4, that the meaning of a language device is what it accomplishes in the world. Suppose this to be true of everything in human culture, whether it be a cognitive tool or another kind of tool. Then the meaning of these Inuit tools is indeed in their use, not simply in what they are *designed* for but in every aspect of their making, handling, and employment; in their integration in Genre, Discourse and community. Awareness of the tools as *things* is situated low on the meaning dimension; awareness of their role in community *ecology*, of the relationships and "right actions" involving them, is high on the meaning dimension.

Jerry Lipka has dramatically shown high-meaning pedagogy at work in his portrayal of a Yup'ik teacher in Alaska (Lipka, 1991). A demonstration of making a beaver pelt has students slipping easily into the roles of active

observers, just as if they were out on the land; it becomes an animated lesson in subsistence, survival, and “right relationship”. In minutes a small imagined community is created in the classroom which closely models part of the community outside the school. The implication is that teaching practice in indigenous community-based schools may be very different from standard Western models, precisely because the students’ imaginations need to be grounded in “who they are now and where they are going” (Annahatak, 1994). And this underlines the situatedness of the teachers themselves: if the community ecology that they know differs from that of their students, then their ability to cultivate high-meaning awareness in the latter may be circumscribed in ways of which they themselves are quite unaware. Non-indigenous (non-local) teachers in indigenous schools may have to learn to know themselves better, as well as the children they teach, in order to progress along the meaning dimension.

Stairs’ third dimension, **process**, refers to the level of *active participation* by community members in the educational project. “Depth of negotiation process results in cultural creativity—culture-in-the-making,” writes Stairs, implying that the limiting of participation (either in terms of numbers of individuals, or in terms of intensity and duration) will prevent any real negotiation from taking place:

As an example, negotiation at the initial language level in our model can result in a superficial process of introducing add-on “cultural inclusion” indigenous language classes once or twice a week, unrelated to and with no effect on other school programs. On the other hand, it can result in the deep process of elder and community involvement, collective efforts at language renewal, and the strengthening of local indigenous identity around the language, its use, and the cultural values it uniquely conveys (Stairs, 1994: 165).

The meaning and process dimensions can be distinguished by thinking of the former as characterizing the range of Discourse available within a particular Genre, and the latter as characterizing the range of Genre available within a particular Discourse. Low-meaning negotiation limits the co-ordering of awareness to the most immediate aspects of a situation; low-process negotiation limits the co-ordering of awareness to those most immediately involved. Conversely, high-meaning negotiation ignores concrete particulars to focus awareness on more abstract forms of order, and high-process negotiation subordinates the perceptions and values of the immediate stakeholders to those of a more diverse and complex community of individuals. Process can thus be summarized as *an index of interpersonal scope*, so that we have the following dimensions characterizing all situations in which the co-ordering of awareness and action is being negotiated:

- context = implicational scope = total system that is potentially affected (the *context boundary* delimits the set of Genres and Discourses available for negotiation);
- meaning = imaginative scope = range of Discourse involved in negotiation (from shared experience to shared abstraction);
- process = interpersonal scope = range of Genre involved in negotiation (from situation-specific to system-wide).

It is quite possible to have low-context (low-implication), low-meaning (low-imagination) practices which display high levels of process (as in the sports clubs that keep schools bearable for some students), or to have high-context, high-meaning initiatives—such as Ministry conferences and consultations—which engage a low range of Genres and are thus low process. Evidently a key aspect of successful indigenous education is sustaining high process and high meaning at low context levels: that is, involving teachers

and administrators in a continual effort to model community values in their practices. This can involve a substantial amount of *unlearning*, as Lipka notes, for such values and practices “are not the ones being taught through ... field-based teacher education programs” (Lipka, 1991). Consequently, effective community-based schools generally place a great deal of emphasis on staff development and sharing of both theory and practice. Outstanding examples include the multicultural Richmond Road school in Auckland, New Zealand (May, 1994) and the Hualapai school in Peach Springs:

Ongoing staff development has been instrumental to the curricular institution of the Hualapai language and culture. On-site workshops, classes, and participation in summer institutes all aimed at building the capacity of community members to design and implement an educational program tailored to local needs. The program has made effective use of community experts, especially elders, and outside specialists, organizing regular workshops on bilingual/bicultural teaching methods, cultural and linguistic curriculum development, oral language, and process-oriented approaches to reading and writing in two languages. Importantly, these workshops have not been limited to program staff, but have included school faculty, administrators, parents, and staff involved in other federally funded school projects (Watahomigie and McCarty, 1994: 36-37).

This is difficult enough, given the material constraints and social strains that indigenous schools must often struggle with. Still more difficult is to sustain high process and high meaning at higher context levels, since it is simply impossible to achieve the number and intensity of negotiated exchanges that is feasible within the contexts of local community and school. Overcoming this barrier, at least to some extent, is a key to the success of indigenous education “as a thing in itself”, as Eber Hampton puts it. Without standards that have been negotiated in common, the only thing indigenous

schools will share is the mainstream system—"the white man" (Hampton, 1995: 24). If, instead, a vision of education can be developed that celebrates spirituality, diversity, service and respect, then every teacher and administrator in indigenous schools will have an alternative yardstick against which to measure their practice and their objectives. This is, of course, no less than a process of cultural negotiation, a building of community, within the contexts of nation, continent and globe.

To sum up the above, I see context, meaning and process as a way of characterizing the dynamics of a cultural community. The Inuit communities that inspired Stairs' model live by norms of awareness and participation that radically challenge built-in assumptions in the organization of modern schooling. To close this chapter, I will now propose how these insights can be related to the ideal types of *Gemeinschaft*, *Gesellschaft* and *Vereinschaft*, and explore a few of the practical implications of such an analysis—not only for indigenous education, but for schools in general.

"A Third Cultural Reality"

Because she draws her inspiration from indigenous cultural values, Stairs has implicitly proposed a three-dimensional model of *Gemeinschaft*. It is important to see, however, that the *Gemeinschaft* ideal is not embodied in the *maximization* of context, meaning and process, although her illustrative examples often contrast the low indices (on these three dimensions) of conventional mainstream education with the high indices sought by indigenous educators. On deeper examination, the defining characteristic of *Gemeinschaft*-type cultural negotiation appears as a *constant cycling* between highs and lows.

That this must be so is evident, first, from Stairs' comments on the cyclic regeneration of relationship as a shared and central value in indigenous cultures:

Both among Inuit I have come to know, and as described with other indigenous peoples... there is a need to continually construct and reconstruct relationships with all aspects of the world—humans, especially kin, animals, the land, spirits. Neglect or prevention from cyclic regeneration of any of these relationships disrupts development towards *innumarik*, a most genuine person, and threatens identity utterly. A person is not seen as a bounded individual but is her/himself distributed among others and the land (Stairs, 1996: 231).

Even this last statement, I suspect, may be too categorical. The concept of cyclic regeneration suggests that identity is more as something to be constantly *rediscovered* through interaction—neither exclusively “out there” nor “in here”, but *in the relationship between the two* (an idea that ecological psychology is finally rediscovering, after centuries of what Blake disdainfully called “Newton’s sleep”, but which I would more emphatically label “Plato’s dream”). Such interaction should encompass all levels of *context* (from the embodied self through near and distant kin to a situated relationship with the world), *meaning* (from form and substance through action to spirit—a sense of the personhood of things and processes in nature), and *process* (from the solitary inward vision, through daily living with others, to the recreation of culture in each generation as a group endeavour that subsumes the individual). It is this conception of what education *is* that supplies Stairs’ model with its ultimate grounding.

Such an epistemology of discovery carries with it an openness to change, as Stairs relates. “Inuit point out that change is a strong cultural value for them and growth is continual” (Stairs, 1996: 224); “There is great danger...

in being 'too pure' about traditional development values—kinship networks of sharing, for instance, must be modified to deal with money as well as meat from the hunt" (*ibid.*, 225). Yet such change, while continual and welcome, takes place against a background of core cultural values: "Things matter, even small changes are not trivial and must be worked out seriously and deeply at the level of cultural laws rather than behavioural rules" (*ibid.*, 225). Cycling between minima and maxima implies a commitment to *dynamic integration*, which might be termed the keystone value of *Gemeinschaft*-type cultures.

Very different commitments characterize the other two ideal cultural types. The strength of Stairs' model is revealed in its ability to accommodate them elegantly and insightfully, in a way that deepens and strengthens the ecological frame of analysis.

I propose that in *Gesellschaft*, the ideal most familiar to scholars weaned on Cartesian epistemology, the keystone value is *dynamic reduction*. It implies that all relationships, at all levels of context, meaning, and process, are to be deeply understood and experienced in terms of their respective minima. So all levels of *context* are to be understood in terms of the here-and-now, the synchronic moment; all levels of *meaning* are to be reduced to the units of speech, or even to the physical processes underlying them; all levels of *process* are to be interpreted in terms of individual actions, or even as neurons firing in single brains. Far as it is from the realities of people's daily lives, this ideal is nonetheless embodied daily in the writings of modernist intellectuals, from Noam Chomsky to Richard Dawkins (the work of Evers and Lakomski analyzed in Chapter 5 provides another striking example); its single-minded clarity has propelled the scientific and technological revolution, and continues to confront modern societies with

ethical dilemmas on which it can offer no guidance, save the libertarian principle of *laissez-faire*.

Gesellschaft ideals form the background to much modern study of education; as Stairs writes, “movement beyond the individualistic learner focus of behavioural and later cognitive psychology has progressed through slow and uneven steps and is still in progress” (Stairs, 1994: 155); much work on curriculum, pedagogy and administration has likewise been reductive. It was suggested in the first turn of this work that an underlying value orientation in such intellectual work has been the quest for certainty and predictability, in place of Gemeinschaft strategies for embracing and harnessing change. It should be understood, however, that this value reflects the mixed-type nature of modern society; a true Gesellschaft would be quite indifferent to change, as long as individuals could continue to pursue their interests in an unfettered fashion. To the extent that dynamic reduction continues to dominate many forms of discourse, it is neither surprising nor ironic that it creates and maintains a culture of turbulent, unceasing change.

Modernity’s “rage for order” (Friedrich) is, instead, an aspect of Vereinschaft, whose keystone value may be termed *dynamic sublimation*—the raising of all cultural encounters to the highest level of context, meaning and process. “Highest context” here needs to be understood as the *limiting context*, defined by the boundaries of Vereinschaft; context levels above the limiting context must either be ignored or imaginatively related to it—as in the self-appointed colonial missions of the Western European peoples, who saw the world as an object to be remade in their image. Thus, Vereinschaft discourages cultural negotiation outside its boundaries, just as it discourages independent exploration—whether of the

self or of the world—within its boundaries. Individuals are educated to monitor their own actions in terms of adherence to transcendent values: the “why” of the meaning dimension governs all forms of Discourse. Similarly, on the dimension of process, it is the group norms that prevail; the duty of wholehearted participation in the cultural reproduction of society is the principle that trumps all others.

Although Vereinschaft-type values are most strikingly realized in autocratic and theocratic states, their effects can be traced everywhere, including the organization and governance of modern education systems. As many critical educators have pointed out, the oft-proclaimed commitment to education for independent thought that one finds in liberal societies is usually belied by such common procedures as standardized testing, a sanitized curriculum, and a style of pedagogy that reduces learners’ responsibility and initiative to a minimum. It is Vereinschaft that provides the “hidden curriculum” so effectively transmitted by schools, thereby undermining the Gesellschaft ideals that dominate discourse *about* education. Vereinschaft values are often not made explicit, for this exposes them to Gesellschaft-type deconstruction and critique; rather they are *embodied* by virtue of the Vereinschaft principle that “what everyone else does must be right”. Vereinschaft thus resists change as staunchly as Gesellschaft embraces it; the uneasy coexistence of the two in modern societies is regulated, largely but not wholly unconsciously, by limiting scrutiny and debate at the highest levels of context, meaning and process.

The obstacles to effective indigenous community-based education are therefore of two kinds. First, as cultural negotiation progresses along the dimensions of context, meaning and process, it runs an increasing risk of

encountering Vereinschaft-type barriers. In the context dimension, this can be seen in terms of political and institutional resistance within the governing structures of education: the higher the context level, the less likely one is to find deeply negotiated support for effective local control. In the meaning dimension, this can be seen in the structure and content of the curriculum: indigenous schools may be able to effect changes in textbooks and pedagogy, particularly in the younger grades; but in general, and especially in the higher grades, such Vereinschaft-related features as the compartmentalization of subjects, the prestige of the written standard language, and the high value attached to objectified knowledge are extremely difficult to challenge or alter. Finally, in the process dimension, it can be observed that the flexibility of negotiation declines as more and more people are involved: projects can be radical when developed by a small group, yet move closer and closer to mainstream practice as the process expands.

Alongside these Vereinschaft-type obstacles are those due to Gesellschaft. More than a dilemma of practice, these represent an impasse of understanding. By focusing awareness upon a *single* context level, a *single* level of meaning, or a *single* level of process (and especially upon the lowest level, the isolated individual or teacher-learner dyad in the here-and-now), the Genres and Discourses of Gesellschaft consistently misconstrue what is going on in classrooms and schools, and indigenous schools in particular. This misconstrual has consequences: it not only blinds teachers, administrators and policy-makers to the impact of their actions, but it deprives indigenous education of an educational vocabulary adapted to its needs. Gesellschaft-type discourse—the textualized knowledge of disciplinary cultural communities—can be a powerful force for change over the long

term; unfortunately, as Stairs points out, such discourses as might be suited to describing and championing Gemeinschaft-type education are still in the earliest stages of development. For some time to come, educational discourse will be at best an unreliable ally for indigenous educators; more often, it will be their enemy.

Pointing out these obstacles is not intended as a rationale for doing nothing: on the contrary, by mapping out the terrain I hope to provoke more strategic thinking about priorities and objectives. In particular, it seems imperative to me to promote the keystone value of Gemeinschaft, dynamic integration, within all aspects of indigenous education. A school that takes “cycling” as its guiding organizational principle may be able to incorporate much that is of value from both Gesellschaft and Vereinschaft, and to develop a critical consciousness towards whatever is inimical in these cultural orientations. Cycling will be most effective when it extends as far along the dimensions of context, meaning and process as possible. This means, as we have seen, finding ways to incorporate higher context levels in the curriculum, and discussing them from a local perspective; bringing teachers and administrators together both in the school and with the community; encouraging individual experience and discovery, but then working to place them in a larger imaginative context. When such work is given priority, schools become very different places to learn and teach.

Why, then, restrict it to *indigenous* education? Or, more accurately, why reserve Gemeinschaft-type education to indigenous schools? It is not that Gemeinschaft has utterly withered in modern societies, only that it has become invisible in the ruling discourses of the imagination. Wherever there are people, Gemeinschaft can be built. Not easily, of course. Indigenous

communities, however terrible their present situation, have lost less of their millennial heritage than people whose societies have been modernizing for centuries. Nonetheless, *Gemeinschaft* is a *human* potential, not only an indigenous one, and by starting with the contexts, meanings and levels of process that individuals already share, cyclic processes of shared exploration can slowly begin to build a dynamically integrated culture in any setting.

In reality, of course, such work will not be allowed to progress unhindered. In the indigenous context, Eber Hampton speaks of the ongoing, relentless war “between that which honours life and that which does not” (Hampton, 1995: 33). It is not that *Gesellschaft* and *Vereinschaft* are *necessarily* life-denying, but that they cannot keep such imaginative forces under control. For Hampton, this is a call to action, a spur to invention:

It is the tension felt by Native educators, teachers, administrators and curriculum developers as they attempt to fit their practice into non-Native structures that generates the creativity necessary for the development of the new Native education (Hampton, 1995: 10).

It would be well if other educators were to come to perceive this tension as all-pervasive, to accept the challenge of reestablishing *Gemeinschaft* within schools and communities, and to take on a commitment to the cyclic regeneration of relationship in their own lives. In such circumstances, Stairs’ “optimistic proposal of cultural negotiation” would truly come into its own—as a fully-realized potential “for evolving cultural identities as a rich range of alternatives to assimilation and cultural loss, or even to indigenization and cultural isolation or anomie between the two” (Stairs, 1994: 155). It is surely an outcome worth working for.

8 Community and Modernity

In the previous chapter, I argued for an understanding of modern societies as mixed-type cultural communities in which *Gesellschaft* and *Vereinschaft* both compete with and complement one another. I suggested, too, that this implied certain things about the functioning and development of modern languages, and about their relationship to vernaculars based in *Gemeinschaft*-type cultural communities. This chapter will take these ideas further, showing how our experience of and ideas about language and education have been influenced by *Gesellschaft* and *Vereinschaft* and exploring some implications of the ecological alternative.

Language and Vernacular Values

To understand modernity in ecological and evolutionary terms, we need to trace its development from pre-modernity. In Chapter 5 I argued that the Cartesian conception of knowledge was continuous, in important respects, with the Christian veneration of written texts and their interpreters. The extension of this epistemology to secular domains of knowledge was well adapted to the spread of imperial rule, although it also led to unforeseen consequences in the Enlightenment, the scientific and industrial revolutions, and the gradual establishment of the liberal democracies. It is time now to examine the linguistic dimension of this transformation more closely.

I suggested in the previous chapter that the linguistic component of *Gemeinschaft* is the “ideal vernacular”, and that this represents one pole of the evolutionary cycles that gave rise to the linguistic mosaic of the pre-modern world. “Vernacular” is a traditional word for local, unstandardized linguistic varieties. It is also the word that the Jesuit-trained scholar Ivan Illich proposed to denote the *Gemeinschaft* way of life as a whole:

Vernacular comes from an Indo-Germanic root that implies “rootedness” and “abode”. *Vernaculum* as a Latin word was used for whatever was homebred, homespun, homegrown, homemade, as opposed to what was obtained in formal exchange. The child of one’s slave and of one’s wife, the donkey born of one’s own beast, were vernacular beings, as was the staple that came from the garden or the commons. ... Just now, I would like to resuscitate some of [the word’s] old breadth. We need a simple, straightforward word to designate the activities of people when they are not motivated by thoughts of exchange, a word that denotes autonomous, non-market-related actions through which people satisfy everyday needs—the actions that by their very nature escape bureaucratic control, satisfying needs to which, in the very process, they give specific shape. ... By speaking about vernacular language and the possibility of its recuperation, I am trying to bring into awareness and discussion the existence of a vernacular mode of being, doing and making that in a desirable future society might again expand in all aspects of life. (Illich, 1983: 476-7)

An ecolinguistic account of modernity, then, may begin by joining Illich in tracing the decline of the vernacular in pre-modern Europe and its replacement by other “modes of being”.

Inventing the Mother Tongue

Many centuries before Descartes, the seeds of modern Europe were being sown through the ascendancy of the post-Carolingian monastic orders

and their technologies. Between 900 and 1500, medieval northwestern Europe was gradually transformed from a heavily forested and sparsely settled continent into a mosaic of largish villages dominated by the local abbey and relying on the previously unknown power and speed of the horse to bring large swathes of the countryside under cultivation. Over this period, according to the Jesuit-trained scholar Ivan Illich, the monasteries gradually expanded their role from magisterial to pastoral: “the classical priest trained in Roman and Hellenistic models began to be transmogrified into the precursor of the service professional: the teacher, social worker, or educator” (Illich, 1983: 477). With increasing imaginative dependence on the local branch of the Church came a gradual shift from *Gemeinschaft* towards *Vereinschaft*. As Illich makes clear, when “the clergy can define its services as needs of human nature, and make this service commodity the kind of necessity that cannot be forgone without jeopardy to eternal life,” then the *vernacular* conception of Christian life has been replaced by a one in which local life is sublimated to high-context, high-meaning, high-process norms (Illich, 1983: 478).

A change in community type necessarily affects the language in which it conducts its affairs. One effect was undoubtedly to establish or strengthen Genre-Discourse boundaries between communities in different parishes; on the dialect maps of Europe today one can still trace these old boundaries in the form of “isoglosses”, demarcation lines between one set of linguistic forms and another. Another effect, traced by Illich, was to alter the popular *conception* of language:

Neither in ancient Greece nor in the Middle Ages did people make the modern distinction between mutually understandable dialects and different languages. The same holds true today, for example, at the grass

roots in India. What we know today as monolingual communities were and, in fact, are exceptions. From the Balkans to Indochina's western frontiers, it is still rare to find a village in which one cannot get along in more than two or three tongues. While it is assumed that each person has his *patrius sermo* ["father speech," the language of the home], it is equally taken for granted that most persons speak several "vulgar" tongues, each in a vernacular, untaught way. Thus the vernacular, in opposition to specialized, learned language—Latin for the Church, Frankish for the Court—was as obvious in its variety as the taste of local wines and food, as the shapes of houses and hoe, down to the eleventh century. It was at this moment, quite suddenly, that the term *mother tongue* appeared. (Illich, 1983: 479)

"Mother tongue," as interpreted by Illich, denotes a *Vereinschaft* language. It is the language of social service, of the "Mother Church" or of any other curatorial or pastoral institution. According to Illich, the term was first coined by the Frankish-speaking (i.e. Germanic) monks of the Cistercian abbey of Gorz, in Lorraine, as a means to combat an encroaching vernacular shift towards Romance which would weaken their status relative to the neighbouring monastery of Cluny. Mother tongue is not the *patrius sermo*, but the language of institutionalized salvation. In the usual dialectic of *Vereinschaft*, it is a language that both brings people together (under the aegis of some authority) and divides them (from people living under rival authorities). While it may resemble a local vernacular, it is invested with a moral weight that constrains what can be said in it, and how; ability in its Genres and Discourses must be acquired in sanctioned settings from sanctioned experts. According to Illich, "as a rare Latin term it ["mother tongue"] incubated for several centuries. In the decades before Luther, quite suddenly and dramatically, [it] acquired a strong meaning. It became the language taught in school" (Illich, 1983: 480).

Another transformation was in the making. Since the time of Charlemagne, the principal language of formal schooling had been Latin (Kahane & Kahane, 1987); yet as early as the 12th century, lay schools were spreading through Europe and providing some instruction in the local languages of administration and commerce. By the 15th century there was a strong literary and humanistic tradition in many vernacular varieties, even as Latin, too, spread from its base in religion and law to become an all-purpose lingua franca of the educated elite (Parker, 1983). In the midst of this thriving multilingual mixed-type society, where *Gesellschaft* and *Vereinschaft* had modified but not yet deposed *Gemeinschaft* as the organizing principle of everyday life, appeared a literally revolutionary technology: the printing press.

It is estimated that before 1500, more than 1,700 presses in almost 300 European towns had produced one or more books. Almost 40,000 editions were published during the fifteenth century, comprising somewhere between 15 and 20 million copies. About one third of these were published in the various vernacular languages of Europe.

Four categories of books first appeared in the people's languages: vernacular, native literature; translations from French and Latin; devotional books; and, already, the how-to-do-it manuals that made teachers unnecessary. Printed books in Latin were of a different sort, comprising textbooks, rituals, and lawbooks—books at the service of professional clergymen and teachers. From the very beginning, printed books were of two kinds: those which readers independently chose for their pleasure and those professionally prescribed for their own good. (Illich, 1983: 468-9)

The impact of this vernacular literature may have been far greater than the number of copies suggests, since standard vernacular literacy practices of the time entailed reading aloud to an audience, not consuming a text

privately and in silence. By itself, then, the advent of the printing press did not bring about a movement towards standardizing languages over a wide area. Printing might have continued to develop as a local industry, fostering the literary development of hundreds or thousands of vernacular varieties alongside languages of wider communication. What intervened was the expansion of Vereinschaft: "the transformation of mother tongue into national language under the auspices of the imperialist Crown's grammarians" (Illich, 1983: 480), and with it, the creation of a new linguistic role for schools.

From a modern standpoint, it is difficult to imagine that medieval era before print, with its very different conceptions of time, space, and human purpose (Anderson, 1983). Clearly, however, the diversity of local ways of life was an accepted fact which neither Church nor State considered problematic, for the simple reason that no alternative had yet been imagined. Secular rulers were not particularly concerned with what people did in their everyday lives, as long as they didn't obstruct the material interests of the Crown; the Church had achieved a degree of localization that made it part of the fabric of diversity, although its evolution into a pastoral institution had already prepared the ground for a far-reaching cultural transformation. The first man who clearly saw the potential in applying a similar principle to the State was a Castilian linguist, Elio Antonio de Nebrija, whose manifesto of 1492, the *Gramática Castellana*, is described by Illich as comparable "to the burning of Giordano Bruno or to the appearance of Johannes Kepler's *The Harmony of the Worlds*" (Illich, 1983: 464).

Nebrija had spent his youth in the study of classical Latin, grammar and rhetoric, and his middle years in the study of Castilian. He regarded with

disdain the spread of literacy in local vernaculars (the Gutenberg revolution began in his adolescence); in the introduction to his grammar, dedicated to Queen Isabella, he writes of his "constant desire... to provide the men of my tongue with books worthy of their leisure. Presently, they waste their time on novels and fancy stories full of lies" (Illich, 1983: 467). And so, he continues:

I have decided... that my most urgent task is to transform Castilian speech into an artifact, so that whatever henceforth shall be written in this language may be of one standard tenor, one coinage that can outlast the times. Greek and Latin have been governed by art, and thus have kept their uniformity throughout the ages. ... I want to do for our language what Zeno has done for Greek and Crates for Latin. ... By means of my grammar, [your subjects] shall learn artificial Castilian, not difficult to do, since it is built up on the base of a language they know; and, then, Latin will come easily. (Illich, 1983: 470-3)

Several arguments are marshalled by Nebrija for the adoption and dissemination of his grammar by the Crown, all of them inspired by a Vereinschaft-type vision of the world. First, the *internal* power of the Crown will be greatly augmented, both spatially and temporally. Centrally-produced documents, whether administrative texts or propaganda, will become accessible to all, instead of requiring local translations or functioning only within government agencies. Vernacular literacy, potentially frivolous or seditious, will be discouraged by the flood of approved publications in the artificial standard. Second, the *civilizing* mission of the Crown requires that Spanish culture be brought into step with the great classical cultures of antiquity, and thus the development of a language suited for the translation of Latin and Greek. Third, the *external* power of the Crown, already proven against the Moors and soon to be used for the subjugation of the New World,

responds to the imperatives of rule and civilization alike, and will thus be equally well served by the standard language.

In Nebrija's striking vision, the concept of "mother tongue" suddenly assumed unprecedented dimensions. In Illich's analysis:

Nebrija's grammar is conceived by him as a pillar of the nation-state. Through it, the state is seen, from its very beginning, as an aggressively productive agency. The new state takes from people the words on which they subsist, and transforms them into the standardized language which henceforth they are compelled to use, each one at the level of education that has been institutionally imputed to him. Henceforth, people will have to rely on the language they received from above, rather than develop a tongue in common with one another (Illich, 1981: 14).

Naturally, Nebrija's program could not be realized all at once. For one thing, it depended implicitly on a system of formal education that would employ the new variety, and this could only be developed piecemeal, in many fits and starts. For another, it would take time to train writers and translators in the new language and to develop its expressiveness in all the necessary areas. But these were simply details; it was the audacious vision of empire articulated by a common tongue that moved his readers. The combination of regal power, capitalism, and the printing press provided new and fertile ground for the first attempt at what would eventually be called "language planning"—the deliberate development and dissemination of a new linguistic variety for political and cultural purposes.

The Linguistics of Modernity

What interests us now is the linguistic ecology of this new creation. Nebrija's grammar was no more than an "engineering manual", in Illich's phrase: only when taken up and used by a community of speakers could his

“artificial Castilian” develop the Genres and Discourses characteristic of a natural language. It is thus of great import *whom* Nebrija set out to convince of his project’s viability: first the Spanish Crown, second the humanist intellectuals. Unlike a vernacular, which is acquired only by those whose mode of life is fitted to its characteristic Genres and Discourses, the adoption of a *standard* language requires an act of transcendent will—an imaginative relating of the speaker to others he has never met. Nebrija’s proposal was designed to invite particular kinds of imaginative projection, in which local forms of life were destined to appear as marginal, mere resources to be sublimated in the great project of Cosmopolis. Such were the pragmatic horizons embedded in the first Genres and Discourses of this new, evolving community. Spain was to be reimagined through a single language based on the Castilian vernaculars and rendered intertranslatable with the European humanist tradition. It was a wonderful invitation to intellectual creation; in the long term, it would also prove to be the most effective tool of imaginative hegemony ever devised.

For what Nebrija had discovered was a new type of *Vereinschaft*—the *nation*. As touched on in Chapter 2, Benedict Anderson has argued for the central role of standard print literacy in enabling the sharing of ideas, experiences and values across a wide area and thus giving birth to a sense of nationhood (Anderson, 1983). But it is important, too, to see that this process did not arise spontaneously across wide swaths of rural dialects, but spread outwards from urban centres of power, carrying with it the Genres and Discourses of imperialism, humanism, and paternalism. To participate in this new language of opportunity, one had to become conversant with the worldview of the Centre; and the Centre was soon embarked upon an

unprecedented enterprise of pillage and conquest in the New World and administrative dominion in the Old.

In the first turn I drew upon the work of Zygmunt Bauman to describe the birth of modernity. Illich's analysis brings out another aspect of this transformation, exemplified by language but with far wider implications:

The radical change from the vernacular to taught language foreshadows the switch from breast to bottle, from subsistence to welfare, from production for use to production for the market, from expectations divided between State and Church to a world where the Church is marginal, religion is privatized, and the state assumes the maternal functions hitherto claimed only by the Church. Formerly, there had been no salvation outside the Church; now, there would be no reading, no writing – if possible, no speaking – outside the educational sphere. People would have to be reborn out of the monarch's womb, and be nourished at her breast. Both the citizen of the modern state and his state-provided language come into being for the first time – both are without precedent anywhere in history (Illich, 1981: 15).

Illich is correct about the general direction and implications of the transition from vernacular to mother tongue, from Gemeinschaft to Vereinschaft; but his statement focuses on only one aspect of the linguistic ecology of modernity. As Renaissance humanism was swept from the field by Cartesian rationalism, the nascent national languages developed Genres and Discourses that were unforeseen by Nebrija and his peers. States simply did not have the resources to impose Vereinschaft at the depth that Nebrija might have imagined, and the imaginations of their educated subjects were able to roam into areas that he would surely have wished to proscribe. At the price of conformity to the Genres and Discourses of Vereinschaft—participation in the rituals of national loyalty, social convention (including discrimination based on gender, race and class),

religious orthodoxy, and humanist piety—the “citizen of the modern state” was free to explore the possibilities of rational will, whether it be in commerce, in science, or elsewhere. The unfolding of modernity can be seen in part as a duel between these two orientations, *Vereinschaft* and *Gesellschaft*, within the boundaries set by the limits of national power.

It can be seen that in such circumstances, the ecology of national languages becomes a complex thing indeed. *Vereinschaft* works to generalize Genres and Discourses that relate the individual and the group to the cultural community as a whole. To the extent that it succeeds, all acculturated users of the national language share certain forms of knowledge and belief, certain attitudes, certain values, that can reliably be drawn on in particular settings and with regard to particular topics. To be really successful, a national *Vereinschaft* needs a centralized education system and an extensive array of communications media—just as a disciplinary *Vereinschaft* needs university departments, textbooks, monographs and journals. Its effect, in the symbolic realm, is to establish the “fields” described by Bourdieu (1991), in which every symbolic gesture has its market value and low symbolic capitalization is likely to result in exclusion or oppression.

Vereinschaft competes with *Gemeinschaft*, tugging people’s awareness away from local particularities—each other as individuals and kin, the environment as a system of natural relationships into which people must fit—towards the limiting context, be it nation, religion, profession, or whatever. As we have seen, the establishment of such cultural communities has an inevitable corollary: the raising of new Genre-Discourse boundaries between them. Within the national *Vereinschaft*, then, the social space is increasingly riven by communicative divides, even as people begin to mingle

and migrate towards the urban centres on an unprecedented scale. Since few Vereinschaft-type communities encompass every aspect of existence, normal social life increasingly demands the co-ordering of awareness and action on the basis of minimal mutual knowledge. Gesellschaft, in other words, *fills the gaps* left by Vereinschaft: the latter engenders the former through its disruption of Gemeinschaft.

Just as capitalism requires a currency standard to enable the exchange of disparate commodities, so Gesellschaft requires a linguistic standard to enable communication between disparate cultural communities. Ironically, then, Nebrija's dreamed-of language of culture and power is inevitably pressed into service as a makeshift go-between in situations where neither culture nor power is of service. In contrast to a vernacular, where layers of unspoken meaning can underlie each phrase, the standard language is increasingly constrained to present its meaning on the surface: the "literal" ideal is born. Linguistic creativity becomes the province of specialists, for ordinary speakers are caught between strict Vereinschaft sanctions against inappropriate speech and strong Gesellschaft constraints on what will be understood. One speaks as one has been taught, or as one has heard professionals speak. Illich records his dismay at the consequences:

Taught colloquial is the language of the announcer who follows a script that an editor was told by a publicist that a board of directors had decided should be said. Taught colloquial is the dead, impersonal rhetoric of people paid to declaim with phony conviction texts composed by others, who themselves are usually paid only for *designing* the text. People who speak taught language imitate the announcer of news, the comedian of gag writers, the instructor following the teacher's manual to explain the textbook, the songsters of engineered rhymes, or the ghost-written president. ...

The vernacular and taught mother tongue are like the two extremes on the spectrum of the colloquial. Language would be totally inhuman if it were totally taught. ... I do not claim that the vernacular dies; only that it withers. The American, French or German colloquials have become composites made up of two kinds of language: commodity-like taught unquack and a limping, ragged, jerky vernacular struggling to survive. (Illich, 1983: 485-6)

Illich is fundamentally concerned with freedom, autonomy, and the pursuit of wisdom: like indigenous theorists, he considers these values best realized in *Gemeinschaft*. His well-known plea for “deschooling society” follows naturally from this stance. Yet even if we accept the need for education to move towards a *Gemeinschaft*-type cycling model, as argued in the previous chapter, we still need to understand how it can be articulated with modern society and the massive knowledge industries it has developed. This is the issue to which I now turn.

Education and Community

In Chapter 5, I argued that the Cartesian revolution had consisted, above all, in the social separation of knowing from doing, of the scientists and philosophers from the administrators and rulers, within the uneasy alliance described by Bauman under the heading of “legislative reason” (Chapter 2). In the last chapter I reinterpreted this alliance in terms of a balance between *Gesellschaft* and *Vereinschaft*, between rational will/dynamic reduction and transcendent will/dynamic sublimation, within mixed-type modern societies. Now I propose to take this analysis a little further.

Cultures and Their Codes

Knowledge, in the ecological paradigm, is always active: it inheres in the ongoing efforts of real people toward meaning and value. When knowledge is put into words, it only remains knowledge in so far as those words succeed in co-ordering the efforts of other people. Without interpreters, words are sounds and sights devoid of meaning, "agitated layers of air" or marks on a page. Yet even when would-be interpreters exist, words do not carry their own translation manual with them. Interpreters must learn to share the same world of experience as the speaker or writer before they can properly understand what words mean; and this effort of co-ordering one's awareness and actions with others, through Discourses and Genres, reaches its culmination in *Gemeinschaft*. *Gemeinschaft* is the ultimate form of shared knowledge.

What the scientific revolution accomplished, in part through the agency of Descartes, was to establish a new and tightly circumscribed type of *Gemeinschaft*: specialized cycles of cultural negotiation, moving back and forth along the dimensions of context, meaning and process, yet focused on only one isolated aspect of the world. Such communities generated their own limiting context and thus necessarily took on some of the aspects of *Vereinschaft*, with their orthodoxies and hierarchies and modes of discipline; necessarily, they also embodied aspects of *Gesellschaft*, with many aspects of everyday life excluded from negotiation (and the embodied self usually excluded from the written text); and yet, the experience of *Gemeinschaft* they offered was enough to generate a loyalty, a dedication, an absorption in some of their practitioners that endowed them with an impressive dynamism.

Such communities generate their own language varieties—often referred to disparagingly as “jargon” by outsiders, but an inevitable by-product of *Gemeinschaft*-type negotiation. As their reports of their discoveries diffuse outwards, along with the technological practices they make possible, some of these language devices do as well, eventually arriving in the “taught colloquials” that now constitute the basis of formal education in modern societies. To the *social* heteroglossia already inherent in national languages, with their *Vereinschaft*-inspired mission to be all things to all people, is now adduced *scientific and technical* heteroglossia: a weak co-ordering of imaginative awareness with the specialized professional communities encompassed in the national *Vereinschaft*. The extreme tenuousness of this co-ordering is frequently a source of frustration for the professionals themselves, especially if they consider their work to be of general social relevance. More centrally for the present work, it should be appreciated just how immense a challenge heteroglossia poses to the modern education system.

Formal education is at heart a *Vereinschaft*-type enterprise. In *Gemeinschaft* one learns through watching and doing; in *Gesellschaft* one learns through solitary study and reflection; only *Vereinschaft* requires the establishment of compulsory institutions with centrally defined curricula and periodic external evaluation. The logical language of education is thus “taught mother tongue”, and it is not surprising that all of the nascent national education systems of the eighteenth and nineteenth centuries were premised on the use of a single standard language—despite the fact that every one of these modernizing nations included a wide range of spoken (and often written) linguistic traditions within its borders.

But it is one thing to recognize a logical implication, and quite another to implement it. It is easy enough to exclude other languages from the school, by force if necessary—historically a near-universal practice in the education of linguistic minorities (Skutnabb-Kangas, 1988). It is much more difficult to forge an effective educational tool from the complex ecology of a national language. When Basil Bernstein writes of the indispensability of the “elaborated code” for education, he is referring precisely to the role of taught mother tongue in co-ordering imaginative awareness across widely separated contexts: its *Gesellschaft* role. However, lacking an ecological theory of cognition, he misses the corollary: that the elaborated code can be equally well used to counterfeit awareness, or to obscure it (cf. Bourdieu, 1991). If *Gemeinschaft* is missing from classrooms, then children will learn to manipulate words as objects without understanding their real meaning; if the elaborated code does not enable them to express experience in their own terms, that experience may become inaccessible to critical reflection. In Bernstein’s idealized, *Gesellschaft*-inspired vision, “where codes are elaborated, the socialized has more access to the grounds of his own socialization, and so can enter into a reflexive relationship to the social order he has taken over” (1971: 176). Yet if such access is bought at the price of increased participation in *Vereinschaft* and a distancing from *Gemeinschaft*, the net gain is far from clear.

In his early work, Bernstein was at pains to emphasize the limitations of “restricted codes,” since his central concern was the difficulties experienced by working class children in making sense of school language—essentially, in adapting to discourse that relies heavily on the co-ordering of imaginative awareness. Later, however, goaded by the misappropriation of his work to

support deficit theories of non-standard language, he formulated a more nuanced statement:

Now because the sub-culture or culture through its forms of social integration generated a restricted code, it does not mean that the resultant speech and meaning system is linguistically or culturally deprived, that the children have nothing to offer the school, that their imaginings are not significant. Nor does it mean that we have to teach the children formal grammar. Nor does it mean that we have to interfere with their dialect. There is nothing, but nothing, in the dialect as such, which prevents the child from internalizing and learning to use universalistic meanings. But if the contexts of learning, the examples, the reading books, are not contexts which are triggers for the child's imaginings, are not triggers on the child's curiosity and explorations in his family and community, then the child is not at home in the educational world. (Bernstein, 1971: 199)

What concerns Bernstein, then, is not the nature of the vernacular *per se*, but the way its development is restricted when educational contexts are monopolized by a different code. As we have seen, this is a Vereinschaft effect due to the establishment of education as a separate field of activity, whose primary responsibility is to produce children and adults who are well integrated in the *national* socio-economic order. This places all vernaculars in a subordinate position, but varying greatly with respect to the boundaries between them and the taught standard, the elaborated code. In middle class families, the latter is typically used from an early age in reading out loud, describing the child's daily activities, explaining aspects of the adult world and so on. The restricted and the elaborated code are not experienced as separate, but as a continuum of language use. For the working class children studied by Bernstein, in contrast, there is no continuum but a sharp break: a boundary whose maintenance requires that *the vernacular be restricted to the lowest range of context, meaning and process*. If, on the other hand, a local

vernacular is linked to its own elaborated code, as is the case for many immigrant communities, then the boundary between the community and its schools may be relatively permeable even when the two languages are formally quite different.

Analysis of the Genre-Discourse boundaries between a vernacular cultural community and its schools should therefore prove a far more reliable predictor of school performance than overt linguistic or cultural difference. This is the insight at the heart of John Ogbu's "cultural-ecological theory of school performance," which draws a distinction between "autonomous," "voluntary" and "involuntary" minorities (Ogbu & Simons, 1998). The differences between these kinds of community, in Ogbu's theory, derive from the conditions of their genesis (that is, the original formation of the boundaries that separate them from the national *Vereinschaft*), and from the subsequent evolution of both the "system" outside these boundaries and the "community forces" within them. Thus, voluntary minorities may initially be separated by practical difficulties of communication, but as long as the "system" does not institutionalize these barriers they will soon achieve a reasonable degree of integration with the national cultural community and their school performance will reach or even exceed national norms. In the process, such groups are likely to gradually "re-ethnify" and "re-linguify" as the elaborated code of the national *Vereinschaft* becomes their own.

One alternative to assimilation is presented by autonomous minorities such as the Amish, Jews and Mormons. Ogbu, whose primary interest lies with African Americans and other "people of colour", is not particularly concerned with this community type since "there are no nonwhite autonomous minorities in the United States" (Ogbu & Simons, 1998: 164).

Such communities are nonetheless important as examples of Vereinschaft-type voluntary minorities whose members must negotiate a set of defining and normalizing Genres and Discourses that are parallel to, yet very different from, the norms of the national Vereinschaft. In most cases, this seems to have no negative impact on school performance, particularly if the school incorporates features of the elaborated identity code (taught mother tongue, formal religion, and so on).

The other alternative to assimilation is presented by involuntary minorities, who, I suggest, can be thought of as three kinds. Indigenous peoples were characterized by Gemeinschaft-type cultures of great sophistication, for which the elaborated code of the European colonizers simply had no place. It was the latter who imposed strong Vereinschaft-type boundaries on indigenous America, herding people into reservations, categorizing them as Status and non-Status, providing them with pure ethnic labels, and inventing laws that regulated every aspect of their existence. In doing so, they sharply restricted the range of cultural negotiation in which these communities might engage, and set the scene for the agonizing dysfunction of recent generations. At the same time, colonization has been proceeding apace within the vernacular cultures of the modernizing nations, giving rise to the working-class communities studied by Bernstein and the rural communities studied by Tönnies, all of them limited to negotiation at low levels of context, meaning and process. Finally, the slave trade produced its own involuntary minorities, too fragmented and dispersed to maintain their original cultures, too oppressed and discriminated to elaborate their new vernaculars into Vereinschaft-type codes.

For involuntary minorities, access to the national elaborated code is always bought at the risk of cultural and spiritual estrangement, and the certainty of personal and communal struggle. Most find the risk or the struggle to be too great, leading to high “push-out” rates in secondary and higher education, with all their consequences. Others succeed by abandoning the vernacular culture altogether, and naturally may come to believe in this as the only sensible solution. Illich records his visit with one such man, a young college teacher in the South Bronx:

This man wanted my signature on a petition for compensatory prekindergarten language training for the inhabitants of a partially burnt-out, high-rise slum. ... I saw dozens of children dashing through uninhabitable cement corridors, exposed all day to blaring television and radio in English, Spanish, and even Yiddish. They seemed equally lost in language and landscape. As my friend pressed for my signature, I tried to argue for the protection of these children against further castration and inclusion in the educational sphere. We talked at cross-purposes, unable to meet. And then, in the evening, at dinner in my friend’s home, I suddenly understood why. This man, whom I viewed with awe because he had chosen to live in this hell, had ceased to be a parent and had become a total teacher. In front of their own children this couple stood *in loco magistri*. Their children had to grow up without parents, because these two adults, in every word they addressed to their two sons and one daughter, were “educating” them—they were at dinner constantly conscious that they were modelling the speech of their children, and asked me to do the same. (Illich, 1983: 490)

In order for this to be more than a marginal strategy, however, Ogbu’s “system”, the Genres and Discourses that constitute Smith’s relations of ruling, would have to offer far more reliable rewards. Involuntary minorities are characterized in part by the knowledge, painfully accumulated through generations and constantly reinforced, that efforts towards accommodation

may bear no tangible fruit at all. Broader and more lasting change, then, is likely to take place only when two processes coincide: the elaboration of high-context, high-meaning, high-process Discourses and Genres within a community, and the relaxing of Vereinschaft-type restrictions within the system outside. What this entails, and what the linguistic consequences may be, is examined in the final chapter.

The Limits of Taught Language

In the remainder of the present chapter, I want to return to the difficulties inherent in using the taught colloquial, the elaborated code, as a medium of education; and to begin once again by considering some of Bernstein's ideas. The British sociologist's early concern with the discontinuity between restricted and elaborated codes was later translated into a more general framework for thinking about the organization of knowledge in modern societies. The two key concepts of this framework, classification and framing, were first published in 1970 (Bernstein, 1971) and are still being elaborated in his most recent work (Bernstein, 1996). As with the code theory, an ecological reinterpretation of his concepts may be illuminating for a range of educational issues.

As Bernstein originally formulated it, the term "classification" refers to the boundaries between bodies or systems of knowledge:

Where classification is strong, contents are well insulated from each other by strong boundaries. Where classification is weak, there is reduced insulation between contents, for the boundaries between contents are weak or blurred. Classification thus refers to the degree of boundary maintenance between contents. Classification focuses our attention upon boundary strength as the critical distinguishing feature of the division of labour of educational knowledge. (Bernstein, 1971: 205)

The second term, “framing”, refers to the pedagogical relationship between teacher and taught, knower and learner:

Frame refers to the strength of the boundary between what may be transmitted and what may not be transmitted, in the pedagogical relationship. Where framing is strong, there is a sharp boundary, where framing is weak, a blurred boundary, between what may and may not be transmitted. Frame refers us to the range of options available to teacher and taught in the *control* of what is transmitted and received in the context of the pedagogical relationship. Strong framing entails reduced options; weak framing entails a range of options. Thus frame refers to the degree of control teacher and pupil possess over the selection, organization, and pacing of the knowledge transmitted and received in the pedagogical relationship. (Bernstein, 1971: 206)

In traditional European-type education, Bernstein proposes, both classification and framing are strong. Bodies of knowledge are developed and transmitted in fairly well-insulated social categories, into which learners are thoroughly socialized over a long period. This structuring of knowledge Bernstein terms a “collection code”. One effect of a collection code is to “discourage connections with everyday realities” in the process of acquiring formal, school-type knowledge: there are strict constraints on “what of the outside may be brought into the pedagogical frame” (*ibid.*, 215). Thus the discretion of the pupils is consistently minimized: the teacher is in control, and relatively free of supervision once he or she has demonstrated adherence to the collection code. Bernstein terms this “invisible pedagogy”, since the act of teaching is not on public display.

In the late 1960s and early 1970s, a number of school reforms attempted to relax the traditional collection codes in the name of greater personal freedom and more egalitarian relationships between teachers and taught.

Bernstein argued that such a system, characterized by weak classification and weak framing, would only be emancipatory in certain respects. The increased discretion of the pupils, who would be enabled to draw to a greater extent on their personal experience and to have a greater influence on the selection and pacing of educational knowledge, would be paired with reduced discretion for the teachers because of the need to work together across subject and classroom boundaries. Administration and teaching would now be far more visible, leading, Bernstein suggested, to “a pronounced movement towards a common pedagogy and tendency towards a common system of evaluation” (Bernstein, 1971: 217). Such a system of knowledge Bernstein termed an “integrated code”.

More recently, Bernstein has elaborated the two basic concepts of classification and framing to allow for the description of a greater variety of systems (Bernstein, 1996). I shall argue, however, that the ecological framework does this more economically. In particular, Bernstein nowhere addresses the evident difficulty that classification and framing are not wholly independent of one another. It is unlikely to be purely a matter of chance that, in his two canonical knowledge systems, strong classification is accompanied by strong framing and weak classification is accompanied by weak framing. Thus, rather than introducing further variables such as *external* and *internal* classification and framing (Bernstein, 1996), it may be better to account for the same phenomena in a different way.

First consider the organization of knowledge within the limiting context of the nation, which also supplies the limiting context of the educational system. As we have seen, knowledge production takes place within many topically restricted *Gemeinschaft*-type communities, the topical

restrictions being institutionalized in a disciplinary/professional *Vereinschaft*. These knowledge communities are nested and co-ordered, at varying degrees of strength, within broader professional and academic communities, and also through various kinds of public communications media, the political and economic systems, and the educational system. It is the latter which is expected to most accurately reflect, or model, the system of knowledge production in general. Thus, institutions of higher education need to co-order their internal organization with the organization of trades and professions in society, secondary schools need to co-order their internal organization with institutions of higher education, and primary schools need to gradually elaborate and diversify the vernacular knowledge brought from home by their pupils to prepare them for the primary-secondary transition.

Now, the stronger the *Vereinschaft* boundaries in the originating knowledge communities, the more limited are the Discourses and Genres through which knowledge can diffuse, primarily in the form of language devices, across these boundaries and into educational settings. This restricts the discretion of teachers and students: the former will typically have little direct contact with the originating knowledge community, and will have to rely on up-to-date textbooks and teaching manuals; the latter will be expected to co-order their imaginative awareness with a community of which they have no direct experience at all. Thus a direct effect of the proliferation of *Vereinschaft*-type boundaries within a national cultural community—a classification/*Gesellschaft* effect—is to increase “the strength of the boundary, the degree of insulation, between the everyday knowledge of the teacher and taught and educational knowledge” and hence to strengthen the framing in schools (Bernstein, 1971: 206).

This effect depends, however, on the sublimation of cultural negotiation within the school to the national *Vereinschaft*. If lower-context *Vereinschaft*-type negotiation is established, for instance at the level of the region, the community, or the school itself, then it can shelter teachers and students to some extent from *Gesellschaft* effects at higher context levels. Bernstein's "integrated code" can thus be seen to depend on establishing a school-level *Vereinschaft*. As he points out, the implications can be far-reaching:

The centre of gravity of the relationships between teachers will undergo a radical shift. Thus, instead of teachers and lecturers being divided and insulated by allegiance to subject hierarchies, the conditions for their unification exist through a common work situation. ... These new work-based horizontal relationships may alter both the structure and distribution of power regulated by the collection code. ...

We might expect similar developments at the level of students and even senior pupils, for pupils and students with each increase in their educational life are equally sub-divided and educationally insulated from each other. ... Integrated codes may well provide the conditions for strong horizontal relationships and allegiances in students and pupils, based upon a common work task (the receiving and offering of knowledge). In this situation, we might expect a weakening of the boundary between staff, especially junior staff, and students/pupils. (Bernstein, 1971: 219-20)

Yet whether these possibilities *necessarily* follow from the establishment of a school-level *Vereinschaft* is debatable indeed. Bernstein has in mind the secular and egalitarian ethos of the late 1960s, but it is not difficult to imagine integrated codes that embody quite different values. *Vereinschaft*-type communities can vary immensely in their internal characteristics, as illustrated by a brief consideration of the world's nations and religions; semi-autonomous schools might in principle do the same. The

particular type of *Vereinschaft* Bernstein envisages, in fact, is one which protects and nurtures a knowledge *Gemeinschaft*, a scientific community which is locally rather than topically bounded. The following comments bear this out:

With the collection code, the pedagogy tends to proceed from the surface structure of the knowledge to the deep structure; as we have seen, only the elite have access to the deep structure and therefore access to the realizing of new realities or access to the experiential knowledge that new realities are possible. With integrated codes, the pedagogy is likely to proceed from the deep structure to the surface structure. ... Such emphasis on various *ways* of knowing, rather than upon the attaining of *states* of knowledge, is likely to affect not only the emphasis of the pedagogy, but its underlying theory of learning. The underlying theory of learning of collection is likely to be didactic whilst the underlying theory of learning of integrated codes may well be more group- or self-regulated. This arises out of a different concept of what counts as having knowledge, which in turn leads to a different concept of how the knowledge is to be acquired. (Bernstein, 1971: 217-8)

Rather than relying on Tönnies' distinction between *Gemeinschaft* and *Gesellschaft*, Bernstein employs Durkheim's roughly equivalent categories of mechanical and organic solidarity—the former embodying an implicit and condensed symbolic order, the latter an explicit and differentiated one. He argues that an integrated code must make its integrating principles explicit in order to establish a boundary between the school and the organization of knowledge outside it, but that this “overt structure of organic solidarity... creates through its less specialized outputs mechanical solidarity. ... This is the fundamental paradox which has to be faced and explored” (Bernstein, 1971: 225). In the terms of the ecological framework, the challenge is to understand how *Vereinschaft* and *Gemeinschaft* can combine to stabilize and elaborate local knowledge systems, within a predominantly *Vereinschaft*-type national

educational system and a predominantly *Gesellschaft*-type national knowledge system.

The natural question to ask, given Bernstein's range of interests, concerns the linguistic code of such settings. If the elaborated code has evolved to mediate the exchange of knowledge in a collection code, can it be unproblematically transferred to an integration code? To my knowledge, Bernstein does not actually pursue this issue in his writings, and yet it is a crucial one. The logic of his position points to a negative answer: socialization into the collection code "is socialization into order, the existing order, into the experience that the world's educational knowledge is impermeable" (Bernstein, 1971: 214), while the integrated code (in his idealized version) emphasizes access to experiential knowledge and "the realizing of new realities." The linguistic counterpart of a integrated knowledge code is an *elaborated vernacular*—a "restricted code" that is no longer restricted, but available for cultural negotiation at the highest levels of context, meaning and process.

By establishing such a situation as the ideal, one gains new insights into the limiting effects of modernist language policies upon the potential of community-based schools. As long as the monopoly of the national taught colloquial forms part of the fundamental *Vereinschaft* of the school, the only communities where integrated codes may be sustainable are middle-class settings where the vernacular and the taught colloquial form a continuum; and here, the integrated code must contend with the constant intrusion of higher-context *Vereinschaft* and *Gesellschaft* effects through the lives of the children outside school. Even when the monopoly of the national language is challenged, it is usually supplemented or replaced by a rival taught colloquial,

an elaborated code originating in a national *Vereinschaft*, and equally ill-suited to the development of an integrated knowledge code. In this way the linguistic practices of schooling perpetuate, often against the explicit intentions of their advocates and practitioners, the culture of epistemological dependency that causes Illich such concern.

But is his anxiety really warranted? If people can still think, love, laugh in a taught colloquial, is the issue of its relationship with the vernaculars of such deep import? Modern linguistics can only ask such questions at the lower levels of context, meaning and process, and the response is predictably negative. Indeed, the analysis of languages in terms of phonology, morphology and syntax fosters a perspective from which all languages, taught or untaught, elaborated or restricted, appear essentially equivalent (e.g. Newmeyer, 1986; cf. Hymes, 1980). Powerful though *Gesellschaft*-type linguistics is, it is of little use for studying the *adaptation* of language to social context; that is, for examining its role in high-meaning, high-process cultural negotiation. At this level the discipline must resort to *Vereinschaft*-derived abstractions, whose deceptively everyday appearance—for instance, the notions of “a language,” “speaking a language” and “knowing a language”—permits them to carry out a great deal of rhetorical work but shed little light on the phenomena themselves.

The purpose of the ecological framework is to enable the critical naturalist study of these higher levels of meaning, just as selectionist and systems theories have opened up new types of explanation in biology (Mayr, 1988). *Functional* biological explanation deals with proximate causes, with the “what” and “how” of living structure and process; it relies on studying each organism or organ in isolation, determining the way it is put together, its

inputs and outputs, its characteristic behaviour under normal or extreme conditions. *Ecological and evolutionary* explanation requires investigating the relationships of the organism or organ with its neighbours, the maintenance of this system through time, and the probable influences of natural selection. Good critical science, in both biology and the social sciences, needs to integrate this entire scale of context, meaning and process, just as in a well-functioning *Gemeinschaft*.

It follows that a range of approaches is necessary to explain how language works in modern settings. Functional linguistics will treat linguistic systems or subsystems in isolation, determining the way they are put together, looking for cross-system regularities in structure and function, and testing the limits of their expressiveness. The kind of explanation supported by this work will be relatively proximate, or low on the dimensions of context, meaning and process. Pursuing higher levels of explanation, however, will entail the development of ecological or evolutionary linguistics, in which overlapping chains and nested levels of linguistic systems or subsystems are involved, and in which the operation of natural selection over time assumes a central explanatory role. To understand where we are, we must first understand where we have come from. Once again, the ultimate test of a naturalist linguistics is to integrate these various levels of explanation in a dynamic way.

Illich's thesis can thus be posed as a question, and a provocative one: what does the organization of language in modern societies imply for human values, and to what futures is it likely to lead? Still more provocatively: what changes are necessary in modern linguistics and modern educational research to allow them to explore such questions? Most challengingly of all: what is to

be done in schools and society to make the future as “convivial” as possible, in Illich’s phrase? In the final chapter, I will sketch some tentative conclusions, and explore their implications for schools.

9 The Linguistic Ecology of Schooling

We have arrived at the last curve of the third turn—a final climb into sunlight, if the stairs hold firm. The challenge that awaits is to unfold a philosophy of education, a multidimensional framework for guiding awareness and action, that could help the linguistic ecology of schools evolve into something more sustainable, integrative and emancipatory. And we need to begin with a paradox, first alluded to in Chapter 6: that this kind of education *cannot be centred on language*. Overdependency on language, in the form of texts and facticity or what Edward Reed calls “second-hand information” (1996b), is part of the problem; for this reason, too narrow a focus on the linguistic dimensions of diversity can may mislead educators to deal only with symptoms, ignoring a more deeply-rooted systemic malaise.

There are other ways to express this difficulty. As the last chapter may have made clear, the so-called middle classes of the industrialized countries have been co-created by the educational system, and in turn play a central role in the latter’s ongoing re-creation. It is largely the imaginings of the national middle class that make their way into textbooks and curricula; it is middle-class Genres and Discourses that teachers consciously and unconsciously model in the classroom; and it is the middle class that has adopted the language of the school, taught mother tongue, for its own use at work and play. So all-encompassing is this subtle co-ordering, and so diverse are the forms of thought and belief it can accommodate, that any attempt to criticize

or change it may be experienced by the majority as a violation of something sacred, a deliberate assault on decency and reason.

Among such sacred middle-class truths is the language myth. This claims, in part, that the national language is the same for all; that mainstream schooling, whatever its other failings, can provide equal access to this common currency of communication; that other languages may be of value as private expressions of identity or as gateways to other cultures, but otherwise contribute nothing to the goals of education; and that educational language policies must therefore focus on rapid acquisition of the national language and the instruction of various literacy skills in that language. This myth is tenacious because it is at one and the same time a *Vereinschaft* myth and a *Gesellschaft* myth, with a firm enough basis in middle-class experience to lend it credibility. All other languages are marginalized: indigenous and immigrant vernaculars through the discourses of colonialism, “foreign” and “artificial” languages by the discourses of nationalism, with the practices and ideologies of facticity lending invaluable support at every level.

As this description suggests, the language myth does not exist in isolation; in a sense, it is not just about language. It is one manifestation of the broad cultural perspective of modernity, which regards social change as a one-way street, an unstoppable and generally positive process of cultural and technological evolution whose vanguard is constituted by the middle classes of the industrialized countries. Once again, this picture corresponds closely enough with the last few generations of middle-class experience to appear more-or-less plausible. Unfortunately, as the educational philosopher C.A. Bowers observes, such a “sense of living in one of the most progressive times in human history” represents a highly particular cultural perspective that

does not conform well with broader global realities (Bowers, 1993: 9). Evidence is accumulating of the decline of local, regional and planetary ecosystems on which humans depend, while social equality and integrity continue to decline, in some cases catastrophically, in the so-called “developing” countries of the Two-Thirds World and even in parts of the industrialized world. Ultimately, a critical realist philosophy means confronting these realities and arriving at a view of the world as a truly interdependent system, where neither ecological nor social deficits can be sustained over the long term.

To date, the theory and practice of education has taken no more than the first faltering step or two along this path. Most schools in the industrialized countries now include curricular units related to the ecological crisis: students do courses on the environment, projects in recycling, celebrate Earth Day. Yet in all other respects they are encouraged to imagine the future as a more egalitarian, efficient and technologically advanced version of the present (Bowers, 1993). Analogously, the broader social response to growing concern about the natural environment has been to develop new disciplines, such as environmental studies, human ecology and planet management, and new technologies, such as “clean” energy, in the expectation that experts and governments together will overcome the problems. The fundamental metaphors of “global ecology” remain those of control, of machinization, of the social separation of knowing and doing (Sachs, 1993).

Such compartmentalized responses to the ecological crisis are mirrored by attempts to address increasingly prevalent political, social and psychological crises. Although language is sometimes recognized as playing a role in these, its study suffers a similar fate to that of ecology: disciplinary

balkanization in the universities and curricular marginalization in the schools. Linguistic diversity, for instance, features in most U.S. schools as a peripheral topic in social studies, and in restricted and ineffective classes in a small number of standard languages. A minority of schools offer bilingual education, usually of a “transitional” variety that has only a limited impact on learners (Cummins 1994), and a very small number of bilingual schools are organized around the use of two languages, usually English and Spanish (e.g. Freeman, 1999). Educational connections between language and other aspects of human ecology are virtually unknown. The same is true in Canada, where official bilingualism has done nothing to challenge the deeper structures of the language myth, and indeed has encouraged its extension to indigenous languages as well (Fettes, 1998; Fettes & Norton, 2000).

According to Gregory Cajete, this two-fold alienation from nature and culture, this urge to reduce or eliminate diversity and mutability at any cost, is what makes modern schooling a long-term threat to human survival:

Contemporary educational systems, ways of living, ways of relating to other people and other cultures have evolved from a paradigm that does not serve life, but modern technology. In many ways, we are bound to the technological tools that create our environment. These tools do not allow us to establish a sustainable and direct relation to the earth or realize our primal relationship to it because they have largely been created with reference to the old Newtonian-Cartesian paradigm.

Cultural diversity is as important to human ecology as bio-diversity. It is the diversity of the human solutions to every terrestrial environment that has been the foundation of our success as a species. Without this cultural diversity—and the cultures that have evolved unique, ingenious, and creative ways to survive within the natural world—the modern global economic world order, with its standardized solutions, bottom-line mentality, lack of relationship to the life of the earth, assures its eventual extinction. Its overspecialization, its inability to act at the communal

level, and its menacing evolution of artificial environments ensures modern society's continued alienation from Nature and its life-sustaining processes. (Cajete 1994: 80-81)

It can thus be seen that "changing education for diversity" (Corson, 1998) entails more than the incorporation of other languages and cultures, just as "educating for an ecologically sustainable culture" (Bowers, 1993; 1995) involves more than a curriculum in environmental studies. Educational systems that value and maintain diversity over the long term must develop a very different approach to knowledge, learning and identity based upon a commitment to dynamic integration, the organizing principle of *Gemeinschaft*. And it would be vain to seek such integration in schools that remained separate from the natural and social worlds around them. Linguistic, cultural and natural diversity should be considered as *the primary educational resource* available to schools; and learners' encounters with such diversity should encompass as wide a range of meaning, context and process as possible. This approach to education goes beyond appeals to principles of justice or enlightened self-interest (e.g. Corson 1993; 1996) towards the indigenous ideal of "the development of a person with well-integrated relationships among all aspects of self and the world" (Cajete, 1994: 179).

It should now be obvious that such "ecological" approaches to education must play close attention to the ecology of language. Whether one thinks of the overall definition and organization of schooling, or the philosophy and practice of educational administration, or the organization and guidance of learning, or the development of an emancipatory educational science, language and linguistic diversity pose both inescapable challenges and inexhaustible possibilities.

Leadership for Diversity

Under the spell of modernity, school organization and educational leadership have long been thought and spoken of in industrial and managerial terms, employing metaphors and images adapted to over three hundred years of “machining” the social world, as Edward Reed puts it (1996b). In Chapters 2, 5 and 8 we saw some of the characteristics and consequences of this approach, and we observed the difficulty of establishing sustainable alternatives against such profoundly rooted patterns of cultural negotiation. In particular, good classroom practices, whether based on the experience and intuition of teachers or on systematic research, are unlikely to be widely understood, accepted or applied unless they are supported by the guiding visions of policy makers and administrators. This in turn implies that the latter must develop, through a sustained process of cultural negotiation, a shared “theoretical articulation... to organize research, guide practice, and serve as an explicit guide to discussion and clarification” (Hampton, 1995: 11)—an inspiring set of “future pictures,” in Betsy Annahatak’s phrase (see Chapter 7).

Attempts to develop such alternative frameworks have been plagued by the problem of fragmentation. Modernism works in part because it draws on so many overlapping metaphors and patterns of social organization that a challenge in any one area can be effectively subverted, in the short or the long term, by the encroachment of *Vereinschaft*- and *Gesellschaft*-type negotiation from neighbouring domains. This struggle is likely to persist indefinitely, for modernity is not a social system that will eventually be superseded: it is a permanent aspect of the cultural potential inherent in any language-using

species. Once again, Hampton's description of Indian education holds true for the ecological alternative in general:

Indian children face a daily struggle against attacks on their identity, their intelligence, their way of life, their essential worth. They must continually struggle to find self-worth, dignity, and freedom in being who they are. I know that I participate in my own oppression. I did not make the winter wind but I have sometimes carried it to my children. I could not always shelter them but I am relentless in my effort. (Hampton, 1995: 35).

Accepting *the need for struggle*, not only against "the winter wind" but against one's own role as its bearer and consumer, is the first standard of ecological education. This sounds, perhaps, like a bleak beginning. Yet with the acceptance of responsibility comes power: power to feel, to judge, to speak, to act. To imagine and create. It is not pain and struggle but their denial that corrodes education, as it corrodes all human life (Becker, 1968). Freire saw this in his call for a "pedagogy of the oppressed" (Freire, 1972), Cummins has argued for the need to "challenge coercive relations of power" in the bilingual classroom (Cummins, 1996), and ecological educator Stephanie Kaza has described how "leading people through a process of waking up to their feelings for the world... releases bound energy which can then be engaged in positive effort" (Kaza, 1999: 146). From these many perspectives, a consensus emerges which places critical awareness, in all its dimensions (rational, emotional, spiritual, poetic, dramaturgic...), at the heart of education.

In developing a vision of the linguistic policies and practices that are appropriate for ecological schooling, this standard must be constantly borne in mind. The goal is not to replace one set of objectivist certainties with another, but to describe a self-sustaining adaptive system in which the contents and methods of education are continually evolving in response to cultural

negotiation at many levels of context, meaning and process; and in which *Vereinschaft* and *Gesellschaft* are kept in check by a constantly renewed commitment to dynamic integration. Ultimately, it is this commitment that gives ecological leadership its distinctive quality, allows schools to bridge the local and the global, and offers the best hope of “making the educational world safe for students from diverse backgrounds” (Corson 1998).

Language in the Ecological School

The first kind of struggle that the ecological educator faces is against the separation between school and community, as Gregory Smith argued in one of the first extended treatments of environmental education:

Enabling children to grasp and live out their interdependence with others and the natural world will require us to develop educational forms that are set as much as possible within the communities from which students come. Instead of physically separating children from those communities, as is generally the case now, educators must strive to create learning experiences that break beyond the boundaries of the classroom and root themselves in the broader environment. One consequence of such efforts is that the line between school, home, workplace and the natural world would become less defined. (Smith, 1992: 95)

This, of course, is no new vision. Community education has been an influential force in educational reform since the 1920s; elsewhere I have analyzed it in terms of “four fundamentally different concepts of community, all of which have some relevance to the challenges of indigenous education but are ultimately inadequate as a guide to practice” (Fettes, 1999: 20). Two of these traditions are essentially externalist, in regarding community as something actually *created* by the school (the Village College tradition) or by the social worker/ popular educator (the radical tradition). The other two, the

universalist and reformist traditions, seek to have the school *reflect* community, differing in their assessment of the depth of change necessary to accomplish this. I have argued, however, that only an education which enabled learners to “develop an understanding of their own imagined communities—‘if we made society in our image, this is how it would be’” could withstand the assimilatory pressures of modernist schooling; and that this required the establishment of “cycles of community,” an earlier term for *Gemeinschaft*-type cultural negotiation (Fettes, 1999: 33-40).

As already suggested in Chapters 7 and 8, this is not readily achieved or sustained at the level of individual schools alone, although this is the contextual scope most prominently featured in the literature on community and indigenous education and in the work of Basil Bernstein on integrated codes. Given exceptional leadership both inside and outside the school, remarkable things are possible, as illustrated by such cases as the Hualapai school in Peach Springs (Watahomigie & McCarty, 1996), the Navajo school at Rock Point (Holm & Holm, 1990), and the multicultural Richmond Road school in Auckland, New Zealand (May, 1994). But such schools are vulnerable to many sources of disruption: administrators, teachers and community leaders will move away, retire, or die (as happened at Richmond Road); funding may come with strings attached that bear no relation to community priorities; and cultural influences from higher contextual levels are likely to subvert the commitment of educators and parents over time.

More sustainable may be semi-autonomous educational systems, such as those established for indigenous schools in New Zealand (*Te Runanga Nui o Nga Kura Kaupapa Maori*), northern Quebec (the Cree and Kativik School Boards) and Nova Scotia (*Mi'kmaw Kina'masuti*). Their relative political

independence allows such institutions to gradually develop a sustainable system-level *Vereinschaft*, with policies, pedagogies and curricula that allow room for local needs and possibilities. On the negative side, they inevitably inherit many of the modernist assumptions and traditions that characterize the mainstream school system, and the same *Vereinschaft*-type negotiation that provides a bulwark against assimilation can also be experienced as an assault on local autonomy (a real issue in all of the examples just cited). In fact, prolonged contact with modernist institutions is propelling many indigenous peoples towards true nationhood, distancing them from the vernacular life as surely as any assimilationist policy would do and adding to the conformist pressures on indigenous education.

For most schools, of course, there is no single indigenous cultural tradition to sustain them or to be sustained; even religious schools are increasingly confronted with a diverse population of learners. In this respect, then, the indigenous model of separate education is of little help, as it is indeed of only indirect and limited help for the large numbers of indigenous people in mainstream schools. Some other principle is needed to encourage high-meaning, high-process negotiation above the context level of the school while respecting and, indeed, valuing difference between and within schools. It will be argued here that ecological education supplies such a standard, the second to be enumerated: *knowledge and love of place*.

The importance of place in indigenous education has already been noted here, but it is strikingly absent from the literature on multilingual and multicultural education. Yet place, in the sense of a geographical and ecological bioregion, is common to all in a school—learners, teachers and administrators alike—and shared with many others beyond the school itself.

Place, as encountered in experience, narrative, and memory, is at once private and public, the meeting point of culture and nature. Place as a political, economic and civic web of relationships functions as both constraint and resource in learners' lives. Most importantly of all, place as environment integrates and transcends all forms of symbolic knowledge. Approached with respect, it offers an endless source of learning.

Education that is "indigenous to place" (Kawagley & Barnhardt, 1999) must, of necessity, take community seriously, but it can more readily avoid the traps associated with more traditional conceptions of community education. For wherever the school may be, it will share ties of place with other schools and other communities, ties which extend along rivers and coasts, through forests and across plains, or along urban thoroughfares. "Community" becomes a multifaceted and relative concept when it is viewed against such a backdrop—simply one way of understanding "the natural context of human life and activity", as Cajete puts it:

We are, one and all, social beings living *in relation to one another*. Our physical and biological survival is intimately interwoven with the communities that we create and that create us. The community is a complex of physical, social, and psychical relationships that are ever changing and evolving through time and the generations of people who identify with it. ... It is through the medium of community that our first human ancestors created the phenomenon of culture. And it is through community that each successive generation of people has expressed the million faces of culture. Civilizations are not the enduring human systems—communities are! (1994: 166)

The cultural milieu of the school, then, is "an environment subject to the same ecological principles and truths as a physical environment... a dynamic human creation that is always in process at one or several levels

simultaneously” (Cajete, 1994: 191). An ecological education based on place must concern itself with both. And this, indeed, reconnects with Tönnies’ understanding of *Gemeinschaft* as an organic unity based on *kinship, place and mind*; three forms of relationship that are not chosen but inherited and embraced. In the ecological perspective, schools take on a new meaning, not as institutions of cultural homogenization, but as places where children can learn to embrace their full heritage of place. In this respect, indigenous cultures who have occupied a place for thousands of years and immigrant families who arrived last month are equally present, equally real, although their respective contributions to the understanding of *this* place at *this* time will be very different. It is the mutual exploration of such differences that makes ecological education an effective form of multicultural education as well.

Eber Hampton puts it this way in his essay on Indian education:

As in all conversations, it is the difference in our knowledge and language that makes the conversation difficult and worthwhile. It is this common earth we stand on that makes communication possible. Standing on the earth with the smell of spring in the air, may we accept each other’s right to live, to define, to think, and to speak. (Hampton, 1995: 42)

Although there is probably no school in the world, still less a school system, that has yet realized all the implications of a “pedagogy of place”, it is a philosophy implicit in many alternatives to mainstream schooling. As noted in Chapter 8, when Basil Bernstein considered the implications of educational reform as conceived in 1960s Britain, he was led to formulate the ideal of an “integrated code” as a *Gemeinschaft* of knowledge specific to the school, a kind of scientific community that took learners’ lives as the central reality for study (Bernstein, 1971). Likewise, the successful indigenous schools

considered in Chapter 7 embody a pedagogy of place in which indigenous knowledge, traditions and languages play a central role (Holm & Holm, 1990; Watahomigie & McCarty, 1994; Watahomigie & McCarty, 1996). From the ecological perspective, C.A. Bowers identifies three inspirational models of schooling centred on place, each located in a different corner of the U.S.: the Vermont-based Common Roots program, the Foxfire Curriculum initiated in rural Georgia, and the programs of the Centre for Ecological Literacy in the San Francisco Bay area (Bowers 1995). Working within the North American tradition of bilingual education, Jim Cummins offer three examples of “schools that nurture the spirit” (Cummins, 2000 (in press)), all of which take the diverse cultural realities of their learners as their point of departure from the mainstream system: Richmond Road in Auckland, New Zealand (May, 1994), Oyster Bilingual School in Washington, D.C. (Freeman, 1999), and the Foyer Model of trilingual/bicultural education (Reid & Reich, 1992). In these diverse senses, the pedagogy of place is alive and well.

Yet the vision of ecological schooling advocated here calls for a broader and more integrative vision than any one of these approaches. Bernstein, certainly, glimpsed the social dynamics at work—and noted, in passing, that the turn to integrated codes signalled the failure of modernity to establish a stable moral order (Bernstein, 1971). Yet his work is abstract and allusive, allowing for many interpretations of his critique and his proposed alternative, some completely contrary to his declared purposes. The best contemporary work on indigenous education is profoundly insightful, but not readily generalizable to the non-indigenous contexts in which most schools must function. Ecological education tends to be strong on connections with the natural systems of a particular place while paying little attention to

the diversity of cultural and linguistic systems; in multilingual/multicultural education these strengths are reversed. Furthermore, educational theory in all these settings tends to focus too narrowly on curriculum, teaching and learning, leaving the controlling levers of policy and administration unexamined, along with the vitally important question of assessment: how schools and their effects on learning and socialization are to be known, judged, and improved.

The integrated ecological alternative (I will refer to it from now on as “the ecological school” or “ecological schooling”) not only demands a rethinking of learning, teaching and administration, but of the role of the school system itself. To anticipate arguments that will unfold throughout this chapter, an ecological understanding of schools would view them not *primarily* as a means of pouring received truths into young minds, nor of training the work force of the future, nor even of educating responsible citizens, but as *ecological knowledge centres* for a city or bioregion. At first sight, it might seem implausible to burden children and teachers with such responsibility. It must be understood, however, that a great deal of the knowledge cultivated in ecological schooling *would not be explicit*: it would be the active, embodied knowledge of learners with a profound awareness of the diversity and dynamics of place. This knowledge would include the sustained experience of natural processes central to all forms of ecological education (Smith & Williams, 1999), together with the cultivation of multiple traditions of oral and written narrative in local languages, their exchange and cross-fertilization. When learners were asked to make their knowledge explicit, it would often be for an audience beyond their own classroom or school.

From the point of view of families and the children themselves, school would be a place to discover, gradually and in a structured way, the endless variety and adaptability of life in their particular place, and to work outwards from that knowledge to an understanding of life on this planet. The curricular and pedagogical details of this would be as varied as the places themselves, but many themes would be shared: for example, early and repeated exposure to real-life diversity, whether natural (in the form of gardens and field trips) or cultural (in the form of community visitors, visits and events, correspondence networks, the use of two or more languages of instruction, etc.); the development of systems thinking and what I have called “dynamic integration” through the cyclic renewal of relationship; and a system-wide commitment to integrating cultural diversity, enabling some schools to specialize, and others to share resource people who are familiar with the cultures and languages involved, who can assist learners scattered among a few dozen schools to explore their common roots, and who can guide research into the economies and ecologies of the urban area.

In such a system, every child, from every background, would be a potential resource, not only to their class or their family but to the entire urban “community of communities”. Helping the child to develop that potential would be a central objective of the school system, and it would be understood that such development will not take place in isolation from the communities which fostered the child in the first place. In some cases, these communities might appear as bleak and hostile environments, more obstacle than resource for the objectives of education (Smith 1992: 120, 128). As part of the urban ecosystem, however, they would never be discounted. In the same way, community languages not shared by teachers and administrators might

pose a major educational challenge, but exclusion would not be considered an acceptable solution. Instead, a variety of means would be employed to integrate them in the process of learning, including vertical age groupings, cross-linguistic and intercommunal projects, and explicit teaching about linguistic diversity, all of which would encourage children to incorporate distinctive words and expressions from community languages and dialects in the language of the classroom. In this way, the acquisition of English (or whatever other standard “matrix” language is used in the school) would take place through authentic vernacular Genres and Discourses, to which all learners could contribute, and which could provide them with an unusually rich set of language devices for imagining and describing their world.

The linguistic ecology of the classroom, school and school system would be further enriched by offering advanced forms of bilingual education for those who wanted it. This would enable a certain proportion of students to develop higher-level analytical and descriptive skills in their community languages, skills which could improve their performance in the matrix language and raise the quality of their contributions to the shared exploration of the urban ecology. Such bilingual programs would be jointly governed by professional educators and representatives of the community involved. Given consent from the latter and sufficient interest among middle-class speakers of the matrix language, some bilingual programs could become two-way programs; it should be noted, however, that the increased focus on two particular languages and cultures might well reduce the linguistic and cultural diversity available in these schools, which would have to rely on other sources—for instance, by networking with other bilingual schools sharing only one of their two languages.

Not only would ecological schools be considered a vital link in ensuring and enhancing the sustainability of a region's cultural and natural systems, but they would also constitute an extremely important setting for "ecosocial" research: that is, for the interdisciplinary critical ethnography advocated in Chapter 6. Small research teams with a range of experience and expertise (including novice social scientists) would play an integral role in the educational system, each working with a range of schools on issues that were jointly selected and expected to advance the school's goals. The teams in turn would be networked with others in the same region, and their members would participate in forums and institutions of higher education and advanced research.

Such is the vision that will be elaborated, at least in some crucial respects, in the following pages. But one question must be asked at the outset: from where will come the demand for such an education? Not in the first instance from the great majority of parents and children, for modernity's grip on the popular imagination is still extremely strong, and with it a nearly blind faith in the industrial philosophy of education. The disaffected are numerous but fragmented, scattered among the middle and working classes, immigrant and indigenous minorities, feminist and gay communities, orthodox and radical religions—plotted and pieced into multiple disjoint discourses by the relations of ruling.

Yet in such diversity is also great vitality. One can think of these various cultural communities as seed beds for diverse experiments in education, some of which will find common ground with the ecological alternative. Alongside the contributions of indigenous education, for instance, Gregory Smith sees promise in schools for at-risk youth, in magnet

schools and “schools of choice”, and in more radical reforms in inner-city schools (Smith, 1992). Other current sources of inspiration will be referred to in the pages to come. What the present work attempts to offer is a compelling common framework, one with sufficient flexibility to accept many different approaches and yet sufficient coherence to sustain common standards, that would allow these many alternatives to converge towards the ideal of multilingual ecological education.

Language and the Ecological Administrator

Such convergence will require a new kind of leadership. The modernist dream of “a science of administration”, already encountered in Chapters 2 and 5, is premised on the compartmentalization of the social world: schools apart from communities, leaders apart from learners, knowledge apart from life, as if administration were “somehow separate from life, love, sex, growth, conflict, accomplishment, decay, death and chance” (Greenfield, 1991: 5). For ecological administrators, such divisions run directly counter to the flow of learning and the purpose of schooling. Frequently referred to as the “hidden curriculum”, they teach that knowledge is the privilege of authorities and experts, that decision-making is normally a hierarchical rather than a collective process, and that human organizations need pay little attention to their cultural or social environment. Such an “industrial” model of educational administration, far from being neutral, is deeply hostile to indigenous cultures in particular (Hampton, 1995), to minority cultures in general (Nieto, 1996), and to the ecological world-view in its widest sense (Bowers, 1993).

The indigenous concept of leadership is far removed from the industrial metaphor, as Cajete makes clear:

Leadership in and of itself was never a goal of Indigenous education but rather a result of living in community and striving to become more complete. Traditional learning was always geared toward understanding and applying what was useful and beneficial. Indigenous community was predicated on the perception that all things can be useful, and the qualities of being useful and beneficial intertwine. These perceptions imply reciprocity, support, benefit, purpose, and vision. These perspectives—combined with an ingrained love for one's people and orientation to act for the good of the people—formed the foundation for the expression and development of Indigenous leaders. Leadership was a role that had to be earned in Indigenous community. It was earned by achieving a level of integrity that was irrefragable. (Cajete 1994: 175)

This leadership ideal may be summarized as a fourth standard of ecological education: *service to all*, to the organic web of living relationships surrounding and permeating the school. Such a concept may be close to the moral vision of a few outstanding practitioners, as we shall see, but it is a world away from current debates in administrative theory. It is, above all, those who challenge the philosophical foundations of the discipline that come closest to the ecological perspective. Thomas Greenfield, for instance, building on the work referred to in previous chapters, concluded in one of his last papers that “we need to turn to a notion of *something higher* if we are to find in the school reason to respect it and to believe in it as a justified moral order;” and that the value positions most widely touted, ranging from the conservative “basic skills curriculum” to the liberal “child-centered development”, offer “only a shrivelled and diminished view of the value potential of the school. ... All this is a mystery indeed and one that administration as study, practice and profession should focus upon and come

to grips with" (Greenfield & Ribbens, 1993: 224-25). The mystery of which Greenfield speaks, surely, is that of life itself in its inexhaustible and ever-changing diversity. Unfortunately, Greenfield's attempt to develop an administrative philosophy of "the middle ground," between the camps of "pure fact" (the objectivists) and "pure value" (the relativists) (Greenfield & Ribbens, 1993: 221), was doomed by its tacit reliance on Cartesian epistemology. The importance of community as "the natural context of human life and activity," in Cajete's terms, remains unarticulated in Greenfield's work, save for one brief reference in the interview that closes his collected essays:

I hope I have never taken the position that one value position is as good as another—the opposite indeed—though I have tried to show that looking at the world through the eyes of value holders reveals profound conflicts that reason itself fails utterly to resolve. ... While it might be easier to throw up one's hands in the face of these difficulties, the way I have reached finds that each culture offers its own road upwards. Salvation, peace, and reconciliation, if they are to be found, are to be found on that road, and we cannot deny our own road (Greenfield & Ribbens, 1993: 269).

Yet behind this ideal of service to one's own "culture" lurks the other face of modernism: the tyranny of Vereinschaft. We see this dialectic at work in the philosophy of Greenfield's friend and colleague Christopher Hodgkinson (1991), who shares the former's belief in knowledge and values as individual attributes, welling up from within instead of being negotiated through a give-and-take relationship with the world. On the one hand, this leads to an emphasis on the moral complexities of leadership, the lack of absolute "scientific" truths that might relieve the administrator of the need to make value judgements, and the desirability of a broad humanist training for

aspiring leaders: all principles which are compatible with the ecological concept of administration. On the other hand, it also leads to a vision of administration as a struggle to *impose one's own conception of the good*; in Greenfield's words, "a matter of will and power: of bending others to one's will and being bent in turn by others" (Greenfield, 1991: 8). In this image, the values that matter most are the non-negotiable ones, the tacit convictions that "are unverifiable by the techniques of science and cannot be justified by merely logical argument" (Hodgkinson, 1991: 99). In effect, this absolves the administrator from any need to question the consequences of her cultural and ideological assumptions for learners, teachers, their communities, and society as a whole: all that need concern her is to achieve approximate congruence between her values and those of the school.

This clearly does not meet the ecological standard of service to all. If administration is to be more than the continuation of colonialism under the name of "moral art," administrators must be prepared to revise their beliefs and assumptions in dialogue with others, and in response to the accumulation of empirical evidence on the effects of particular practices and policies. To this end, one valuable tool might be a revised conception of Hodgkinson's "value audit... a reflective and contemplative effort which seeks to bring into the light of consciousness the range, depth and breadth of one's preferences, conditioning and beliefs" (1991: 136). If his *monological* conception of praxis, the "conscious reflective intentional action" of a subject upon the world, is replaced with an *ecological* one in which subject and world adapt to one another, the value audit can be recast as a "relationship audit", or more elegantly put, a meditation on ecological identity. Through such reflection, the administrator's awareness may be awakened to previously

unperceived forms of order, actual and potential, that may serve as a guide to right action: an integral stage in the dynamic cycling between minimal and maximal engagement, or “process”, that characterizes the ecological ideal of the “whole person” (see Chapter 7).

Such a “relationship audit” can be seen unfolding in Eber Hampton’s vision quest:

In the six-directional pattern, education starts with prayer, standing in the centre of the world and looking towards the sky. The central prayer is, “Help me for my people’s sake.” ...The first time I fasted for a vision I remember that prayer working on me, defining me, creating deep within me an identity as an expression of my people....

The prayer is answered with identity, an unalienated self. On the second day of the fast, as I prayed I began to ask myself, “Who are my people?” Over the following days my identity expanded from my own skin outwards to family, friends, relatives, Indian people, other humans, animals, growing things, to finally reach the earth itself and everything that is. I came away from the fast with a deep awareness of feeling at home, related to all that is. (Hampton, 1995: 19-20)

In this and many related practices, indigenous cultures appear to have anticipated the needs of contemporary ecological education. As Gregory Cajete comments:

The whole human being and the whole community are integrally related. The whole person, as the whole community, is an amazing complex of diverse aspects. ... Achieving harmony, peace of mind, and health were ideal goals that were anything but easy to attain. They had to be actively sought, sacrificed, and prayed for. ... Society, rituals, healing ceremonies, sports, pilgrimages, vision quests, and other rites provided the communal context in which individuals might attain one of Indigenous education’s highest goals, that of completing one’s self. ... This was done because it was in the best interest of community to develop complete men and women. (Cajete, 1994: 179-180)

Thus, in the ecological perspective, the school administrator is not distinguished by a separate ideal, but by the application of a broader educational ideal to the demands of administration. The administrator's search for wholeness "for her people's sake" is not fundamentally different from the search enjoined on every learner and every teacher; but for each person, the question "Who are my people?" will yield different answers. Incumbent upon the educational leader is the responsibility to be more inclusive, to range further along the scales of meaning, context and process, than either teachers or learners need do. It follows that one of the greatest challenges for the administrator, as Hodgkinson himself recognizes, is to stay in touch with classroom and personal realities at the same time as they deal with the more abstract and generalized concepts needed to manage the school or school system as a whole (Hodgkinson, 1991: 57-60). To this, the ecological perspective adduces a second challenge: to develop awareness of the invisible ecological and social systems that support the tangible realities of the school day.

Linguistic diversity sharpens this dilemma, for it effectively excludes the administrator both from important dimensions of personal contact and from the invisible co-ordering of imaginative awareness within different vernacular cultures. But where modernism uses this as a pretext for the exclusion of diversity and the development of schools in the image of the administrator's own culture, the ecological response is necessarily more complex. *Awareness of and respect for difference* is the fourth standard of ecological education. It does not imply that all difference is equally worth preserving, but it recognizes that difference is always overdetermined, the result of many interacting relationships from which are born both strength

and weakness, peril and promise. Ignoring or suppressing difference is therefore the response of least wisdom, the course of action most detrimental both to learning and to sustainability. Ecological education includes an appreciation of biological and cultural diversity as characteristic of all sustainable living systems that include humans, and the ecological administrator looks for ways to integrate this diversity in a meaningful way in schools.

In this endeavour, the language myth presents a major hurdle. So deeply ingrained are its metaphors that efforts to develop a school-based “language policy across the curriculum” (Corson, 1990; 1999) will inevitably have to wrestle with modernist assumptions: about the interchangeability of languages, about the homogeneity of language communities, about a direct relationship between informal and academic language use, and so on. The ecological administrator therefore needs training in critical language awareness, at the very least, and not merely in the (mostly unilingual) sense in which the term is used by Norman Fairclough and his colleagues (Fairclough, 1992). The linguistic training that promises the greatest benefit for the ecological administrator is *critical bilingualism*, to coin a phrase: the experience of cultural negotiation in two (or more) languages, coupled with some exploration of the theoretical and research literature on bilingualism and multilingualism both in and out of school. Administrators with such a background will be far more likely to make appropriate decisions and to guide language policy development in fruitful ways than those deprived either of first-hand experience or the concepts of research-based analysis.

What, then, does this imply for the education of administrators—and, in lesser but still significant measure, for the preparation of educators in

general? At present, as far as I am aware, an understanding of cultural or ecological diversity is completely marginal to credentialling programs throughout the industrialized world (cf. Bowers 1995). Where minority rights advocates or critical theorists have succeeded in integrating courses on diversity-related issues, the obsession with texts that modernism has built into higher education works against any direct engagement with the *reality* of diversity. North American students are typically not even expected to read in more than one language, nor to be able to spend more than a few hours away from the prepackaged conveniences of industrialized society. If ethnocentrism and anthropocentrism are built into the forms and contents of the credentialling process, it seems absurd to expect its graduates to transmit other values through the schools.

Thus, where Greenfield and Hodgkinson both advocate a broadly humanist education for administrators, the ecological alternative implies a still greater challenge to modernist norms. Rather than describing it in the abstract, it may be helpful to pick out two examples of “emancipatory leadership” (Corson, 2000 (in press)) and consider their lessons for aspiring administrators, and for those that aspire to train them.

I. A multicultural urban school

David Corson himself provides the example of Jim Laughton, the principal of Richmond Road school in Auckland, New Zealand, from 1972 until his death in 1988. Previous accounts of the school (Cazden, 1989; May, 1994) have described its success in educating roughly equal proportions of white, Maori, Samoan and Cook Islander children in vertical bilingual streams, achieving both high academic standards and high levels of cultural

maintenance and self-confidence. Although these descriptions have left the issue of leadership largely unanalyzed, Corson justifiably asserts that “the Principal himself was the catalyst for change” (Corson, 2000 (in press)). Some of the dimensions of Laughton’s achievement may be summarized as follows:

- Laughton worked to instill the principle of “service to all” in teachers and children alike:

He talked to us constantly about rights and responsibilities, and... privilege and responsibility specifically... We [as teachers] were privileged to have the attributes, I suppose, to work with those children. Therefore it was our responsibility to do what we could, as much as we could, more than we possibly were able to do! But the same thing worked with the children in the classroom. It was a privilege for some children to be older or more gifted or more skilled, therefore they had to share that knowledge, that ability, those skills, with others who were less privileged in that circumstance... (May 1994: 108).

- Laughton succeeded in making staff and students feel valued, not only through his personal warmth, but through deliberate measures to create a collegial school culture in which everyone’s contribution would be expected, noticed and valued.

- Laughton was extremely well-read in educational theory, and “was always looking for ways to expand, and where necessary, change his own thinking” (May 1994: 67); he demanded that staff read up on educational theories and discuss them at long meetings lasting all Tuesday afternoon. As Corson observes, “Richmond Road raised expert knowledge to a level that is rare in schools,” involving both external professional expertise and the expertise of the staff and the community (Corson, 2000 (in press)).

- Laughton was realistic about the difficulties of institutional change. Only after five years at Richmond Road did he initiate major structural reform, by forming the first vertical “family group” or *ropu* of pupils from all age levels; for this he carefully chose the most experienced teachers and some of the brightest younger children to improve the chances of success (May 1994: 72). Other striking examples of his managerial deftness are the implementation of the school’s curriculum resource program (*ibid.*, 113) and the adoption of a highly structured approach to timetabling (*ibid.*, 124), both of which placed great demands on staff.

- Laughton “was concerned with access to power, not only for the minority children at Richmond Road, but for the school itself, and he knew how to get it” (May 1994: 84). For the children, his political goals were twofold: “*cultural maintenance* – the fostering of identity and self-esteem through the affirmation of cultural difference, and *access to power* – equipping minority children with the skills necessary to live in the wider society” (*ibid.*, 61) He was extraordinarily adept at taking advantage of changes in legislation and policy, and at nurturing an activist Board of Trustees spanning all the cultural groups at the school.

Beyond all this, Laughton was himself a Maori, and had thus experienced the tensions of cultural alienation versus cultural survival at first hand. May’s account makes it clear how much of himself he invested in the school; and although May himself expressed optimism about Richmond Road’s capacity to continue Laughton’s policies after his death, my own on-site inquiries in June 1995 revealed that most of his achievements had been swept away within five short years (unpublished interviews). Yet the primary question of interest is not whether Richmond Road depended on Laughton

(clearly it did), but how similar values and skills might become characteristic of educational administrators, rather than a rare exception?

II. A rural community-based indigenous school

The second setting is very different from the sprawling inner-city suburb of Richmond Road:

The town of Peach Springs sits amongst desert foothills just south of the Grand Canyon, on the edge of the million-acre Hualapai reservation. Straddling the Santa Fe Railroad and US Highway 66, Peach Springs includes the K-8 school—the only educational facility within 40 miles—a post office, general store, two gas stations, and the tribal and US Public Health Service offices. Federally funded housing lines both sides of the Santa Fe Railroad tracks. (McCarty & Watahomigie, 1999: 85)

In this unremarkable setting, the director of federal programs at Peach Springs School, Lucille Watahomigie, has spearheaded an extraordinary bilingual/bicultural program in English and Hualapai. When the program began in 1975, there was not even a practical orthography in Hualapai, let alone a tradition of literacy or instruction in the language, and attitudes in the community were hardly promising:

With few Indian educators of our own at the time, we encountered resistance from teachers at the school and met with distrust from our administration. Parents and grandparents were upset because they had been brainwashed for over 100 years that the native language and culture were to be forgotten. (Watahomigie, 1995)

As the only certified Hualapai teacher at that time, Watahomigie assumed the direction of the program with the support of the Hualapai principal, and set out to reinvent Hualapai education from the bottom up. In her patient and determined struggle over more than two decades, many

common elements with Laughton's contemporary reforms at Richmond Road can be discerned.

- Watahomigie worked extremely hard to bring the community on side, stating flatly: "Gaining that support required some 'reverse brainwashing'. We have had to re-educate our parents on the importance and priority of the values and knowledge embodied in our culture" (Watahomigie, 1995: 191). For years the bilingual program staff held public meetings, repeatedly bringing up the question, "Why have the schools failed to educate our people?" As it became thinkable to criticize the formal education system, Elders and other community members began to offer suggestions and help; and as parents began to see benefits in the program, their attitudes, too, changed (Watahomigie & McCarty, 1996: 106). Only with this transformation in perceptions, beliefs and values could the community actually take control of its education.

- Watahomigie sought out expertise both external and internal to the Hualapai community. Externally, she established a long-running partnership with linguistic anthropologist Akira Yamamoto, and both played a large role in founding the American Indian Language Development Institute (which continues to advise, train and inform indigenous communities throughout North America). Internally, she drew on the botanical and other knowledge of Hualapai elders to develop beautiful curricular materials in the language and help learners with their research. And like Laughton, she pushed her staff hard to "become our own linguists" and to continually re-evaluate the effectiveness of their efforts (1995; Watahomigie & McCarty, 1994; 1996).

- Watahomigie was clear from the beginning that the bilingual program was to be a means to an effective and empowering education for Hualapai children, not an end in itself. In parallel with the linguistic work, program staff and community members set about developing a Hualapai philosophy of schooling in which the natural, community and home environments are all seen as contributing in important ways to children's learning and growth.

As for Laughton, Watahomigie's own life experience as a member of a marginalized cultural/linguistic community—in this case, the very community she set out to serve—was an essential element of her effectiveness. Yet in order for her to draw on that experience, she had to transcend it: to see how things might be different. Then she had to reach out to others, across many Genre-Discourse divides, and let the vision take root and flower in surprising ways. Laughton, too, was a quintessential “bridge builder and border crosser”, as William Foster put it in Chapter 3, encouraging people to see each other differences as strengths and to work together for a common conception of the good. But it is vital to recognize that, in each case, the administrator was not concerned with collegiality and collaboration *for their own sake*, nor simply with “bending others to their will” in conformity to preset values, but with awakening and cultivating the latent capacity for critical awareness in communities, staff and learners alike. Both worked through dialogue, but a dialogue that constantly challenged people to assess the realities of their lives and their work.

Such dialogue, ranging back and forth between theory and practice, individual and society, language and nature, is the hallmark of Gemeinschaft-type negotiation (Chapter 7). Let us see how Arlene Stairs'

three dimensions of context, meaning and process highlight the ecological administrator's commitment to "dynamic integration":

III.1. Dynamic integration of context

- The ecological school takes on a political and cultural role in the surrounding community; administrators spend considerable time building strong relationships with community leaders and parents, including an effective school council.
- The school is shielded from standardizing and assimilatory policies coming from higher up the educational hierarchy; administrators cultivate allies in the policy framework, search for loopholes and options, and complain vigorously when necessary.
- Classroom practice must constantly be reexamined for its relevance to the school's vision; administrators involve teachers in weekly discussions, encourage them to read and experiment, and expect them to share their experience and ideas with others.

III.2. Dynamic integration of meaning

- The ecological school nurtures and builds on the vernacular cultural identities children bring with them; administrators use this as a primary criterion to evaluate the success of school practices, including teacher preparation, timetabling, classroom organization, curriculum planning, school-wide events and much else.
- First languages are integrated to the highest grade levels and across subjects; planning for a mutually supportive relationship between dominant and minority languages requires administrators to rethink many aspects of school organization.
- Cultural conflicts and contradictions are openly acknowledged, but at the same time subsumed by the school's common participatory culture; administrators act as guardians and

gardeners of this culture, making its foundational principles clear but ensuring it remains open to growth and adaptation.

III.3. Dynamic integration of process

- **The ecological school is always evolving, as teachers, administrators and parents reflect, discuss and chart new directions; administrators nurture this process by stoking the flow of ideas and information, ensuring regular and effective forums for discussion, and prodding people towards decisions when the time is right.**
- **Much time is devoted to professional and curricular development; administrators voice high expectations of their staff and provide opportunities for individual and group learning, planning themes across classes, developing materials and so on.**
- **Everyone is considered to be a participant in learning and change; administrators endeavour to keep in touch with what various people and groups say and do, both inside and outside the school, and to build bridges across those Genre-Discourse boundaries that restrict participation.**

In many respects, of course, these principles resemble classic prescriptions for a reformist version of community education (Fettes, 1999), and one must therefore beware of the inherent weaknesses noted earlier that allow such models to drift towards conformity with mainstream practices. The danger is perhaps less acute in the indigenous context, where ecological reforms connect with a long cultural tradition, than in the multicultural urban context, where external divisions reach into the school from every side. Yet for both settings the general principle holds: ecological education will become much more sustainable when networks of such schools are established, along with common standards, clearinghouses for curricular

materials, seminars and conferences, and eventually appropriate training programs for teachers and administrators.

Which brings us back to the question: how can ecological administrators be trained? Based on the two examples outlined above, along with the preceding discussion, the following suggestions can be made:

- Begin with a “relationship audit” that spans the full range of ecological identity, from family to nature. Encourage students to go out and re-experience the social and natural contexts that hold deep meaning for them. Discuss how and why these contexts are restricted or excluded from schooling, and what this may mean for children’s learning. Develop ideas on how schools might be opened up to these other forms of experience.

- Have students experience what it means to be a learner, both in their own language and in a different one. Discuss the literature on second-language learning and the differences between informal and academic language. Ask them to design programs for a bilingual or multilingual school, and compare their ideas with actual examples. Discuss current national and school board language policies, the options for schools, and strategies for change.

- Have students pick an issue in ecological education that is relevant to a community they know, and examine the organizational challenges involved in enabling learners to investigate its natural and social dimensions for themselves. What sources of expertise would be available? Who in the community would be affected, and what cultural and linguistic issues would play a role? How could experience be combined with description and analysis, or with other forms of representation such as drama and art? How compatible

would such approaches be with standard curricula and timetabling? Compare proposals with existing programs in ecological education.

- Introduce students to critical discourse analysis and critical ethnography; then ask them to record and analyze part of a discussion among diverse constituencies (a public meeting of any representative community organization would do). Whose voices were heard and whose were not? How might participation become more equitable and meaningful? What commitments would this require of a leader, and what organizational changes might be required?

It will be seen that such a program itself models some of the attributes it seeks to introduce into educational administration, in particular the cyclic process of dynamic integration across context, meaning and process. Equally important would be a commitment by the administrators of the program itself to reach out to underrepresented communities, and to open up the program to organizational, instructional and cultural changes in response to increasing diversity. The most impressive example of such a program that I have encountered is the Master's program in Maori Education at the University of Auckland, run by Graham and Linda Smith, a Maori husband-and-wife team. Starting from a trickle of one or two students a year, they went out into Maori urban and rural communities to tell them that this was a program designed for their needs; within a few years, they had fostered one of the most active postgraduate programs at the university, in which Maori (and some non-Maori) students from a wide variety of backgrounds could feel at home (unpublished observations and interviews, June 1995).

None of these recommendations is at odds with the need to train administrators in the more mundane and managerial aspects of their profession. What they provide is an understanding of the broader ecological context within which schools must function, and an opportunity for administrators to develop the integrative vision needed to sustain emancipatory leadership over the long term. The heart of this vision is the same mythic sense of inexhaustible bounty that Rupert Ross discovered among Aboriginal communities of Northern Ontario: the universe not as a pre-ordered ideological system awaiting explication but a web of life and spirit that everyone must discover for themselves through participation, both together and separately (Ross 1992). It is clear from the accounts of Cajete, Kawagley and others that the renewal of this mythic sense was one key function of traditional rituals and traditional storytelling. If ecological schooling is to be sustained, administrators—and especially the programs that train them—must find ways to reawaken this wonder at the world.

The demands placed by this vision on the ecological administrator are great, yet the rewards are also great. Whereas, in modernist models, administrators are isolated from nearly all that makes education exciting and fulfilling, in the ecological approach they are involved emotionally, intellectually, and spiritually with the natural current of learning. Freed from the solitary contemplation of private values or unquestioning adherence to institutional norms, they are open to discovery, surprise, change, growth. Cultivating a new generation of administrators under such a vision implies major changes in the field of educational administration. Without such change, however, no amount of curricular reform is likely to result in long-

term educational success for language minorities, nor in the renewal of ecological awareness on a wide scale.

Learning for Sustainability

Ecological leaders are perhaps the single most crucial element in the ecological reform of education; yet emancipatory leadership does not, in itself, constitute ecological schooling. Children's learning unfolds, for the most part, out of the sight of administrators, even those who take care to stay in touch with the realities of the classroom, the playground and the community. And because ecological schools are surrounded and penetrated through and through by the cultural and technological products of modernity, every setting and every theme is potentially a site for struggle over the maintenance of the ecological vision.

Two epistemological challenges are of particular concern. One stems from the prevalence of the container metaphor of mind, along with a conception of knowledge as something not created but transmitted by teachers and schools. As we have seen, particularly in Chapters 4 and 5, this metaphor serves to justify the modern addiction to second-hand information and harnesses schools to the reproduction of an invisible and inequitable social order. Ecological schooling requires quite a different set of images, in which both teacher and taught are participants in a web of life whose diversity and interconnectedness extends seamlessly across generations and communities. Knowledge in this framework is not regarded as a state to be attained, but a journey of endless discovery through both personal and communal experience. Yet because this conception of knowledge is not valued within the

economic and social systems of commodification, the ecological school will find itself struggling with two very different measures of educational success for some time to come.

This tension between holistic and modernist standards of assessment is accompanied by the tension between emic and etic modes of knowledge, insider and outsider perspectives. It is vital for ecological schools to develop their own knowledge base, for even the most enlightened emancipatory or ecological vision may be poorly implemented; moreover, the very complexity of education ensures that new challenges and dilemmas will continually arise as schools and communities evolve and change. In addition, it may well be that on many of the specific issues confronted by ecological schools *there is no appropriate expertise*—so much social science research has reproduced modernist ideologies (wittingly or unwittingly), and so limited have the resources been for the ethnographic research that is most relevant to the needs of the ecological school (see Chapter 6). Ecological schools will therefore frequently find themselves in negotiation with contrasting knowledge claims, and the ecological administrator cannot escape responsibility for steering a safe course among them.

These two issues—the nature of learning and assessment, and the need for school-specific knowledge—are profoundly interlinked with the ecology of language and education. As we bring them more clearly into focus in the second half of this chapter, many of the epistemological concerns of preceding chapters will be revisited—this time within an educational context which offers grounds for hope.

Language and the Ecological Learner

In mainstream schooling, teachers are authorities dispensing truth through the medium of language devices and other standardized symbol systems. In ecological schooling, they are guides in the co-exploration of reality, helping learners acquire new skills and tools for the purpose. Although the ecological teacher will likely have achieved a more sophisticated awareness of many aspects of reality than her learners, she will not expect the latter to follow exactly in her footsteps, nor to achieve such awareness through exposure to language devices alone.

Some ecological educators have begun to grapple with the profound implications of this change in perspective. Biologist Paul Krapfel, for instance, encountered it in the context of field studies for 4th to 8th grade classes in northern California. He came to conclude that too much explanation:

- makes the world seem completely “uncovered and understood”, instead of being full of mystery and surprise;
- fosters emotional and intellectual detachment instead of deeper participation;
- relies on simplification rather than letting learners “revel in the true complexity of the world”;
- focuses awareness on unchanging, independent, discrete concepts in place of the interconnectedness that lets “the concepts come alive”;
- divorces feelings from intellect, when true, grounded knowledge fuses the two. (Krapfel, 1999)

As Krapfel learned to relax artificial constraints on learning situations in the field, he began to notice how committed classroom teachers were to a

style of instruction in which all the answers were pre-ordained. Eventually he and his wife founded a charter school “to explore to what extent nature study can form the backbone of a school’s entire curriculum”—and, presumably, pedagogy (Krapfel 1999: 62). His experiences, referred to at greater length below, indicate to what extent ecological administrators may be required to challenge habitual forms of awareness and action. In modern schools, it is almost always easier to present learners with second-hand rather than first-hand information—a tendency currently reinforced by the spread of videos and CD-ROMs throughout classrooms at all levels and in all subjects. As Edward Reed argues at length in *The Necessity of Experience* (1996b), ecological education requires that this trend be confronted and reversed.

The fifth standard of ecological education is *learning from lived reality*. In his holistic philosophy of indigenous education, Gregory Cajete (1994) clearly identifies this as a central pedagogical principle:

Tribal teachers begin teaching by building on the commonplace. We have common experiences, understandings, and human traits that can be used to pose a problem in terms, forms or experiences that are familiar to students. ...

Basic understanding begins with exploring how things happen. Observing how things happen in the natural world is the basis of some of the most ancient and spiritually profound teachings of Indigenous cultures. Nature is the first teacher and model of process. Learning how to see Nature enhances our capacity to see other things. ...

The real situation provides the stage for most Indigenous learning and teaching. Overt intellectualization is kept to a minimum in favor of direct experience and learning by doing. Teaching through a real situation expands the realm of learning beyond speculation and allows the students to judge the truth of a teaching for themselves.

Attention may be considered a foundation of Indigenous learning in that almost every context—from learning basic hunting and fishing skills, to memorizing the details of ritual, to listening to story, to mastering a traditional art form—relied on its practical application. Attention in the Indigenous sense has to do with the focus of all the senses. Seeing, listening, feeling, smelling, hearing and intuiting are developed and applied in the Indigenous perspective of attention.

Placing students in situations in which they constantly have to examine assumptions and confront preconceived notions is a regular practice of Indigenous teachers. Through facilitating this constant examination of what students think they know, they remain open to new dimensions of learning and prepare for higher levels of thinking and creative synthesis. (Cajete 1994: 223-26)

In the terms of Chapter 4, the ecological approach to learning involves the progressive building up of a rich stock of experience-based intensions for every linguistic and symbolic device. This reduces the risk of middle-class students simply reproducing the language devices they have picked up from the pages of books and the conversation of adults, without ever really understanding the realities involved; at the same time, it offers equal opportunities for learning to language-minority students, who are not confronted with a mystified imaginative order of discourse but shown how specific language devices guide awareness to observable, tangible features of the world. It does not take too great a stretch of the imagination to see how such a pedagogy is suited to learning about the natural world; nor is it difficult to see that the language of such encounters, if the latter are sufficiently frequent and sustained, would evolve as an authentic vernacular in which lived reality, rather than social sanction, provided the criterion of correctness.

The further step advocated here is to apply these insights to learning about the *social* world. Such a transfer is by no means straightforward. Human biological adaptation ensures that many ecological meanings and values in the natural environment are accessible to all; human cultural adaptation ensures that many ecological meanings and values in the social environment are accessible only to those who are part of the Discourses and Genres that define them. This fragmentation must be overcome to a sufficient extent for deep learning about cultural diversity to take place, and this is no easy task. Yet within the context of a pedagogy of place, and aided by learners' shared experience of deep learning about the natural world, the ecological school could plausibly take on this challenge.

One vital *organizational* factor to be considered is that of time. Paul Krapfel, whose ecological field work with grade 4-8 students was mentioned earlier, found that children soon develop a sharpened and deeper awareness of "stories they can learn to read" in their environment, but that "systems thinking, on the other hand, is not a quick take":

Systems thinking involves becoming aware of general principles that arise from complex specific examples. Like fine shale, this kind of understanding is paid down one layer at a time. Students need to encounter example after example of how systems thinking provides insight into dynamics that would otherwise be invisible. ... {W}e think it probably takes two to three years until students are spontaneously and accurately applying systems thinking to new situations (Krapfel, 1999).

On the grounds of encouraging mutual assistance and long-term relationships, ecological educator Gregory Smith has argued that students and teachers at the elementary level should remain together for a number of years (Smith, 1992: 99-100). Krapfel's work suggests this corresponds with the

natural rhythm of ecological learning, “layer by layer” through repeated encounters with an ever-changing yet stable reality; and this also agrees with research on second language learning, showing that “although there will be large variation among students, typically it takes between five and ten years for second language learners to catch up academically” when taught primarily in their second language (Cummins, 1996: 71). Thus, whether learning is focused on natural, social, or linguistic systems, *continuity over time*—the sixth standard of ecological education—may be one of the most important factors involved.

This becomes particularly important when one considers the development of *shared* awareness among teachers and learners. At present, ecological awareness is rare among families or communities in any settings; most learners’ experience of everyday languages is confined to thoroughly humanized and ethnicized Discourses, with little or no awareness of the surrounding diversity of soil, water, plants and animals, languages and cultures. This would make it incumbent on the ecological school to develop its own vernacular language system, one containing the conceptual and linguistic tools needed to understand specific features of this local diversity and the system dynamics underlying it. To this end, linguistic creativity would have to be encouraged; the standardized vocabulary of scientific facticity would be seen as one way of speaking among many. Some of that “power over language” whose passing was lamented by Ivan Illich (Chapter 8) might yet be restored in schools which value vernacular forms of cultural negotiation. But for each class of learners to acquire and contribute to this language system, communal stability over a time span of several years would once again be essential.

Other kinds of reform central to the ecological school are modelled in the “pedagogies of place” cited by C.A. Bowers (1995). Although these programs do not explicitly address social and cultural diversity, they convincingly demonstrate how the curriculum can be used to put learners in direct touch with local realities. One, the Vermont-based Common Roots program, is “a comprehensive school development process designed to reconnect public elementary schools with the traditional knowledge and natural heritage of their local communities” (Kiefer & Kemple, 1999: 21). In many ways, schools in this program approach Bernstein’s ideal of the “integrated code” (Chapter 8); the linkage of education and ecology serves as “the foundation for holistic education that honors the natural interconnectedness of all things”, involving intensive cooperation across disciplines, the involvement of many people from outside the school, and a curriculum that unfolds temporally, geographically and imaginatively with each passing year.

We have found that recreating the story of the very community in which the students themselves live provides an ideal context for meaningful learning. Now for the first time, the teacher can say to the curious child just entering school that we are going somewhere. Each season we are going to live the lives of the people who first lived here, we are going to walk their footsteps and learn from their lessons—now they survived and sustained themselves over time. We are going to discover the foods they grew and the ways that they grew them. We will explore how they related to and used nature in balance or out of balance, constructively or destructively. We are going to explore their culture using arts, dance, theater, music.

We shall walk in these woods and meadows, and learn what grows here and what animals live here. We will learn about the houses and neighbourhoods and families that have sprung up in this town over the generations. We will meet the people who live here, talk to the men and

women who themselves went to school in this place, to hear their words and stories and worries and questions. In addition to understanding their perspectives on the past and their concerns about the present, we will discuss their hopes and dreams for the future. This, children discover, is what we call learning. This is the starting point of formal education. (Kiefer & Kemple, 1999: 32-33)

In Bowers' assessment, the Common Roots program succeeds in integrating many kinds of ecological awareness in a meaningful way and in strengthening learners' experience of community, both through shared work in the project's gardens and by extended encounters with farmers and others outside the school. On the negative side, it does not provide children or teachers with insight into the ways in which such awareness and experience can be obscured or transformed by the cultural metaphors reproduced through language, or into the very different metaphors and meta-narratives present in different cultural communities. "Would [these children]," Bowers wonders, "be able to understand the connections between the ecological crisis and the modern ideals of progress, individual creativity, and how our cultural approach to doing science relativizes the traditional foundations of moral authority?" (1995: 202). And if not, will they not remain "unnecessarily vulnerable to the modern pressures of keeping up with recent technological and consumer fads"?

Related strengths and weaknesses are present in another "pedagogy of place" analyzed by Bowers, the Foxfire Curriculum. This Dewey-inspired reform movement, which originated in rural Georgia in the late 1960s, places less emphasis on the natural world but involves still greater engagement with the local community. Aided rather than directed by a teacher, students decide what they would like to learn and set about finding the answers in the

place they live, not only for their own benefit or that of the teacher, but for “an audience beyond the teacher... an audience the students want to serve, or engage, or impress. The audience, in turn, must affirm that the work is important and is needed and is worth doing” (Bowers 1995: 186). These studies typically involve interviews with older inhabitants, “making spoken discourse centered in a community of memory a core part of student learning” and encouraging students to view elders as “someone who has experiences, special knowledge, and perhaps even wisdom students want to learn about and document for future generations.” Bowers believes that “learning how the activities that sustain community life are connected in multi-dimensional ways (through family connections, through stories told over time, reenacted in individual experience, and so forth)” is a step towards “framing the world in terms of processes, interactive relationships, and networks that are essential aspects of an ecological paradigm” (1995: 189). Yet at the same time, the lack of an explicit emphasis on the natural environment or the diversity of cultural interpretations of the world means that much of this potential will not be realized, for lack of guidance on the part of the teacher and limited exposure to direct and sustained experience of natural and cultural diversity on the part of the students.

The integrative ecological school, in contrast, would extend the principles of the Common Roots and Foxfire programs to include the different cultural and linguistic communities that share a place. As well as embarking on a journey through the natural environment, learning to recognize the patterns of the seasons and the co-adaptation of plants and animals within larger ecosystems, learners would progress through a deeper and deeper exploration of the social environment. At the beginning, this

would involve such readily accessible manifestations as food, music, and dress, but these encounters would be planned to lead children onward into encounters with language, narrative, history, values, patterns of discrimination and resistance, and efforts at community maintenance and renewal. As for the field programs run by Paul Krapfel (1999), repeated short experiences over a long period would be far more effective than occasional intensive exposure with nothing between. In this way cultural diversity would become part of the daily warp and weft of the classroom experience, and systems thinking about the social world could be built up little by little over time.

In addition to direct contacts with local cultural communities, ecological schools would cultivate extended “learning networks” with schools in other parts of the world. Examples of these have been described by Jim Cummins and Dennis Sayers in the book *Brave New Schools* (1995), ranging from the pioneering Freinet schools which have used international correspondence as a major pedagogical tool since the 1920s, to contemporary Internet-based partnerships using Spanish and English. Such examples are multiplying rapidly: since September 1999, for instance, a “virtual school” using Esperanto has linked two dozen classes in all five continents. Cummins and Sayers argue emphatically, however, that such networks will only facilitate deep learning if the participants are encouraged to ask hard questions, and to think critically about their own education and society. Ecological schools would seek means of expanding learners’ awareness of the physical and cultural realities that can only be dimly inferred through text and picture, and to encourage collaboration on projects requiring joint attention and dialogue to complete. Such learning networks would be of

particular importance for schools with few local resources for cultural diversity, but they could help to make the diversity of the world manifest in any other setting.

At the same time as this intercultural exploration progressed, learners would be helped to use and actively develop the vernacular knowledge inherited from their homes and communities. Home and community languages would be used for Foxfire-style research, and language and culture specialists would assist learners in presenting their findings and interpreting them in the common language(s) of the classroom. Bilingual programs would cultivate more academic styles of language use wherever there was sufficient demand. In keeping with the first standard of ecological education, schools would seek to actively build community resistance against the unjust social relations and alienating discourse patterns of modernity, by expanding the knowledge and reinforcing the pride of learners and parents; Cummins (1996) offers many examples of such empowering education. Allied to a pedagogy of place, the potential *Vereinschaft*-type tendencies of efforts towards cultural maintenance could be transformed into a broader, *Gemeinschaft*-type commitment to organic diversity: an achievement that might yet reverse the ominous trend towards the "extinction of experience" (Chapter 6).

Inevitably, such a comprehensive challenge to the relations of ruling would invite repeated attacks; and ecological schools might well find it helpful if they could show that, *even on modernist grounds*, they offered a more effective form of education than mainstream schooling. Without going into detail regarding possible teaching strategies and techniques, the ecological theory of cognition developed in Chapter 4 supports the claims of both

ecological (Smith & Williams, 1999) and critical bilingual educators (Cummins 1996) to connect with “the natural current of humanness” viewed by Cajete as the source of all learning. Cummins, reviewing the literature on language minority learners, considers cultural/linguistic incorporation, community participation, transformative pedagogy, and a holistic approach to assessment to be the four most important components of effective programs; the ecological school encompasses all four, not as disconnected priorities, but as part of an integrative philosophy of education. In the light of this philosophy, some of the text-oriented “critical literacy” approaches to transformative pedagogy inspired by Paulo Freire can appear unredeemably modernist (Bowers 1993); the ecological alternative is more radical, more patient, and more lasting.

This is not to say that text-oriented critical literacy would be excluded from the ecological school: nor would standard science, nor the taught colloquial. The thrust of the ecological alternative is not a wholesale rejection of modernity, but its transformation into something more sustainable; not an elevation of *Gemeinschaft* to the sole organizing principle of society, but its use to ameliorate the oppressive and alienating impact of *Vereinschaft* and *Gesellschaft*. The latter have become deeply rooted in human societies, and learning to use their potential and evade their snares is a vital part of any education—a modern variant of the indigenous Hunter of Good Heart (Cajete, 1994), who now must stalk the cultural labyrinth as he once did the untamed wilderness. Founded on a pedagogy of place, ecological schools would seek to instill that acute awareness of the world that every hunter needs (Ross, Chapter 6), in which experience, imagination and emotion are fused.

Language and the Ecological Researcher

The multifaceted process of personal and communal discovery central to ecological schooling would create knowledge in abundance; but it would also require knowledge. Earlier it was shown how ecological administrators will search out expertise and work with teachers to apply it to the goals of the school and community, but left largely unanalyzed were the challenges of assessing the school's own achievements, of validating the emic knowledge developed in its programs, and of adapting to new social circumstances, institutional pressures, and ideological criticism. All of these require communication between disciplinary worlds, across Genre-Discourse boundaries that administrators themselves may not have the time or expertise to bridge effectively. Thus, alongside the vernacular, political and natural communities of the region, the ecological school would pursue deep integration with a fourth constituency: the community of etic knowledge-makers.

In the Second Turn this idea was prefigured in Dell Hymes' proposal of ethnographic monitoring (Chapter 6), which I set within a broader turn towards critical ethnography and related methodologies in the social sciences. As Hymes saw, a reflexive awareness of language is a key part of this "discursive turn", and effective ethnographic monitoring would both require and propel a far-reaching revision of modernist approaches to linguistic thought and study. Now, by relating Hymes' proposal to a similarly far-reaching proposal for the reform of education, we can view it in its proper social context: at the meeting point of ecological schooling and ecological science.

In such a system, the value of research could never be assessed on the basis of its textual description alone. Research reports and papers offer pertinent evidence: one can look for indications of good observational practices, significant feedback from subjects, consistent and self-critical relating of theory and data, and conclusions proportionate and relevant to the research context, among other indicators (cf. (Corson, 2000), chapter 7). But all of these are etic criteria. As important in the evaluation of ecological research would be the emic criteria: has the work helped the researcher to expand her skills of awareness and action? or done the same for other individuals in the research context? or fostered lasting and positive change in the school or community? Critical-realist evaluation of critical-realist research would itself involve far more than armchair knowledge (Chapter 5): it would investigate the real-world consequences of the researcher's actions.

It is somewhat outside the scope of the present work to trace all the implications of this shift. Two conclusions, though, are highly relevant. The first is that the naturalist study of language, advocated throughout the three turns of this work, demands a reorganization of the way research is done. As long as researchers are separated from schools, communities, and each other within the balkanized worlds of university and government departments, the knowledge they produce will remain fragmented and delocalized, of little value for the fostering of sustainable human societies or for an integrative understanding of reality. Secondly, the transformation of schools and school systems into ecological knowledge centres would provide a social basis for such integrative research to take place. In an ecological system of assessment there might be direct ties between groups of schools and groups of researchers, with both sides contributing funds and expectations of a long-term working

relationship. Priorities for assessment would be determined through discussion, and learners, teachers, administrators and parents would all be involved in contributing to, commenting on and using the research. An internship in such an interdisciplinary, locally based, long-term project might become a basic qualification for educational researchers, analogous to a similar requirement in the medical professions. Because ecological self-assessment would be considered an integral part of a sustainable educational system, the funding and research base would be far broader than is the case at present, yielding what might well become the richest vein of ethnographic data in the social sciences.

Calls for such a *systemic* restructuring of educational research are being heard more often than in Dell Hymes' day—and they are still being led by researchers on language. Recently, for instance, the U.S. National Institutes of Health and the National Research Council sponsored a comprehensive report on “improving schooling for language-minority children” (August & Hakuta, 1997) which put forward an ideal that drew heavily on the organization of medical research: more effective and broader-based peer review, explicit attention on the part of researchers to the full complexity of situations under study, a much broader funding base, and so on. Similar ideas are summarized in a recent review of research on bilingual education in the United States (Moran & Hakuta, 1995), which concludes:

If research in bilingual education is going to serve its diverse audience, it must follow a dynamic design that allows for the interplay of political and social forces within the context of the communities served. It must be inclusive in its involvement of the educational community in every step of the research. To accomplish this, the researcher must play a role that includes being listener and broker at the research table, bringing together the entire educational community and facilitating the creation of

innovative approaches to researching the significant issues in bilingual education. Those significant issues should be influenced by a broadened perspective that includes foreign-language teaching as a goal of bilingual education; a view of minority languages as a natural resource; and bilingualism as a gift to be cherished. (Moran & Hakuta, 1995: 460)

Helpful though such calls may be, however, they surely underestimate the scope of the challenge. In the absence of commitment to a pedagogy of place, with all that it entails for the ecological reform of schools, the educational establishment will remain vulnerable to the discourses of *Vereinschaft* and *Gesellschaft*, and with them the language myth that is such an integral part of the social ecology of modernity. If multilingual and multicultural education is not to be constantly fighting a rearguard action to preserve its slender gains; if integrative linguistic research is not to remain a merely theoretical possibility; if both schools and science are to contribute to the well-being of people and peoples in the deepest sense, then it is not merely the science of language and education but *language and education themselves*, as social practices, that need to be reformed.

Ironically, though perhaps inevitably, my contribution to that endeavour, this spiral staircase for the imagination, is not particularly close to the ecological ideal. No practising teachers or administrators have been consulted in its production, much less learners or parents; nor are there inbuilt provisions for its ideas and conclusions to reach the educational, political and academic audiences where they might do some good. As an elaborate, unwieldy language device of restricted circulation, it constitutes barely an eddy in the modernist tide. On the positive side, I have found deep satisfaction in the capacity of this work to challenge and surprise me, to point to deep forms of order in the world that I had sensed but not suspected. I take

satisfaction, too, from doing theory as I believe it should be done, defining basic ontological categories in naturalist terms so that the underlying assumptions are as clear as possible. This has provided the foundation for theoretical progress in the natural sciences, and I firmly believe that the turn of the social sciences has come.

The merest eddy in a flood of language this work may be; but eddies are curious things. Most are quickly dampened by the prevailing current, but some prove surprisingly sustainable, while others yet feed into positive feedback loops that can alter the state of entire systems. Even the smallest contribution to such change seems worth attempting: for if the ecological paradigm does not gain ascendancy in this new century, I fear that the centuries that follow on our small blue planet will be bleak.

Let the vision sketched in this final chapter stand as an affirmation: In ecological reason there is hope for language, for schools, and for us all.

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