

S. Ali (2003) Mining, Environment,
+ Indigenous Development
Conflicts

Chapter 1

Mining on Indigenous Lands

The North American Experience

Perhaps the most valuable attribute of social science research lies in its ability to understand complex phenomena in human societies—to explicate situations whose dynamics cannot be replicated in vitro. This chapter aims to describe the phenomenon I am trying to understand in some detail so that the rest of the book can be contextualized. By understanding the scope and scale of the phenomenon I can move with trepidation toward more generally applicable theories as the story unfolds.

In this chapter I will endeavor to show that environmental resistance to mining activity on indigenous land is a phenomenon that merits in-depth research, particularly from a planning perspective. Since this research is a study of conflict, it is essential to gain close familiarity with the categories of stakeholders. This chapter also serves to introduce one of the main stakeholders in the conflicts that I am studying—indigenous groups. They are truly the key protagonists in this book—indeed it is the unique policy challenges that are presented by indigenous people and their predicament in settler-dominated countries that have motivated this study. To summarize the way various stakeholders in such conflicts can be envisaged, figure 1.1 attempts to present them as a Venn diagram. It is important to note that the representation of bargaining power in this diagram reflects the more prevalent “environmental justice” worldview that envisages governments and corporations to be much more powerful than indigenous communities and environmentalists. However, this differential of power will itself be a subject of much debate throughout the book.

Table 1.1
Explication of Loci in Venn Diagrams

Venn Diagram Regions	Context of the Conflict
A	Corporate interest only: maximizing profits from operations outside the country
B	Government interest only: policies of importance to constituencies outside the dispute
C	Common interests between community and corporation: employment and labor benefits. A portion of the community feels the compensation offered by the company is adequate. Potential for splinter group within community
D	Common interests between the government and the community only (excluding corporate or ENGO interest): welfare benefits, political representation
E	Common interests among ENGO, government, and community (excluding corporate interest): environmental protection through state-level economic analysis
F	Common interest between ENGO and community (excluding government or corporate interest): environmental protection based on normative concerns (value-based)
G	Common interests between corporation and government: strategic economic development concerns for the state, exogenous to the region
H	Common interests between ENGO and government (excluding community and corporation): other environmental lobbying efforts in which the ENGO is involved outside this conflict area (but within the country), which the government endorses
I	ENGO interest only: Based on a broader vision of the ENGO's charter; accountability to international headquarters and to the resolution of other disputes outside the country
J	Indigenous community's interest only: issues of cultural significance

Note: There is no region of common interest between most ENGOs and corporations. However, this may vary depending on the environmental group. As a general policy, ENGOs have refused to take corporate funding in their activities since the landmark decision of the Environmental Defense Fund to refuse funding from McDonalds Corporation for a study it conducted on packing material used by the company.

Government clearly has many levels and bureaucratic agencies that can act as sub-stakeholders. However, in this diagram, government is shown as an overarching entity for simplicity—different competing institutions within various levels of government can be visualized within the overlapping regions with other stakeholders.

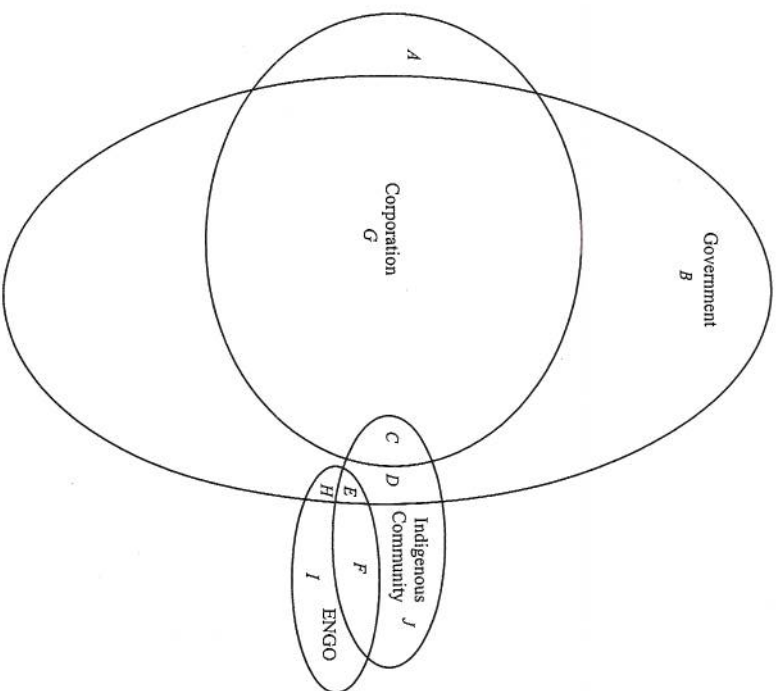


Figure 1.1
Loci of interest for various stakeholders. Size of ellipses indicates the relative bargaining power of each group.

Indigenous Experiences with Mining in North America

Many books on the history of mining in North America begin with a section on the first mystery miners—usually there is a description of how Native American tribes, particularly in the Southwest of the continent, may have discovered the usefulness of metallic elements several centuries before the advent of the Europeans. There are numerous ancient abandoned mine sites in the Southwest that have spawned much debate among historians. The Spanish chronicler Farfan de los Godos reported as early as 1598 that he had been given a piece of pulverized ore by an Indian, who later showed him a small primitive mine site in the mountains of what

is now eastern Arizona. There is considerable debate about the veracity of such accounts, but the consensus is that Indians probably did not use metals for tools and implements; rather, the ore was used as a source of pigment for body adornment and ornaments.¹ The association of indigenous people with mining activity in the presettlement era is thus somewhat obtuse, and clearly the extent of mining at that time was at a very small scale.

Mining does, however, play a pivotal role in the history of Indian-settler relations. Celebrated historian Frederick Jackson Turner noted in 1920 that the settlement of North America seemed to follow a rhythmic pattern. First came the mountain man into the wilderness hoping to make a fortune trapping and trading furs; then came the miners in search of a proverbial El Dorado. They were followed by cattlemen who grazed their herds on open range. Finally came the farmers who fenced the land and ended frontier life for good (Turner [1920] 1998). While revisionist historians such as Hine and Faragher (1999) have largely deconstructed Turner's frontier theories of western expansion, the reality of mining booms and the influx of settlement they brought remains beyond reproach (Hine and Faragher 1999; Limerick 1999).

Lucrative prospects for mining drew more and more settlers toward Indian lands in Appalachia, the Southwest, and the extreme Northwest (Alaska and the Yukon). The promise of mineral wealth provided a great impetus for European settlers to encroach upon Indian lands as early as the seventeenth century. While the fur trade involved reciprocal arrangements between Indians and Europeans and revolved around a commodity with which the Indians were familiar, mining activity occurred on a much more ad hoc basis and involved a commodity with which many Indians were not as familiar. Therefore, mining activity was regarded with far more suspicion in the eyes of many tribes during the early years of the frontier expansion.

The history of European colonization of native lands is beyond the scope of this book and has been addressed by a wide body of literature (see, for example, Debo 1970; Fleet 1997; Nichols 1998). Nevertheless, it is important to have some historical background to inform our discussion, since many arguments presented by resistance movements on native land are predicated on perceptions of history.

The profound demographic effect of European settlement should not be understated. There is considerable disagreement about the population

of native societies in North America prior to settlement. However, even conservative estimates of native depopulation caused by disease, warfare, and overwork are staggering. For example, the population of Indians in Puerto Rico in 1508 by Spanish estimates of the time was 200,000. Within three years, the population was estimated at less than 20,000 (quoted in Champagne 1996, ix).² While the extent of such demographic change may vary from region to region, there is no doubt that the native population generally diminished in all areas where contact occurred. The perception of this change persists in the memories of many Native American activists to this day, and thus genocide is a frequent refrain in native discourse, as exemplified by the recent publication of Ward Churchill's *A Little Matter of Genocide: Holocaust and Denial in the Americas, 1492 to the Present*.³ A more relevant variation of this term is *ecocide*, a term first used as the title of a book published in 1970 on the ecological impacts of wars in Indochina (Weisberg 1970). Since then it has been used to describe colonialism in the Americas by numerous native writers (see Grinde and Johansen 1999).⁴

It may be useful for our purposes to divide the period of Settler-Indian relations in North America into three segments—this broad delineation holds true for relations in both the United States and in Canada.

First was the wave of expansion from the sixteenth century to the end of the eighteenth century, which involved a series of battles and treaties between natives and Europeans. This was the time when many Indians were displaced from their lands because of the need for settlers to acquire land for either mining or agricultural activity. The second wave involved the development of institutions to effectively manage the Indians by relegating them to reservations or reserves within circumspect boundaries.

Initially, Native Americans were relegated to these lands because the lands were thought to be unproductive. As a recent review of a book on Indian mineral resources points out, "It is no small irony that after Native Americans had been forced onto reservations on land that nobody wanted, a wealth of natural resources would be discovered under those lands."⁵

When minerals were indeed discovered, there was a wave of policy initiatives to facilitate the development of mines on native lands through a rather ad hoc mixture of land appropriation, population displacement, and side payments that were anything but fair. In 1882, oil was discovered in the Oklahoma territory, which subsequently led to the Indian Mineral-Leasing Act of 1891. In Canada, mineral resources were included in treaty negotiations between tribes and the Canadian government as early as 1876,

when Treaty 6 was signed. In this document indigenous people agreed to share topsoil "to the depth of a plough" (meaning six inches deep).⁶

Currently, North America is at the third stage of settler-native relations, wherein the political system has reached a level of maturity to preclude overt manipulation of Native American rights. However, there is a continuing sense of distrust among tribes about the terms of resource development on their land, and there is a congruent sense of resentment among many nonnatives about the special status of natives. Natural resource policy is a key issue in this larger conflict, since through the vicissitudes of history many tribes have large resource endowments, spawning a subsequent desire for resource exploitation on their land. Tables 1.2, 1.3, and 1.4 show the scale and scope of mineral deposits and mining activity on native land in the United States and Canada.

One of the puzzles that is evident from these tables is the enormous disparity between solid mineral potential on Canadian reserves and actual mining activity on the reserves. There are basically no large metallic or coal mining ventures on reserves themselves, despite the geologic potential for economically feasible extraction. Most of the mining on the reserves is of sand and gravel, which is qualitatively quite different from metallic mining or even coal mining. The Canadian case studies in this book involve land located in predominantly indigenous areas but that is not reserve land as such. However, the Saskatchewan case study encompasses the Fond du Lac band, which is the only metallic mineral *exploration* on reserve land. There are also certain treaty obligations with regard to mineral extractions that necessitate consultation with indigenous groups regardless of whether the deposit is on reserve land itself. From a comparative perspective, the research presented here attempts to tease out the differences in how resistance emerges in these two settings.

It is clear from the data presented here that solid mineral activity is an issue of great salience to Native Americans on both sides of the border. In the United States, tribes have had more experience with metallic mining on their land when compared to their Canadian counterparts. However, the huge mineral potential of Canadian reserves, and even more so the potential for further mineral activity as land claims are settled in British Columbia and Newfoundland, is immense.

While the specific nature of mining activity in terms of land tenure and legal regime may have been different on both sides of the border, the environmental impact of mining on native communities has been considerably serious for all. Apart from these mines there are several other proposed

Table 1.2
Indian Tribes in the United States with Mineral Activity

Reservation (Tribe)	Energy Mineral Potential	Trust Acreage (Percent Allotted)	Resident Indian Population	Government
Blackfeet (Blackfeet)	Coal, oil, gas	937,701 (68)	7,000	IRA
Crow (Crow)	Coal, oil, gas	1,516,005 (73)	5,500	Non-IRA constitution
Fort Berthold (Mandan, Hidatsa, Arikara)	Coal, oil, gas	419,198 (83)	3,100	IRA
Fort Peck (Assiniboine and Sioux)	Coal, oil, gas	904,683 (57)	5,200	Non-IRA constitution
Hopi (Hopi)	Coal, oil, gas	1,561,213 (0)	9,000	IRA
Jicarilla	Coal, oil, gas	823,580 (0)	2,500	IRA
Apache				
Laguna Pueblo (Keresan)	Uranium, coal	461,099 (0)	6,700	IRA
NANA Corp., Alaska	Zinc, copper	Nontrust, Alaskan corporation lease		Alaskan
Navajo (Dineh)	Coal, uranium, oil, gas	436,947 (27)	170,000	—
Northern Cheyenne (Cheyenne)	Coal, oil		3,300	IRA
Osage (Osage)	Oil, gas	168,794 (100)	6,200	—
Southern Ute	Coal, oil, gas	309,970 (1)	1,200	IRA
Spokane	Uranium	130,180 (9)	2,100	—
Utah and Ouray (Ute)	Coal, oil, gas, shale	10,231,556 (1)	2,500	IRA
Ute Mountain Ute (Ute)	Coal, oil, gas, uranium	597,288 (1)	1,700	IRA
Wind River (Arapaho and Shoshone)	Coal, oil, gas, uranium	1,887,262 (5)	5,500	—

Source: Based on data presented in Ambler 1990 and BIA 2000.

Table 1.3

Canadian First Nation Reserves with Mineral Activity

Band Name	Province	Material Extracted	Population on Reserves	Area (hectares)
Big River	Saskatchewan	Sand, gravel	1,638	12,129
Blood	Alberta	Sand, gravel	7,442	134,293
Cham	British Columbia	Sand, gravel	180	458
Clearwater River				
Déné	Saskatchewan	Sand, gravel	535	9,510
Cowichan	British Columbia	Sand, gravel	1,830	2,254
Cree (Bigstone)	Alberta	Sand, gravel	1,864	21,014
English River	Saskatchewan	Sand, gravel	595	13,100
Fond du Lac	Saskatchewan	Metallic	805	15,520
		Exploration		
Joseph Bighood	Saskatchewan	Sand, gravel	462	4,700
Kamloops	British Columbia	Sand, gravel	—	—
Kwakwaka	British Columbia	Sand, gravel	326	420
Lac La Ronge	Saskatchewan	Sand, gravel	4,195	43,294
Matsqui	British Columbia	Sand, gravel	83	165
Montreal Lake	Saskatchewan	Sand, gravel	1,592	8,270
Pavilion	British Columbia	Limestone	165	2,126
Penticton	British Columbia	Sand, gravel	496	18,532
Peter Ballantine				
Cree Nation	Saskatchewan	Sand, gravel	3,157	15,067
Saik'uz First				
Nation	British Columbia	Sand, gravel	540	2,578
Saulteaux	Saskatchewan	Sand, gravel	482	11,820
Six Nations of				
the Grand River	Ontario	Gypsum	8,323	18,265
Skyway	British Columbia	Sand, gravel	52	680

Source: Personal communication with Jean-Louis Causse and Douglas Paget of the Canadian Department of Indian Affairs and Northern Development, Ottawa, September 2002.

ventures located on or near native land in the United States and Canada (see table 1.4).

Is This an Environmental Justice Issue?

An argument can also be made that the large preponderance of mining activity on native land, particularly uranium mining, was a manifestation

Table 1.4

Mining and Remediation Projects in Native Communities

Mining Project and Area	Tribes or Band Affected	Status
Carlotta and Gentry metal mines, Arizona	White Mountain Apache Tribe	Proposal for an open pit copper mine by Canadian mining company Cambior, near the reservation
Coeur d'Alene mines, Idaho	Coeur d'Alene	Department of Justice lawsuit against Asarco mining and area near the reservation has been declared a Superfund site
Colville, Washington	Colville	Tribe passed referendum opposing mining by Battle Mountain Gold and Santa Fe Pacific
Crandon mine	Mole Lake Chippewa, Menominee	BHP Billiton has purchased Rio Algom, which purchased the property from Exxon, but there is currently a moratorium on mining in Wisconsin
Crescent Valley, Nevada	Western Shoshone	Oro Nevada Resources has begun exploration work despite tribal requests to stay clear of the area
Crowpoint uranium mine, New Mexico	Navajo	Proposal for several uranium mines using in situ leaching process; EIS process is under way
Dawn uranium mine	Spokane	Under reclamation negotiations
Diavik diamond mine, Northwest Territories, Canada	Dogrib, Yellow- knives Déné, North Slave Métis, Inuit K'e Déné, Kitikmeot Inuit	Diamond mine located in area of land claims being settled; participation agreements have been signed with each of the five affected Aboriginal groups; production was projected to commence in first quarter of 2003
Ekati (BHP Billiton) mine, NWT, Canada	Dogrib, Yellow- knives Déné, North Slave Métis, Inuit K'e Déné, Kitikmeot Inuit	Impact and Benefit Agreements have been signed with each of the five affected Aboriginal groups. Production began in October 1998

Table 1.4
Continued

Mining Project and Area	Tribal or Band Affected	Status
Muscelwhite gold mine—Placer Dome/TVX/Normandy Americas, Inc., Ontario, Canada	Car Lake FN, North Caribou Lake FN, Kingfisher Lake FN, Wunnumin Lake FN, Shogomoc FN Council, Windigo FN Council	One IBA has been signed and subsequently renegotiated between the affected First Nations (FN) and the companies; production began in 1997
Picuris project near Taos, New Mexico	Picuris Pueblo	Summo, a Canadian mining company, is conducting exploratory work adjacent to the reservation
Raglan mine, Quebec, Canada	Makivik Corporation	Nickel and copper project commenced in 1998 after an agreement was signed
Snap Lake diamond project (De Beers), Northwest Territories, Canada	Dogrib Treaty 11 Tribal Council, North Slave Métis Alliance	De Beers announced that it has signed MOUs with both of these groups to sign participation agreements in anticipation of the opening of an underground diamond mine as early as 2006; the company also plans to negotiate with the Akaitcho and Yellowknives Déné

Note: Based on various personal communications with the BIA and DIAND, as well as a memorandum, *Mining and Sacred Sites*, published by the Mineral Policy Center in Washington, D.C., in 1999. This list includes projects that are not necessarily on native land but are in close proximity to native areas and have thus required consultation or negotiations with the communities.

of environmental injustice. The preponderance of mining, according to this hypothesis, was not an accident of geology but rather a deliberate attempt by the mining industry to locate mines in areas where there would be minimal resistance on grounds of environmental and occupational harm. However, geological data does not support this idea. Extractable minerals are generally so few and far between that mining companies are seldom in a position to pick and choose deposits. For example, figure 1.2 shows the geologic potential for minerals in North America. Many of the min-

eralized areas happen to be in mountainous or rough terrain—areas that are often not ideal for urban establishments but where tribal communities have flourished because of relatively abundant water, game, and timber.

The historical record shows that in the early days of frontier expansion the decision to mine was determined totally by the perceived potential of minerals on land and quite irrespective of its prior occupancy (hence the term *mining rush*). Over time, the presence of natives on the land, environmental issues, and other regulatory regimes began to sink in as factors in decision making on the part of prospectors—but their inclusion was apparently more a cause for pause. Part of the purpose of this study is to understand the factors that contribute to the decision-making process within mining companies. What role do environmental regulations, indigenous rights concerns, and other regulatory forces play in the decision-making process of mining developers?

Too often scholars of Native American environmental concerns have fallen to the temptation of lumping together such issues as nuclear waste sites and mining development—perhaps this has been caused by the presence of uranium in both issues. However, the siting of nuclear waste sites is far less determinate by geological indicators than is the siting of a mine—the potential choices for possible waste repositories from a purely physical science perspective are far more numerous. For example, it was primarily social factors that ended up narrowing the list to nine sites in the case of the Department of Energy's plans for a waste depository in 1983.⁷ Therefore, environmental justice arguments hold more credence in such cases than they do in the case of mining development.

Nevertheless, the subsequent compliance with various environmental laws and human rights issues post facto of a mine's establishment may well be viewed through an environmental justice lens. A comparison of environmental compliance and occupational health concerns on mines that are located on native versus nonnative land is thus quite reasonable. While such questions are not the focus of this research per se, the emergence of resistance may be motivated by at least a perception of such environmental injustice and hence will be discussed where it is evident in the case analysis. It is important to keep in mind at the outset these various distinctions and subtleties regarding environmental justice to avoid confounding issues.

Environmental justice is, however, becoming an expansive academic concept and acquiring a cache similar to sustainable development. Sus-

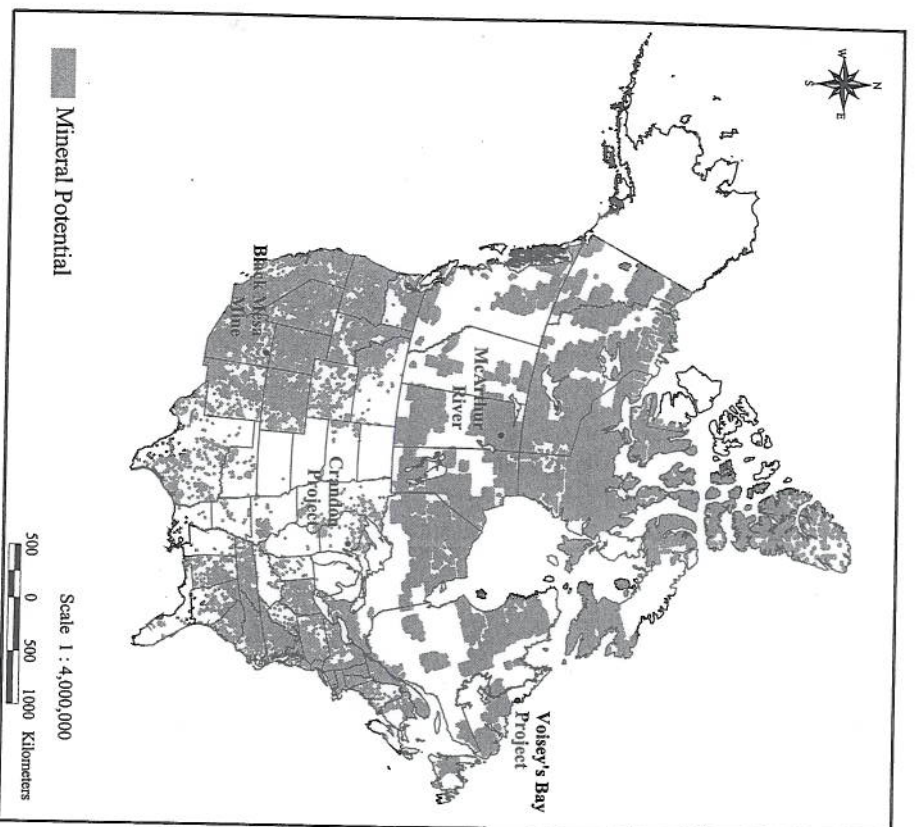


Figure 1.2

Case study sites and mineral resource potential based on geological composition in the contiguous United States and Canada. (Map by Steven DeRoy, based on data from the U.S. Dept. of the Interior, Bureau of Indian Affairs, Mineral Resource Data System, and Statistics Canada)

tainability and environmental justice are by no means synonymous concepts. Andrew Dobson (1999a, 1999b) is among the few political theorists to tackle the confluence and divergence of these two concepts. As he insightfully observes in his work *Justice and the Environment*, the key common ground lies in the common preoccupation that both concepts have with the distribution of "benefits and burdens" (Dobson 1999a, 73).⁸ How-

ever, even with his neat typology of comparing the two concepts, he encounters the following problem: "The framework for the exploration of the relationship between environmental sustainability and social justice would have been neater than it turns out to be if it had been possible to demarcate distinct conceptions of social justice in the same way as I was able to do for the conceptions of environmental sustainability" (Dobson 1999a, 84).

As we shall see (particularly in chapters 6 and 7), much of the disconnect between native groups and environmental groups arises because of an inability to judge this disjuncture.

Mining and Sustainable Development

Retrieving rocks and minerals from the earth's crust changes the most basic structure of an ecosystem by disrupting the substrate on which life may develop. The environmentally deleterious effects of mining were noticed as early as 1556, when Georgius Agricola wrote his seminal text on mining, *De re metallica*: "The strongest argument of the detractors [of mining] is that the fields are devastated by mining operations. . . . When ores are washed, the water which has been used poisons the brooks and streams. Therefore the inhabitants of these regions, on account of the devastation of their fields, woods, groves, brooks and rivers find great difficulty in producing the necessities of life" (quoted in Eggert 1994, 1).

Enormous quantities of waste material are generated since minerals are generally a rare appendage to huge quantities of worthless sediment. Underground mining often involves rock dewatering and the lowering of piezometric head. This may in turn lead to compaction of sand and clay, alteration in rock mass, and the development of major jointing and surface subsidence. Mining activities are also likely to cause extensive chemical pollution and sedimentation in river channels because detergents and petroleum-powered machinery are often used in the mining processes. Dredge mining, a process in which unconsolidated mineral-rich sedimentary material is removed by suction from a water-covered area, is extremely deleterious for wetland areas.

Water within a mine has been traditionally considered a hindrance to mining; hence, draining programs from the mining site have caused major disruptions in groundwater regimes. The direction of groundwater movements may easily change due to mining, thus leading to disruptions in re-

change regimes and the drying up of certain springs. There may also be a rise in groundwater in certain mining areas where geotechnological methods are used. Contamination of springs due to seepage of mine wastes may exacerbate the problem of water quality. Highly mineralized water may be very damaging to the organisms residing in rivers, not to mention the deleterious effects on humans.

Mining activities generally change siltation rates in river systems and turbidity measures that may cause serious damage to fisheries. The excavation sites left by mining operations can fill with water and be a haven for mosquitoes and other undesirable pests. This has been a particular problem in the Brazilian mining region, where reported malaria cases increased from 52,469 in 1970 to 577,520 in 1989. (Hester and Harrison 1994, 12)

There is considerable variation in the environmental impact of different kinds of mining activities (see fig. 1.3). For example, in underground copper, gold, silver, and uranium mines in North America, the ratio of ore to overburden plus waste rock is on the order of 0.1:1 to 0.3:1, whereas for surface mines (often referring to coal), the ratios range from 0.5:1 to 0.1:1 (Eggert 1994, 8).⁹ However, in other areas underground mining presents greater challenges, particularly in the areas of groundwater contamination, seismic disturbance, and occupational health. Overall, solid mineral mining presents different mitigation challenges, depending on the method employed, but collectively environmental concerns surrounding mining development of metallic minerals and coal are significant regardless of the mining method. Tables 1.5 and 1.6 highlight some of the key impacts and mitigation measures in the mining industry.

Waste generation is probably the most widely publicized mining problem—and deservedly so. Mining and beneficiation generate two billion tons of solid waste a year in the United States, representing about 40 percent of the country's total solid waste. However, these numbers can be deceptive. Interestingly enough, the total hazardous waste, which is classified as a subset of solid waste, is only 270 million tons. Unfortunately, there is no comprehensive data available on what percentage of hazardous waste actually comes from mining. Nevertheless, hazardous or not, the solid waste generated is still an immense challenge to dispose of, and the Environmental Protection Agency (EPA) has had a lot of difficulty classifying the waste under the Resource Conservation and Recovery Act (RCRA)

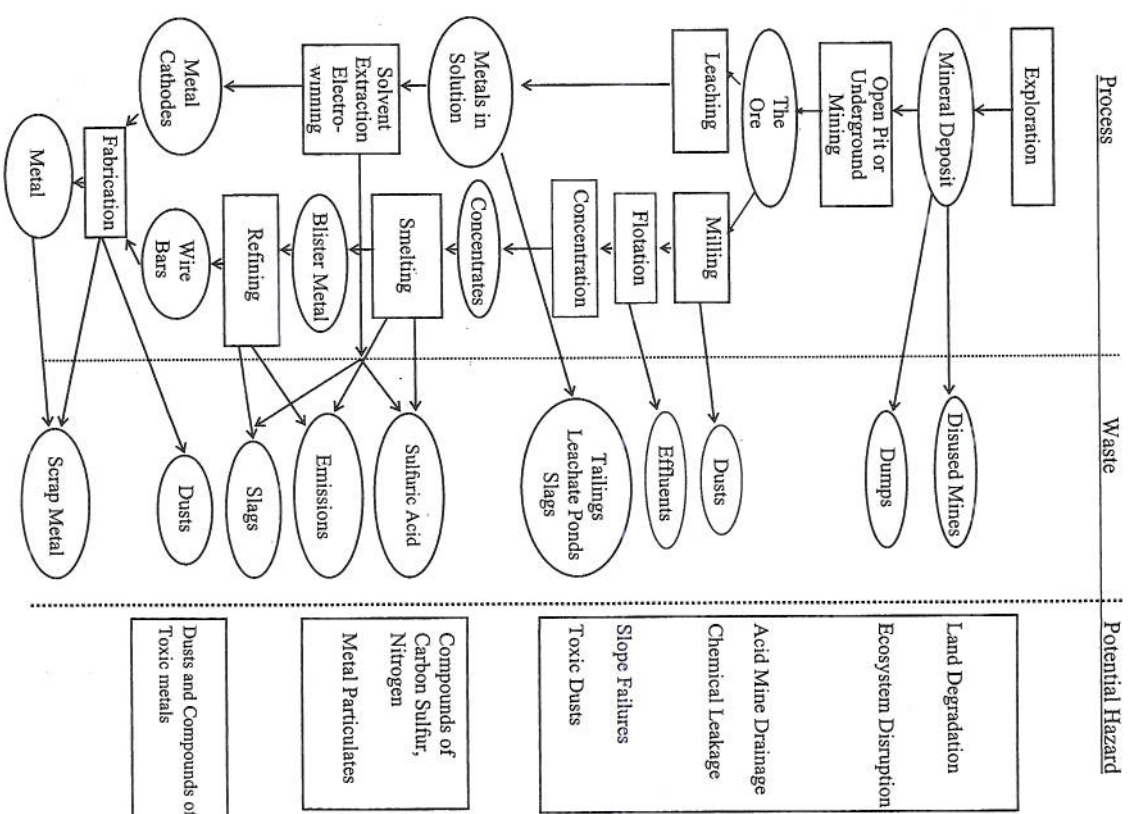


Figure 1.3

Mining and its environmental impact.
(Adapted from Warhurst and Noronha 1999)

Table 1.5
Environmental Effects of Various Methods of Mineral Extraction

Mining Method	Environmental Advantages	Environmental Disadvantages
Underground		
Open stopping	Less waste rock than with surface mining	High subsidence potential oxidation of exposed materials
Filled stopping	Lower risk of subsidence; disposes of some waste material	Possibility of oxidation and combustion of backfill; slurry drainage and water disposal aquifer impact
Surface		
Open pit	Accessibility and lower worker risk than underground	Waste rock and dust; noise; mine drainage; ore oxidation
Alluvial	Relatively easy to control damage although rarely done	High potential for particulate emissions to atmosphere and hydrosphere; surface disturbance
Non-entry		
Auger	Minimum surface disturbance and low worker risk	Low extraction efficiency
In situ leaching	Reduction of solid wastes, mill tailings, surface disturbance and worker risk	Requires disposal of large amounts of soluble salts, possible groundwater contamination and surface subsidence
In situ utilization	Minimal surface disturbance, worker risk and solid residuals	Difficulty in containing and controlling underground process; high potential for underground contamination and explosions

Source: After Ripley et al. 1996.

of 1976.¹⁰ In 1980 Congress passed the Bevill Amendment, which excluded the solid waste from mining, milling, and processing of minerals from regulation under Subtitle C of RCRA (which deals with hazardous waste). Subsequently the EPA prepared a report on the impact of mining wastes on the environment and differentiated between extraction and beneficial wastes on the one hand and mineral processing wastes on the other.

Table 1.6
Abatement Procedures for Some Environmental Effects of Mineral Exploitation

Effect	Traditional Abatement	Advanced Abatement
Surface disturbance and waste dumps	Reclamation, backfilling and slope engineering	Greater use of waste material for mine backfilling, roads, construction
Hydrospheric effluents (water pollution)	Physical stabilization: covering with inert material such as slag, soil, concrete Chemical stabilization: spraying with oil-resin emulsion; vegetative stabilization Settling ponds, recycling, lime neutralization	Greater use of non-entry methods of mining and alternative methods of disposal Better waste-dump siting Use of wet drilling or enclosure and dust collection, more recycling Biological polishing
	Chemical treatment: neutralization, coagulation, precipitation, oxidation, reduction, oil exchange Chemical stabilization: spraying with oil-resin emulsion; vegetative stabilization	Better waste-dump siting

Source: After Ripley et al. 1996.

The report concluded that while some mineral processing waste met the criteria for Subtitle C hazardous classification, most exploration and beneficiation wastes did not. Therefore, the agency decided to regulate mining wastes under Subtitle D of RCRA (nonhazardous wastes), with the caveat that federal oversight and enforcement would be required (even though they are not stipulated in the statute).

This decision was challenged in court by the Environmental Defense Fund, and in 1988 the U.S. Court of Appeals ruled against the agency insofar that the exemption of all mining wastes from Subtitle C was too broad. Therefore the EPA issued two final rules in 1990 under which most were made subject to Subtitle C. Nevertheless, the rules also identified twenty mineral processing wastes whose impact would be studied fur-

ther before a classification was made. These wastes included muds from bauxite refining, residue from chrome roasting, slag and tailings from primary copper processing, wastewater from magnesium processing, and slag from lead and zinc production. In 1991, the agency determined all twenty of these wastes to be nonhazardous. Two of them, phosphogypsum and process wastewater from phosphoric acid production, are now regulated under the Toxic Substances Control Act, while the other contentious wastes are now regulated under Subtitle D. This example illustrates the complexity involved in regulating only one aspect of the environmental impact of mining.

While mining clearly has had a deleterious impact on the environment, it has also had a profoundly positive impact on the development of industrial establishments and our modern way of living. In the words of one eminent historian of mining:

Without mining—from coal to iron to gold—the United States could not have emerged as a world power by the turn of the century, nor could it have successfully launched its international career in the twentieth century. The Carnegies and Rockefellers, giants of the age, would have faced a hard go of it without the labor and sweat of thousands of now nameless men digging in the bowels of the earth, blasting and hauling mineral out of dark caverns far underground in now forgotten mines and mining districts scattered throughout the country. (Smith 1986, 2)

Mining of metals can also be defended on the grounds that metals are recyclable and hence, even though the extraction from the earth is non-renewable, the material itself is more worthwhile than a nonrecyclable substitute such as plastic. However, this argument ignores the fact that metals can also be oxidized and decay into forms that are not economically reusable. Perhaps more research on this issue is needed from an industrial ecology perspective (Ayres and Simonis 1994). However, this pessimistic outcome is by no means inevitable. There are some minerals, such as aluminum, iron, and silicon that are abundant in the earth's crust beyond projectable levels of utilization by humankind, and these minerals can conceivably serve as substitutes for less abundant materials. For example, more than 8 percent of the earth's crust consists of aluminum, the most abundant metal; iron takes second place at 5 percent. Modern technology has already led to the substitution of fiber optics (produced from sand) for copper, and ceramic materials (produced from clay) for iron and

other metals. Materials technology has been advancing very rapidly in response to supply limitations signaled by rising prices for individual minerals. Moreover, the potential for recycling and conservation of less abundant minerals is enormous. The late economist Julian Simon extended this reasoning perhaps too optimistically to declare that even with the finite resources of minerals at our disposal, we can still say that the supply is infinite because we do not know the full potential of reserves and how they can be utilized. He compared the situation to a straight line segment that has a finite length but an infinite number of points contained within it (Simon 1990).

My aim in this section has been to present the significance of mining as an industry and also its environmental impact from a technical perspective. Clearly, there are many underlying issues of what certain human societies value about the environment, which often cause resistance to mining. Those issues are equally important but more difficult to measure and hence will be addressed on a case-by-case basis in part 2.

But the question still remains: Is mining compatible with sustainable development?¹¹ The answer must take two parts. First, there is no doubt that mining under present technological conditions does have a certain degree of permanent impact on a region. Second, mining involves extraction of nonrenewable resources. By these measures, the answer at one level is no, mining is not sustainable. However, while the landscape may be permanently changed by mining in certain ways, this does not necessarily mean that communities cannot thrive if the project is appropriately planned. Mining can therefore be a prelude to sustainable development if we are willing to absorb a certain degree of permanent impact. The key then is to be able to use mining as an entry point toward a more stable industrial or service-based economy that is not inherently obsolescent. Much of this book is about how communities, companies, and the government can move in a partnership to achieve this goal of a sustainable livelihood for a community with minimal environmental impact.

It is important to appreciate that mineral activity evokes a strong sense of ambivalence among tribes, as it does among society in general. Nevertheless, tribes are eager to at least explore options with mineral resources. The requests for mineral assessments to the Bureau of Indian Affairs' (BIA's) mineral resources department are staggering. In 1999, there were more than fifty tribes who applied for mineral assessments.¹² The BIA has had to initiate a screening process to determine which tribes are most de-

serving based on various geologic and economic indicators. Only about one-third of the tribes who apply are accepted for an assessment—such is the scale of the interest in mineral ventures.

In Canada, mineral potential studies have already been carried out for most reserves and are available. While the enthusiasm for mineral development in First Nations in Canada has not been as strong as in the United States, all First Nation bands clearly want to keep their options open. Mineral rights are a salient theme in treaty negotiations in British Columbia and Labrador and were a major demand by the Inuit in the Nunavut agreement, which has led to the establishment of the largest indigenous territory within Canada and the largest area governed by indigenous people in the world.

Mining is thus a very real option for tribes in the United States and Canada and poses important questions about viable trajectories for development of indigenous communities.

Chapter 2

The Resistance Brokers

Environmental NGOs and Mining

A revelatory metaphor for environmental resistance in the context of indigenous movements was offered by the president of the Innu Nation, Peter Penashui, in Labrador, Canada, when I interviewed him about the Voisey's Bay nickel mine: "We think of it [the mining negotiations] as an elastic—how much can we stretch it without letting it snap."¹ This insight is reminiscent of Piven and Cloward's classic work on social movements among the poor, in which they stated that "occasions when protest is possible among the poor, the forms that it must take, and the impact it can have are all delimited by the social structure in ways which usually diminish its extent and diminish its force" (Piven and Cloward 1979, 3).

Resistance in such movements can be tacit—manifest as intransigence at the negotiating table—or overt—involving public protests and civil disobedience. The form that the resistance may take depends on the opportunities and the dynamics of control that are exercised by other stakeholders in the process. According to Tilly, "far from the image we sometimes hold of mindless crowds, people tend to act within known limits, to innovate at the margins of existing forms, and to miss many opportunities available to them in principle" (Tilly 1978, 390). As shown in part 2, the perception of the other's control is critically important to the emergence of resistance against mining.

Within an environmental context, agricultural sociologist Nancy Lee Peluso has developed a theory of community resistance that is predicated on the work of the Tillys and political scientist James Scott (1985). In her detailed ethnographic study of resistance to forestry in Java, Peluso claims that the "repertoire of resistance" is embedded within—indeed

it is a product of—"specific historical and environmental circumstances. The forms that resistance takes depend on the nature and generality of the complaint and the kinds of 'weapons' (social, political, or broadly defined technological) at the disposal of the resisters" (Peluso 1992, 13). The weapons at the disposal of indigenous communities are often quite different from those at the disposal of environmental nongovernmental organizations (ENGOS), who are usually the popularizers of resistance. However, not only are the weapons different, the consequences of resistance failure are also different—hence determining the form resistance may take. To return to President Penatshu's metaphor, the effect of snapping an elastic is quite different for certain NGOs and communities depending on which side they are on. In the language of negotiation, one might say that the best alternative to a negotiated agreement (BATNA) is usually much better for ENGOS than it is for indigenous communities. In other words, native communities have much more at stake in the negotiations and are often more dependent on the outcome than the NGOs.

Before locating the place of ENGOS in the context of such conflicts, it is important to keep in mind a unique characteristic of environmental movements, which can often be misinterpreted. Anthropologist William Fisher highlighted this feature in his study of the resistance of the Kayapo Indians to hydroelectric development in the Amazon: "One of the unique features of environmentalism as an ideology is the indeterminate quality of environmental concerns as a social issue. In the abstract, there is no constituency that is uniquely or exclusively positioned to benefit from environmental quality, although there are pressing immediate interests at stake in any particular case" (Fisher 1994, 228).

I disagree with Fisher in his claim that there is an absence of exclusive environmental benefits in certain constituencies, since there are indeed instances of exclusive environmental benefit accruing to one party, usually by not having a particular industrial facility located in a particular place (leading the way to the infamous not-in-my-backyard, or NIMBY, syndrome). However, Fisher's insight regarding "the indeterminate quality of environmental concerns as a social issue" is compelling. He concludes, and I concur, that "the implications and agenda of environmentalism at any point need to be analyzed as a social product" (229). The term *social product* refers to the nexus of interactions between values and needs that collectively comprise notions of environmentalism in communities. In analyzing environmental resistance at the community level, we must

not lose sight of the structural links that such movements have to other politics and systems of economic and social relations.

NGOs in Theory and Practice

The Greco-Roman tradition of jurisprudence, which forms the basis of most Western political economies, broadly delineates public and private domains of interest. Individual enterprise and rights are generally termed private, whereas collective goods and services fall in the public domain. The evolution of the modern nation-state has caused the public sector to take the form of large institutional structures that often alienate the citizenry. Somewhat ironically, the same seems to have happened with the private sector as well, where individual enterprise has given rise to large organizational structures that rival nation-states. Indeed, the contemporary multinational corporation certainly has the size and scope of many public entities. Though collective action on the part of private actors has been a primordial feature of almost all societies, the institutional polarization of public and private domains—and perhaps public alienation from both—has stimulated the emergence of a third sector. This third sector, or "civil society," manifests itself most prominently as nongovernmental organizations.² NGOs can be thought of as buffers between the classically defined public and private domains.³

Christopher Hood (1984) has constructed a typology of what he refers to as "paragovernmental organizations," reminding us that the nonchalance with which the acronym "GO" is used in various forms often detracts from appreciating the menagerie of highly varied organizations that actually fall under this rubric. Indeed, in Hood's analysis several paragovernmental organizations are created by the government itself and are used for policy purposes. However, I am more interested in environmental organizations, which, according to Hood's typology, would fall under "private or independent, bottom-up organizations" (Hood 1984, fig. 1).⁴ As will be shown, the significance of this sector is acute when dealing with disenfranchised communities and efforts to empower such groups to assert what they perceive to be their environmental rights.

The idea of mediating or buffering institutions should not be confused with mediation, where an external, and usually neutral, party helps to resolve a dispute.⁵ Though ENGOS may play the role of mediators in rare instances, the context of this research involves ENGOS that are by no means

neutral and which mediate only in the most contorted sense of the word—organizations that stand between the individual and the larger institution of public life. These larger institutions of public life may also involve economically private entities such as corporations. Individuals with shared perspectives on a certain issue may also comprise a community that nominatively assume the same domain as the classical conception of private, since the devolution of government authority may not be sensitive enough to account for their collective will. Once again the issue of scale in government institutions is the key factor in necessitating the involvement of ENGOS.

The value of natural resources in monetary terms is often at odds with their intrinsic worth to certain communities. In most modern economies, the primary agent of change in a resource-rich ecosystem is usually a profit-driven entity such as a private corporation for which ecological considerations are mere economic externalities. The inertial forces in the same system are often indigenous groups, and nonprofit organizations and individual activists, for whom environmental change is unusually traumatic. The government is an ambivalent player in most of these disputes, owing allegiance to all sides—a circumstance that must not be confused with neutrality. Whereas neutrality implies indifference to outcome, allegiance to all sides indicates a desired optimal outcome.

The involvement of ENGOS in these kinds of situations depends largely on the actual charter of such organizations and their adherents. Social movement theorists divide ENGO activism into two broad categories: consensus movements and conflict movements.⁶ This delineation is defined by most theorists in terms of what the majority of the surrounding community believes about a particular issue. If the majority concurs with the objectives of the movement, then it is termed *consensus* (an example is Mothers Against Drunk Driving, or MADD), whereas if the movement represents the points of view of a minority within the community, then it is termed a *conflict movement*. The Green Party presidential candidacy of Ralph Nader (whose running mate, Winona LaDuke, is, incidentally, Native American) may be called a conflict movement at one level, since he would garner a small minority of the vote. However, when specific issues are brought to the fore (such as unequal income distribution), environmentalists argue that his positions are espoused by a majority of the population. Environmental movements, as manifest in NGO activity, depending on the issue and the locus of analysis can fall into either of the two categories.

There is considerable disagreement in the literature about the efficacy of this distinction. Instead of joining this debate, my aim is to focus on the commonality in the way these movements succeed or fail in achieving their initial objectives. I am also interested in how conflict movements can be transformed into consensus movements and whether such transformations can achieve the initial aims of the movement without necessarily compromising the principles on which the movement was galvanized.

While conventional social movements have attempted to alter the state, contemporary social movements often serve as countervailing forces to the state, motivated by issues of identity and embracing more than economic considerations (Tinker 1996). This is particularly true with certain ENGOS that operate in *developed* countries where the basic necessities of life are rarely placed on the bargaining table. My choice of case studies in two high-income developed countries is thus more than a mere coincidence.

Since my focus is on the process by which resistance is galvanized, I would also like to distinguish between confrontational and collaborative approaches to hammering out differences. Some environmental conflicts are by their very nature intractable and not conducive to negotiations. Indeed, many ENGOS find themselves in this situation vis-à-vis environmental disputes because disagreements are so often framed in win-lose terms. In such cases legal recourse is often seen as the only alternative. However, we can also reframe these conflicts by taking the perspective of constructive confrontation (Burgess and Burgess 1995). This approach realizes the limitations of mediation and negotiation but attempts to look at ways in which a mediator can attempt to optimize benefits by reducing conflict and creating forums for dialogue and problem solving that seek to maximize joint gains (Susskind and Cruikshank 1987).

Internal Disputes and Conflicts within ENGOS

Disputes are an essential part of organizational life and often the way by which creativity is exercised. However, it is important that people who are part of the same organization live up to Martin Luther King's celebrated aphorism: "disagree without being violently disagreeable." At this juncture, it may be useful to differentiate *dispute* and *conflict*—the former implying an episodic disagreement; the latter referring to a more protracted and perhaps systemic divergence of views, which may be tacit or active (Kolb and Bartunek 1992).

The sociological roots of organizational theory, particularly the writings of Max Weber ([1924] 1947), depict disputes and conflicts as an inevitable consequence of hierarchy. Management theorists, on the other hand, think of disputes as correctable failures of management. Barnard (1938) summed up conflict as a "melancholy failure of leadership," while March and Simon (1993) briefly describe disputes as basically an "interpersonal problem." Both these literatures frame internal disputes within organizations as pathologies, and not much effort has been made to focus on structural issues.

Disputes within organizations are often latent; hence, the research methods needed to study them must often be quite subtle. Dalton (1950) pioneered the use of intensive participant observation (in four organizations over a ten-year period) to study organizational behavior. He concluded that "conflict fluctuates around some balance of the constructive and destructive," caused by "active seeking nature of man, his ancient and obvious tendency to twist the world to his interests" (quoted in W. R. Scott 1998, 76). Implicit in these theories is that individuals within an organization have divergent goals and that this can often lead to disputes.

However, in my discussion of nongovernmental organizations, particularly ENGOS, there is often a normative metagol that may challenge the applicability of conventional organizational models to such entities. Research on organizational behavior and internal disputes within NGOs is still inchoate.⁷ Most of the literature on NGOs tends to focus on their external involvement with political establishments and development as manifestations of "civic society" (Wapner 1996; Tinker 1996). However, anyone who has seen the massive nine-hundred-page book *The Gulliver File* will undoubtedly concur that antiminning activism is a global social movement (Moody 1992). The book lists mining projects and their parent companies around the world in alphabetical order and gives background history and environmental impact information (albeit from a particular activist perspective) about each project. The somewhat ambiguous title refers to a speech made by Charles Barbour, the erstwhile president of the American Mining Congress, who referred to antiminning activists in the following terms: "Like Gulliver, the mining industry is a robust giant held down by a million silk strings."⁸ Barbour estimated that ENGOS had added an extra fifteen cents to the cost of producing every pound of refined metal in the United States (Moody 1992, 9).

The Gulliver File was the product of collaborative efforts among some

ninety groups around the world working on antiminning activism. These groups take the form of NGOs, largely funded through private contributions from interested donors. They are opposed to mining not only because of its immediate ecological impact but also because it encourages the use of nonrenewable resources, and in the case of uranium mining, it adds to the risk of nuclear weapons proliferation.

There is also a critical element of anticorporatism in this movement: an overt rebellion against what is perceived to be capitalistic aggrandizement of wealth and resources. The introduction to *The Gulliver File* states: "It is not that this huge sector—with such vast tangential and peripheral operations—is entirely inimical to human needs or unhearing of human demands. Rather the truth is that—by being organized primarily along corporate lines, with decisions taken according to an industrialist, as opposed to conservationist, or rural-revitalisation, agenda—mining cannot support its own best intentions, nor fulfill its most sustainable expectations."

This perception dovetails with the literature on corporate power that is increasingly becoming popular, perhaps best exemplified by David Korten's book *When Corporations Rule the World* (1996). The corporate structure of the mining sector will be further discussed in the next chapter. However, for the purposes of understanding the antiminning movement it is sufficient to recognize that the concentration of wealth, and resulting power, is itself a cause for resistance by many NGOs.

When I asked Pratap Chatterjee, activist and former employee of the Berkeley-based antiminning NGO Project Underground, for any examples of socially responsible mining companies, he responded by saying: "We don't really give examples of 'good' companies if only because sometimes these companies turn out to be hypocrites and liars."⁹ This strong sense of distrust of the corporate world permeates many antiminning NGOs. It is also a distrust that is shared by many in the native rights movement. However, as we shall see, constructive alliances cannot be built simply on mutual mistrust of a third party. The relationship between ENGOS such as Chatterjee's and native peoples has a rich history steeped in controversy.

The Native/Environmental Debate

The relationship between indigenous societies and nature has been a source of debate and wonder in academic discourse at least since Rous-

seau's use of the celebrated metaphor of "the noble savage" in his *Social Contract* (1762). Anthropologists and historians alike have struggled with an understanding of how Native Americans interacted with the environment before the advent of European settlement. It is thus no wonder that ENGOS are often largely uninformed about native aspirations regarding environmental conservation.

While it is true that ecosystem disturbance was greatly accelerated after the advent of European settlement, historical native practices of wildlife management are widely debated. For example, the extinction of 73 percent of large mammal species in North America some eleven thousand years ago was coincident with a wave of ancestral Indians across the Bering land bridge. By eight thousand years ago, 80 percent of the large mammal genera in South America were also extinct (Ridley 1996). The Pleistocene overkill, as it is sometimes called, has been used by revisionist historians to argue against the presumption of a native environmental ethic. However, these extinctions could indeed have been caused by numerous other factors such as climate change.

A slightly more convincing, though acerbic, argument in this vein is presented by Calvin Martin in his landmark study of the fur trade between Native Americans and the Europeans. Given the extent of Indian involvement in hunting and trapping animals for the Hudson's Bay Company, Martin (1978, 187–88) concludes: "Even if we absolve him of his ambiguous culpability in certain episodes of despoliation, invoking instead his pristine sentiments toward Nature, the Indian still remains a misfit guru. There can be no salvation in the Indian's traditional conception of Nature for the troubled environmentalist."

However, native scholars (Weaver 1996, 6) have argued that Martin's own data illustrate the fact that "beyond economic dislocations creating incentives to participate in the trade, native destruction of animal populations was a means for them to come to terms with epizootics and their potential impact upon humans."

Detractors of native environmentalism also cite the academic manipulation of Native American discourse by Western scholars in the late nineteenth and early twentieth century. The much-celebrated speech that is attributed to Chief Seattle is often shown as an example of how European scholars concocted stories about native environmentalism. The speech that continues to grace many walls and texts, and has been quoted most recently by an environmental scholar of no less eminence than Jane Good-

all (1999) or political celebrities such as Al Gore (1992), is now believed to have been drafted by ABC screenwriter Ted Perry in 1971.¹⁰

Historians such as Sam Gill and John Bierhorst have also questioned the now widely accepted concept of native association with Mother Earth as a theological concept. Gill concludes that, "while I have been able to find a number of tribal traditions that make references to the earth in personal and kinship terms, there is an absence in the vast literature on Native American tribes of any identification of the earth or a spiritual personification of the earth as a major goddess . . . she has become so only in the twentieth century."

Bierhorst goes a step further and contends that Mother Earth is little more than a form of political expediency. This point of view is not held just by historians. Indeed, even certain radical environmentalists have notably extricated themselves from native causes on these grounds. The founder of Earth First!, David Foreman, has pronounced native people a "threat to the habitat" (Churchill 1992, 195–96).

However, native scholarship has countered these claims with numerous other citations and oral histories. Vine Deloria has traced references to an ecologically sensitive theology among natives as far back as 1776, before the times of "corruptibility" of manuscripts that Bierhorst, Gill, and their colleagues have referred to.¹¹

The Cherokee writer and scholar Jace Weaver (1996, xvi) has summed up the debate eloquently:

We are not Moses coming down from Sinai with the Ten Commandments of environmental protection. Indians have been stereotyped far too long by the environmental movement as those with the mystical, ancient wisdom that alone can save the planet. Rather we presented and represented the honest and extremely difficult struggles of indigenous peoples to meet ecological challenges confronting them. Though traditional knowledge and ways play an important part in these battles, so do all the tools of technology, modern modes of communication, and the simple investment of time and sweat.

An appreciation of the salience of this debate is critically important as we try to understand the dynamics of environmental resistance to mining on indigenous land. An interesting European comparison to the ostensibly ambivalent environmentalism of certain native communities is presented by David Rothenberg in his essay on Norwegian environmentalism. On

the one hand, Norway is the land of Gro Harlem Brundtland, the famed leader of the World Commission on Sustainable Development, and the home of Arne Naess, the founder of the deep ecology movement, but, on the other hand, Norwegians are adamant about their whaling traditions and mainstream environmentalists (or *miljømennesker*) are often dismissed as urban elite (Rothenberg 1995).

There are indeed voices on either side of the political spectrum. Native people, like all communities, have disagreement and dissent regarding the primacy of environmental concerns. However, the discourse of native environmentalism assumes a certain homogeneity—any deviation from which is perceived to be a sign of Western adulteration—from both sides of the debate.

Native environmentalism is nevertheless a very real contemporary phenomenon. It is not necessarily embedded in Western environmentalism and has found its own voice in the writings of activists such as Harvard-educated Winona LaDuke (Anishnabeg), who was Ralph Nader's running mate in the Green Party's presidential campaign in 1996 and 2000. Native organizations such as the Indigenous Environmental Network or Honor the Earth have a sizable following. What remains to be understood is why such groups have selective success in mobilizing resistance, while in other cases they are largely ignored.

The Greening of Red Sovereignty?

"The tribes possess a tenacity—a tenacity stronger than all the technology and guile levied against it, a tenacity that will not, will not ever, let go. If that tenacity is the secret, then the secret inside it is the core value that creates the tenacity: a reverence—think that word through—for the land, for a particular place" (Wilkinson 1999, 20). This quotation from *Five on the Platteau* (Wilkinson 1999) reflects the strength of conviction that many scholars have about the strong association native people have with the land. However, while such feelings are certainly true and important, there is also a particular tendency to go the next step and assume that this attachment to the land translates into an irrevocable attachment to environmentalism. Another example of this tendency is the frequent quotation from the Apache language that the word for "self" and "earth" is the same. However, a closer examination of the linguistic and locational ethos of the Apache reveals that this similitude does not have environmentalist implications. Basso (1996) in his detailed study of the Apache entitled *Wisdom*

Sits in Places reveals that in fact the Apache sense of place has much more to do with moral attachments to particular sites rather than a more holistic view of sanctity for land as envisaged by environmentalists.

It is an amazing irony of history that the current rights to self-determination and sovereignty that are being won by indigenous people at the international level are themselves being made possible because human rights issues have trumped the sovereignty of conventional nation-states. In this section, I will try to answer the related question of whether environmental issues have trumped the notions of sovereignty among native people.

This is a particularly sensitive area for discussion among native peoples, as was recently manifest in the outcry against Sheppard Krech's book *The Ecological Indian: Myth and History* (1999). Krech is not denying that natives have a particular respect for nature but rather that their actions were often not congruent with the Western notion of conservation attributed to Gifford Pinchot or Aldo Leopold and certainly not the kind of preservation ethic articulated by John Muir.

Much of Krech's argument was caricatured by both sides of the political spectrum. The negative reaction from native peoples occurred because, much to the dismay of Professor Krech, the book was appropriated by right wing activists who thought it was a vindication of their beliefs that Indians did not deserve special treatment.¹² Hence, many tribes felt that it may be a threat to their assertion of sovereignty in much the same way as the issue of "who were the first Americans" issue has been perceived vis-à-vis the Kennewick Man controversy (see chap. 4).

Some of the disconnect between native and nonnative allegiance to the environment may be also be the result of a fundamental misunderstanding about contending views of sovereignty and subsistence. Chamberlain (in Asch 1997, 12) draws our attention to this gap between indigenous and nonindigenous understandings of the terms:

Sovereignty, for example, is understood on the one hand as underwriting political and constitutional power. In the case of the Americas, this power was historically realized by both European and indigenous nations in the circumstances of contact, including contact before Columbus, was then qualified after European settlement by peace treaties and land cession agreements. On the other hand, sovereignty is affirmed as the inviolable expression of a people's collective identity transcending particulars of time and place and the irrelevant

polemic of treaties. It does not need anyone else's validation, indigenous or non-indigenous; and it is inextinguishable, like an individual's conscience.

Therefore, in the words of one tribal leader from the Lac Courte Oreilles band of Chippewa from Wisconsin (before a congressional hearing in 1998): "We define and accept sovereignty as 'Spiritual Sovereignty.' We do not accept the assertion that sovereignty had its origins in the political ideologies of medieval European nations. We believe and accept that we practiced spiritual sovereignty long before the arrival of Europeans on this American continent . . . sovereignty cannot be given or bestowed from one nation to another" (U.S. Senate 1998, 168).

The various uses of the Maori words *kaumanatanga* (which roughly means governance) and *rangaiatanga* (which roughly means chieftainship) to deal with questions of sovereignty in New Zealand's Waitangi Treaty highlights this from another perspective. *Kaumanatanga* in the treaty as well as in modern Maori reconciliation documents refers to the allowance of governance at the state level given to the settler government of New Zealand, whereas *rangaiatanga* refers to self-determination and is derived from the word for "chieftain"—hence having ultimate authority.¹³ The relationship is thus different from one between a state and federal government—since in this case it is the native populace that believes in its ultimate authority—even if it does not have control.

The same dilemma in an environmental context is even more obvious with the word *subsistence*. It is on the one hand a diminishing term, the minimum necessary for survival, and yet a term used routinely by indigenous peoples to refer to all that is essential to their well-being, including their attachment (spiritual as well as material) to their homeland. This latter conception is not properly acknowledged—indeed, often is not even recognized—by an instrumental understanding of the term, which is common in many nonindigenous societies, where relentlessly utilitarian habits often inhibit a better appreciation of what is meant when traditional indigenous people talk about subsistence that is about "shaping their lives according to patterns of sufficiency rather than of surplus."¹⁴ For example, subsistence has been at the core of Alaska's native advocacy efforts since 1989, when the Alaska Supreme Court declared that a "subsistence priority" for natives was "unconstitutional" (Alaska 1998).

Given this dialectic between contested views of sovereignty and subsistence, how do environmental concerns figure into the debate? To answer

this question, the divergent notions of cultural determinism versus environmental determinism must be addressed. The distinction between these two contending views of the world is critically important in understanding the emergence of resistance and also alliances between natives and environmentalists. If it is assumed, for analytical purposes, that environments shape cultures, the possibility of asking how cultures shape environments is effectively precluded. Many of the arguments about the preservation of ecosystems to preserve indigenous cultures, and the use of the term *ecocide*, emanate from this belief. However, environmental determinism in its extreme form is incompatible with the environmentalist concern to protect the environment through human effort. The assumption that human activities are somehow caused by environmental factors, that the environment is the prime mover in human affairs, implies that human beings are helpless in the face of natural forces, in much the same way that some religious doctrines imply that we are helpless in the face of supernatural forces. As Kay Milton (1996) points out, such a view "induces a rationality of fatalism, in which planning is redundant and in which outcomes, good or bad, are simply to be enjoyed or endured but never achieved." Moreover, in the context of indigenous peoples, Milton goes on to argue that

environmentalists fail, as anthropologists used to, to distinguish between culture and the things people do. The actual impacts of non-industrial societies on their environments depend on how they use those environments to meet their need. . . . Without distinguishing between what people think, feel and know about the world (culture) and the things they do, it is easy to make the mistake of assuming that societies which have little impact on their environment must necessarily have environmentally benign cultures. (Milton 1996, 56)

On the other hand, the cultural determinist model is incompatible with environmental activism, which depends on the recognition of an independent reality that can be modified by human actions. Activism depends on the assumption that the environment exists independently of our thoughts and therefore presents a real threat to the physical state of the earth and its inhabitants. Thus, neither the view that environments determine cultures nor the view that cultures determine environments offers a useful means of advocating the environmentalist/native alliances at this level. On the other hand, both the recognition that environmental knowledge varies among cultures and the description and analysis of such diversity are important resources in the quest for environmental protection and improvement.

To bring forth a more dynamic approach to understanding human interactions with the environment and to give further scientific credibility to his work, anthropologist William Fisher uses the ideas of evolutionary biologists Levins and Lewontin (1985) concerning the relationship between organisms and the environment. Their work attempts to explain why the environment cannot be treated as a preexistent "thing" standing on its own: "To describe an environment as 'rich,' 'lush,' 'forbidding,' or, perhaps even 'complex' involves the fallacy that an environment is simply 'there,' confronting beings that attempt to survive within it. This imperative to explicitly link description of the environment with specific activities of organisms is associated with a view of evolution and ecology that reintegrates the organism and environment as processes actively creating one another" (W. H. Fisher 1996, 21).

The key word here is *processes*. Environmental interactions for native people, as revealed in the case analyses, are all about processes by which communities can be sustained. At present, sustenance is synonymous with sovereignty, though at some points in native history sustenance was synonymous with conservation or perhaps even preservation. Native societies, like all societies, have undoubtedly changed through their interactions with the settlers in a way that is not assimilative but truly adaptive in its form. In his more recent works, Fisher continues his analysis of the Xikrin Kayapó of Brazil and their adaptive resistance to resource ventures. He sums up his findings as follows: "The indigenous forms that develop do not conform to an inexorable logic of either the market or tradition but are actively created through transforming techniques and organizational forms valued by Indians themselves. Subsistence and organization are never imposed from without in any mechanical sense; as indigenous creations, they have their own dynamic tendencies and contradictions which must be analyzed."¹⁵

Thus, native people who are willing to have nuclear waste on their reservations (which can be articulated as an environmental justice question) should not necessarily be considered a sign of desperation on the part of the tribe or as a "sovereignty of convenience" on the part of the federal government.¹⁶ Rather, it should be seen as a self-conscious (and, perhaps, misplaced) attempt to invigorate self-determination, absent other avenues to do so.

Chapter 3

Mining Companies and Management Dilemmas

The Cost of Business

Since the 1999 protests against the World Trade Organization and the 2000 protests against the World Bank and the International Monetary Fund, corporations worldwide have been increasingly on the defensive about their relentless pursuit of profit. While capitalism has clearly triumphed over communism at a global economic scale, there is a feeling in many underprivileged communities that corporations are assuming the erstwhile role of centralized power structures that were the bane of irresponsible communism (Korten 1996; Mitchell 2001). Much of the discontent with corporations is premised on the environmental and human rights records of companies. The argument is often made that the modern corporation, and indeed the greater neoclassical economic framework, regards environmental and human rights concerns as externalities that should be addressed only as a means to an end—the end being profitability (Houck and Williams 1996). Mining companies, in particular, because of their operations in remote underdeveloped areas and their relative secrecy of operations, are regarded with much suspicion by those who oppose corporate power.

Why Are Mining Firms Targeted by Activists?

Whether or not environmental and human rights concerns should be means to an end or ends in themselves is a timeless normative debate. However, the consequences of corporate behavior can, and should, be evaluated on their own merits without any insinuation of motives. Thus, my aim in this chapter is not to paint mining companies as antagonists, but

rather to present them as stakeholders with their own set of constraints and embedded values.

That being said, the historical conduct of mining companies on a global scale must be recognized, and the injustices perpetrated by some mining firms that have led to their contemporary caricature must not be denied. Perhaps the most persistent negative image of mining companies emanates from the narratives of mining life in South Africa, where the institution of apartheid was all too often used to the benefit of mining companies and vice versa.¹ Some of the management strategies of large multinational mining companies, most of which have had at least some operations in Africa, were quite secretive. In the words of one De Beers executive, "We stride across Africa in a very satisfactory way in all sorts of strange places. Part of the secret is we respect confidences. We don't talk much" (Kanter 1993, 7).

While many of the misgivings about secrecy and human rights violations pertaining to mining companies have diminished since the end of apartheid, there are still recurring examples of some ventures that are notably disturbing—though multinational mining companies are not always involved in these cases. The civil war in Sierra Leone, for example, is largely a resource war between the democratic government and the rebels who control much of the diamond mining in the east part of the country. The same is largely true of the strife in the Democratic Republic of Congo, with its diamond and cobalt mines, and continuing civil strife in Angola (one of the most resource-rich countries in the world).

Even the recent war in Kosovo has been described by a notable *New York Times* reporter as being largely about mineral resources surrounding the Stari Trg mining complex (Hedges 1998). According to the mine's director, Novak Bjelic, "the war in Kosovo is about the mines, nothing else. This is Serbia's Kuwait." Greece's support for the Serbian government may also be predicated on a half-billion-dollar five-year mining contract. In May 1998, Mytilinaios SA signed a five-year contract, worth \$519 million, with the state-owned RMHK Trepca and the Serbian agency of foreign trade, in which Mytilinaios agreed to forward one-third of the mineral production in the international market and also upgrade mining equipment and facilities.²

In other cases, activists argue that civil strife may be suppressed by rogue governments. Since mineral resources are a direct source of economic gain for governments, there is a perceived collusion between companies and public authorities and a perpetuation of the Old World colonial

infrastructure. Perhaps the starkest example of the perpetuation of colonial control over mining is the continuation of French rule over the island of New Caledonia in the South Pacific, despite vociferous protests and rebellions by the Kanak indigenous population. New Caledonia has among the largest concentration of nickel reserves in the world and has still not been granted independence, probably for this reason, though a referendum is scheduled for 2014 (O'Neill 2000).

There are also some mining companies with particularly troubling environmental and human rights records, such as Freeport McMoRan, a New Orleans-based company, which has been the subject of lawsuits because of its impact on the lives of the Amungme tribe in Irian Jaya, Indonesia. While the citizen-action lawsuits against the company have been dismissed in the United States (most recently on appeal in March 2000), the firm continues to be under fire from environmentalists and human rights activists. The firm's controversial involvement with the Indonesian military in suppressing rebellion was even profiled as a full-page story in the *Wall Street Journal* (Waldman 1998).³

With such stories making their way to the front pages of business newspapers, it is not surprising that mining companies are regarded with suspicion by many social observers and the general public. In fact, a 1997 survey conducted by Praeger for the *Engineering and Mining Journal* found mining to be the least favored industry by the American public—even less favored than the much reviled tobacco industry.

Apart from the specific case histories of firms, there is also a general feeling in the activist community that mining is inherently unsustainable. Large-scale gold and diamond mining in particular are targeted by activists because most of these minerals are used for jewelry and are thus considered a dispensable industry.⁴

The aim of this chapter is to understand the systemic issues that may lead to such perceptions. Following is a closer look at the organizational and economic dimensions of the mining industry and how they explain the behavior of such firms in environmental negotiations with communities.

The Anatomy of a Modern Mining Firm

In 1847, a twelve-year-old Scottish immigrant named Andrew Carnegie earned \$1.20 a week working in a Pittsburgh cotton mill. Half a century later, he received \$250 million from the sale of his steel firm to J. P. Morgan

and others who were forming U.S. Steel. That firm, known as Big Steel, was the world's first billion-dollar company.⁵ The success of the Carnegies and other major industrial families are emblematic of the concomitant success of mining and mineral processing companies following the industrial revolution.

Ownership and control of world mining is heavily concentrated in a small number of multinational mining firms (most of which are privately owned) and in state mining enterprises (SMEs). There are thousands of small, privately owned mining firms in developed countries and in some of the major Latin American mining countries. However, small mines produce less than 25 percent of world output, and their activities tend to be concentrated in gold, silver, diamonds, and other precious stones and in types of mining where economies of scale are less important. While the primary cases studied in this book involve large multinational companies, the lessons learned are equally applicable to smaller firms and ventures.⁶ An exception to this may be the subsistence-level gold panning operations that are common in South America.⁷

The growth of SMEs has affected the competitive structure of the world mining industry in three important ways. First, cost elements of SMEs differ from those of privately owned mining firms. Second, the objectives and considerations governing investment decisions of SMEs differ from those of private enterprises. Third, production and marketing strategies of state enterprises tend to be less sensitive to cyclical declines in market demand and price than is the case with privately owned mines. Investment decisions by SMEs are often made on the basis of relative profit-earning opportunities.

SMEs tend to be insensitive to price declines in their production and market strategies for two reasons. First, labor costs in developing countries are more a fixed cost because of termination of pay regulations and government policies to maintain employment. Second, state enterprises generally seek to maintain exchange earnings in the face of low prices despite the fact that their current receipts may not cover total foreign exchange and domestic currency costs. Therefore, private industry groups contend that the existence of a large segment of the world mining industry in which investment and production/marketing decisions are made more on the basis of government policy than on the basis of private profit maximization has made investment decision-making in the private mining industry exceedingly difficult. Comparative cost advantage and projections

of world demand and supply balance no longer serve as reasonably reliable guides for decisions to invest in capacity.

In most countries outside the United States and Canada, mining industries have been recipients of a variety of government subsidies, and domestic markets have been protected by import restrictions. However, the United States has low tariffs and no quota restrictions on primary metals. The U.S. mining industry argues that subsidies on foreign production plus the importance of a strong domestic industry for national defense reasons justify government measures to assist the domestic industry. But the U.S. mining industry has had much less success in lobbying for import controls on minerals than have the more labor-intensive industries such as textiles.

Disputes between developed and developing nations on mining have also played themselves out at the level of treaty making. The negotiation of the Law of the Sea Treaty brought into conflict the positions of the United States and certain other developed countries with those of Third World countries regarding the control of exploration and development of manganese nodules on the ocean floors (see Sebenius 1990). The international community agreed in principle that the manganese nodules were not located on land and thus were a "common heritage of mankind." However, consortia of mining enterprises in the United States and other developed country mining enterprises had spent hundreds of millions of dollars investigating this source of minerals for eventual development by multinational mining companies and thus wanted flexible royalty arrangements. Developing countries insisted that these resources belong to all countries and that exploitation should be governed by an international organization. Also, there was considerable danger that trade in nonferrous metals might become subject to the kind of market-sharing arrangements that had characterized trade in steel products. Eventually, the International Seabed Authority was established to oversee exploration activities and special allowances were provided to pioneer investors—countries that had already invested resources in seabed exploration.

Risk Management in the Mining Industry

Mining projects are among the most risky industrial enterprises. They involve large capital investment at the outset and yet there can be little or no guarantee of profits even in the short term. While geological prediction based on empirical core studies and remote testing procedures are

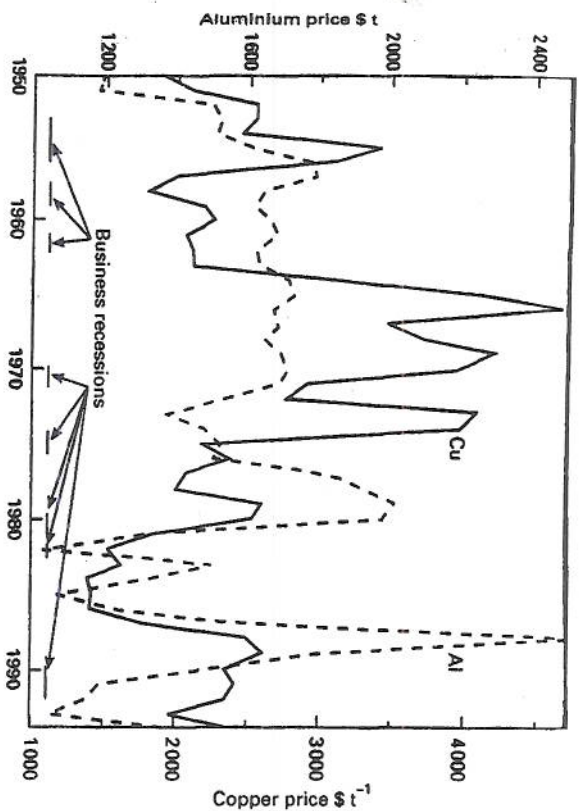


Figure 3.1
Price fluctuations in the mineral sector, 1950-1990.
(Adapted from Evans 1997)

becoming increasingly reliable, the actual grade and extent of an ore deposit is often not fully recognizable until mining commences. Moreover, the international mineral market system is highly capricious in terms of price fluctuations, and this can greatly affect the profitability of a particular mining venture (see fig. 3.1). According to Mikesell and Whitney (1987), the business strategies of mining firms are governed by five key considerations.

First, mining location is determined by geology, which often means that in order to be profitable the firm must be willing and able to have a presence in various and often remote parts of the world. This may explain why mining firms were the first modern nonfinancial multinationals.

Second, modern mining is highly capital intensive and requires a long gestation period following the initial investment before the product can be produced and sold. This influences the way new ventures are financed and explains why most large mining corporations initiated early in the century were financed by investment houses willing to provide large amounts of venture capital.

A third feature is that most minerals (especially metals) are more or less homogeneous products, sold in world markets at prices determined on commodity exchanges, as contrasted with differentiated manufactured products. This means that reducing or limiting costs by introducing better technology and profitability in mining depends on improving management rather than consumer choice. Marketing and developing new products play a lesser role in traditional metals than in manufacturing. An exception is the development of new metals and alloys and their industrial applications, a specialization of the materials industry into which some mining firms have entered in recent years.

A fourth characteristic of mining is that every ore body is a depleting resource, the output of which tends to decline over time. Therefore, mining firms must continually discover or acquire new ore bodies to maintain a relatively stable output over time. Due to uncertainties in exploration, geographical location of mines may be more a matter of taking advantage of opportunities than of conscious planning. Since exploration is usually not undertaken for only one mineral, product diversification or concentration may also be more a consequence of discovery than planning.

The bottom line in considering these characteristics is that mining is an unusually high-risk industry that has thus necessitated very elaborate means of risk management. Following are some of the ways the industry has tried to manage risk.

Horizontal Integration

Mining companies most commonly try to manage risk through horizontal integration, organizational devolution, and intra-industry alliances. Sel-don does one come across a mine that is wholly owned and operated by one company. Almost all large mining ventures involve more than one company and constitute a joint venture. There are sometimes arrangements for royalty proportions and joint liability among firms. For tax purposes and logistical ease, most mine sites have a local management company that is then owned by a set of larger multinational mining firms.

Horizontal integration has been the traditional strategy for the growth of mining firms. It utilizes the professional skills and managerial experience of the firm and complements its need to acquire and develop new ore bodies as existing ones are depleted. Horizontal integration in mining may take place in several ways. The mining firm may undertake exploration to find additional reserves. Alternatively, companies may acquire

ore bodies—or the right to develop ore bodies—that have been more or less fully explored or even partially developed by others. However, the geologists of the firm acquiring an ore body are likely to undertake considerable exploratory work on their own in order to verify the data of others.

Vertical Integration

The degree to which a mining firm is vertically integrated depends in part on the volume of mine production and in part on the availability of financing. Integration of a copper mine into smelting and refining requires a large volume of concentrates (refined ore) and a substantial capital investment. The degree of vertical integration is also determined by business strategy. Having a smelter near a mine saves transportation costs and avoids the possibility of a shortage of smelter capacity, which is usually accompanied by high fees for custom smelting or lower prices for concentrates if sold to smelters. Locating a refinery near a mine is not important for saving transportation cost, since the metal content of blister metal (crude product) produced by a smelter is usually comparable to that for refined metal. It is frequently more important for a refinery to be near the market for the product than near the mine.

Interlocks

There are also several interlocks between mining companies and other investment agents and nominating multinationals that can make a final difference. A primary interlock between a pair of corporations occurs when someone holds a seat on the board of both corporations. A secondary interlock occurs when two directors of two companies both hold seats on the board of a third company. Antitrust law prohibits primary interlocks between competitor companies. However, secondary interlocks are common and are an important means of networking among mining companies. Such interlocks are also criticized by activists, who contend that they can lead to cartel formation and monopolistic behavior as well as the formation of an elitist corporate class.⁸

The empirical evidence regarding the effect of interlocks on corporate behavior is highly varied. A recent large-scale study of interlocks conducted by Pamela Haunschild and Christine Beckman (1998) at Stanford Business School revealed that the impact of interlocks on corporate decision making is largely determined by the flow of alternative information sources. The study revealed that interlocks matter much more so for firms

that get large amounts of business press coverage and for medium-sized firms—much of the mining industry falls into this category. The prevalence of interlocks is an important component of the analysis vis-à-vis perceptions of corporate power among indigenous communities in part 2.

Planning for Mines in Remote Areas

In much of the public policy literature the concern with firm regulation tends to revolve around the notion of monopoly power. While mining firms in some cases have been accused of monopoly, particularly the diamond mining and processing firm De Beers, the most significant issue that concerns mining projects in remote areas is not monopoly power but *monopsony* power. While the former refers to a market that is dominated by one *seller*, the latter refers to a market situation where one *buyer* is dominant. In remote areas, mining companies are often the sole source of income for communities and hence have monopsony power over labor.

Ever since Joan Robinson (1969) first introduced the concept of monopsony in economic literature, it has been viewed with skepticism by economists and is usually relegated to a sidebar in economic textbooks. However, recent research has revealed that monopsony may be far more prevalent than previously thought (see Blair and Harrison 1993). It is, however, important to differentiate between monopsony arising because the supply of labor to each firm is relatively inelastic and monopsony caused by employers acting in concert or colluding. In the case of mining firms, either or both models could be operating. However, the inelasticity of labor as a result of limited alternatives is more plausible.

Figure 3.2 shows various economic implications of monopsony power and how it can be manifest. A monopsony would want to choose the most profitable point on the labor supply curve. Given the marginal cost of labor being higher than the labor supply curve in remote areas, the monopsonist would arrive at the most profitable decision shown as L^* , whereas under perfect competition, the firm would hire and pay wages at point L_c (where the value of the marginal product of labor equals the wage). Thus, a monopsonist hires less labor and at a lower wage than a competitive firm.

The most comprehensive econometric study testing the monopsony hypothesis in the mining sector has been conducted by Boal (1995), in which coal-mining data (1897–1932) from West Virginia was studied. Boal's study used Bertrand and Cournot coefficients methodology along-

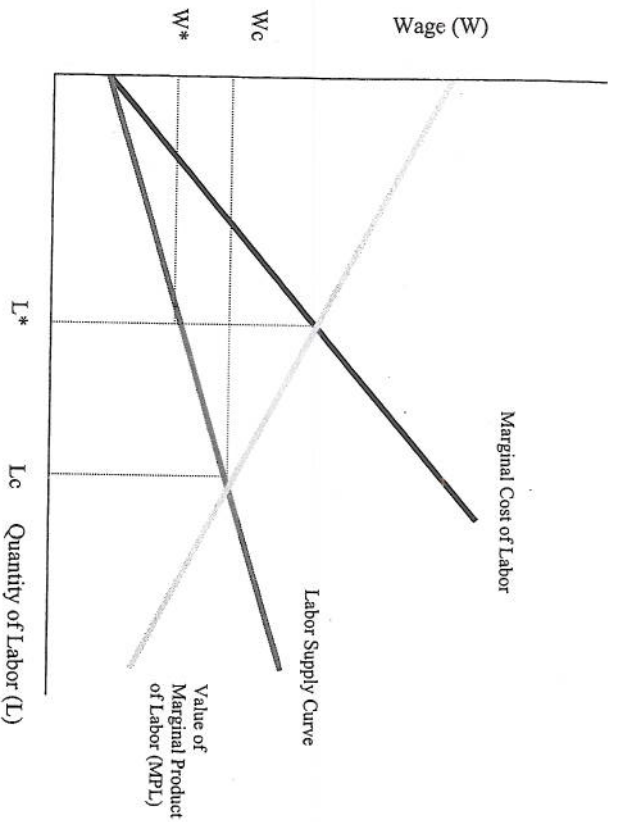


Figure 3.2
Monopsonistic competition.

side the Lerner index to study the potential for monopsony power using wage and labor supply data.⁹ The study does not test whether this power was actually exercised—thus it does not measure the actual gap between the marginal revenue product and the wages. Based on his model, Boal concludes that monopsony power in coal mining during this time existed only at a short-term level and was sharply attenuated if employers “considered the future”—that is, if they foresaw the effect of current wages and employment levels on their own future labor supply. In the long run, given discount rates being used by the employers in decision making, there was no significant evidence for monopsony power of the mining companies. However, these results are by no means translatable to most cases of mining in remote areas. Indeed, in a subsequent review article, Boal and Ransom (1997) have acknowledged that “monopsonistic exploitation” deserves further study.

Economic theory and some empirical evidence thus suggests that mining companies operating in remote areas may have a significant monopsonistic power, though this is by no means the end of the story. Companies are

becoming increasingly aware of the political reality of operating in remote areas and of certain ethical and regulatory obligations to the communities concerned. Community relations consultants, many of whom are anthropologists, are often hired by companies to formulate community relations programs.

Many large mining companies now have environmental health and safety reports that highlight the ways impact is being mitigated. While some of these programs are voluntary, most of the efforts that have been made in this regard have been spurred by governments—who, as shown in the next chapter, are stakeholders in their own right.

Industry Responses to Environmental and Community Concerns

While industry’s perception of risk is largely figured in economic terms, there is, of course, another very real risk associated with mining ventures—environmental harm. Environmental impact assessment is now considered a routine procedure, with specialized consultants having emerged for this very purpose. However, only a few decades ago, mining agreements did not have any provision for environmental considerations. Perhaps the first book to focus on the negotiation process involved in mineral agreements, particularly in developing countries, was written by two professors at Harvard, David Smith (Law School) and Louis Wells (Business School). This book aimed to give advice to governments of developing countries and corporations operating there about reaching agreements that would be mutually advantageous. Their intention was to bring “an element of realism to a subject that had long been clouded by mythology and misunderstanding” (Smith and Wells 1975, 2). However, this entire treatise, despite its merits, made absolutely no mention of environmental concerns and how they might figure in these negotiations.

Another study, conducted by a Nevada consulting firm in 1987, listed a series of factors responsible for “unsuccessful” mining ventures (table 3.1). Here, too, environmental factors were not listed—though the results of this study would most likely be quite different if it were conducted today.

More recently, a study conducted by Roderick Eggert (1994) for the Washington-based think tank Resources for the Future determined that environmental regulation does not play a significant part in the investment strategies of international mining firms. Mining, like other natural

Table 3.1
Sources of Problems in Unsuccessful Mining Ventures

Problem Category	Percentage of Mines with Problems
Ore reserves	23
Construction sequence and cost	29
Mine plan	19
Milling	36
Processing	42
Operation management	23
Market analysis	33

Source: Whitney and Whitney Inc., Reno, Nev., quoted in Milesell and Whitney 1987.

resource-based industries, does not have as much discretion when it comes to selecting investment areas, and perhaps it is for this reason as well that the industry is particularly resolute in pushing certain mining projects even in the wake of community resistance.

While the aforementioned data illustrate that environmental and community issues may not necessarily affect project selection, they do not suggest the same for project implementation. Indeed, environmental concerns and community issues are all too often a major impediment to implementation of mining projects. Environmental concerns are becoming an increasingly important cost consideration for mining companies and have led to the formation of inter-industry collaboration on environmental initiatives. The Ottawa-based International Council on Metals and the Environment is an example of such an initiative, though this organization is also being transformed to become the International Council on Mining and Metals.

To highlight its commitment to environmental issues at the 2002 World Summit on Sustainable Development (wssd) in Johannesburg, the mining industry and the World Business Council on Sustainable Development also conducted a major self-evaluation of its practices through the Global Mining Initiative (GMI). The GMI commissioned the Mining Minerals and Sustainable Development project (mmsd 2002), which was undertaken by the London-based International Institute for Environment and Development. As an outcome of the mmsd initiative, the mining industry has established a permanent International Council on Metals and Mining (icmm) to be headquartered in London. The icmm charter contains man-

agement principles in four key areas: environmental stewardship, product stewardship, community responsibility, and general corporate responsibilities. As stated earlier, the organization thus expands on an earlier industry organization known as the International Council on Mining and the Environment, which was based in Ottawa. The key difference between the organizations is intended to be in management personnel and the level of independence they will be given to undertake research and provide recommendations. The icmm was initially led by Jay Hair, a former head of the National Wildlife Federation. For the industry, it is a major cultural shift to allow someone from the nonprofit sector to lead a major industry organization. However, it was also perceived by critics as an attempt at co-optation of more malleable activists. Dr. Hair passed away soon after this appointment, and icmm is still recovering from this shock.

Because of the centrality of industry funding of projects such as mmsd, many NGOs have boycotted forums organized under these initiatives and dismissed the effort as "greenwash."¹⁰ Critics of the industry have argued much of the work in this regard has been reactive and the industry has been quite resentful of regulatory pressure. Mining companies and industry groups believe strongly that the use of minerals is a part of modern living and often use advertisements to show that any challenge to them is a challenge to the modern way of life. A graphic from the Mineral Information Institute in their latest advertising campaign in 2000 illustrates this belief (fig. 3.3). This advertisement highlights the continuing perception in industry that they are involved in a truly noble endeavor. The nonrenewability of mineral extraction is still largely a nonissue for the metal mining industry, unlike other sectors such as energy minerals, where companies such as BP are trying to reinvent themselves as energy service companies and not just mineral extractors (thus opening doors to renewable resource management). Often the argument is made that because of their durability, metals are highly recyclable and hence renewable, while the energy and means required to attain this renewability are often downplayed.

Such exchanges between industry and communities have led activists such as Al Gedicks (1998, 2000) to posit that apart from the firms' business strategies, the industry also has a set of strategies for overcoming local resistance, which follows an activist agenda as well.

The NGOs that boycotted the initiative wrote an open letter to the industry indicating their reasons for making this decision and largely predicted their resistance on the perception that the outcome of the process



Figure 3.3

An example of mining industry advertising. (Reprinted by permission of Mining Information Institute, Golden, Colorado; copyright 2000)

had been predetermined by the funders by characterizing mining as sustainable under mildly mitigating circumstances. Some of the NGOs that have resisted this effort have an uncompromising normative stance with regard to mining as being inherently unsustainable and thus would label any attempt at defining sustainable mining as greenwash. There are others, however, who had direct process-oriented concerns about the initiative and were able to get some specific workshops organized, such as those on the rights of indigenous people in mining areas, and subsequently joined the initiative.

Most of the groups that boycotted the main MMSD initiative did, however, attend the culminating conference in Toronto in May of 2002. While their presentations were not conciliatory by any means, there was at least an engagement of stakeholders during this four-day event. Another remarkable feature of the MMSD initiative was the advent of numerous mirror events and conferences that boycotting groups organized. This was similar to the World Social Forum, which some NGOs organized in 2001 to mirror the World Economic Forum. However, the NGO conferences during the MMSD process were by invitation only and largely excluded any industry stakeholders. They were mainly strategic events to plan for responding to MMSD rather than democratic engagement of issues. The argument presented to justify such lack of transparency on the part of the NGOs is gen-

erally the overwhelming power differential believed to exist between the corporate sector and civil society.

My aim is not to be judgmental one way or the other, but rather to understand how the various characteristics of stakeholders and their manifest behavior in negotiations influence the emergence of resistance.