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THE POLITICAL ECONOMY OF CANADIAN SCHOOLING

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Hegemony in Education: The Nuclear Industry in Northern Schools

ROBERT REGNIER AND BRIAN MACLEAN

This paper demonstrates how the nuclear industry attempts to establish hegemonic relationships in the schools of northern Saskatchewan through the activities of the Saskatchewan Mining Development Corporation (SMDC), a crown corporation of the Province of Saskatchewan. The case is particularly interesting and revealing because the area had never before experienced such sudden, extensive, and well-orchestrated, corporate intervention. The attempt to engage the education establishment is seen as the result of active and conscious initiatives rather than working through existing structures.

In particular, this study examines how the nuclear industry produces pro-nuclear sympathies and views, and cultivates favourable public relations images and contacts through its programs. These programs include bursary schemes, summer employment, field trips, gifts of books to libraries, grants to teacher associations, tours of uranium mines, public relations visits to schools, counselling materials for guidance counsellors and publication of free curriculum materials. This study contends that these programs have structured social relationships and practices between SMDC and northern teachers, students, school boards, the Academic Education Branch of the Department of Northern Saskatchewan and the provincial Department of Education. These initiatives reflect a restructuring of power relations and of the culture of northern Saskatchewan.

Framework

The influence of the nuclear industry in the schools of northern Saskatchewan is analyzed from within the framework of a critique of domination. This framework reflects a commitment to the emancipation of human beings from various ideological and material forms of domination, particularly as they are socially and economically reproduced. To establish this framework, the author draws upon the work of Michael Apple in the area of education and upon Antonio Gramsci's (1971) notion of hegemony.

In *Ideology and Curriculum*, Apple (1979) contends that several earlier critiques of schooling were overly deterministic. For example, he rejects the view of Bowles and Gintis (1976) in *Schooling in Capitalist America* which argues that mobility, selection and the reproduction of the division of labour are directly determined by those in power. Instead of arguing for a one-to-

one relationship between economics and consciousness, or for the view that the economic base directly "determines" superstructure, he contends that the relations between economics and culture must be understood dialectically. To understand this relationship, he makes use of "hegemony," a concept in which determination is seen "as a complex nexus of relationships which, in their final moment, are economically rooted, that exert pressures and set limits on cultural practice, including schools" (Apple 1979, 4). Instead of reflecting economic interests directly, institutions including schools mediate interests through various forms and practices.

Apple draws his analysis from Gramsci who distinguishes between ideology and hegemony. Ideology consists of abstract, imposed notions; social, political or cultural ideals; assumptions or habits that can be changed by some overt manipulation. Hegemony is a form of domination which "refers not to the congeries of meanings that reside at the abstract level somewhere at the roof of our brain. Rather it refers to an organized assemblage of meanings and practices, the central effective and dominant system of meanings, values and actions which are lived" (Apple 1979, 5). Ideology is a function of symbolic initiatives which continually re-occur to shape ideas, belief and images. These symbolic initiatives may take the form of events, publications, resources, grants, program information, and so on. While ideology can be identified as the *reproduction* of ideas, beliefs and habits, hegemony is the *social production* of relationships, expectations, patterns of activity and meanings that become common sense and taken for granted. This hegemony becomes evident through the recurring interactions of the nuclear industry with educational actors and through the growing presence and influence of the industry in the socio-economic-cultural milieu. Hegemony is anchored in the stability and presence of economic structures out of which ideological initiatives are undertaken.

The relationship and difference between ideology and hegemony can be made evident through an examination of the presence of the nuclear industry in northern schools. Pro-nuclear ideology is generated through various programs, publications, events, activities, visits, and meetings which constitute information, propaganda and public relations functions. Ideology production includes strategies of interpreting social, environmental, and economic issues in the nuclear industry's interests. Structural presence of the industry is sustained through the strategic and profit interests in uranium and this presence is extended through allocation of budget, hiring of personnel and the provision of a mandate which directs and approves of the work in the schools. Pro-nuclear ideology is distinct as ideas, habits and beliefs, but related to hegemony as manifestations of deeper structural determinants and relationships.

Within this theory, educational institutions are viewed as central agencies for transmitting dominant culture and economic activity, by "incorporating" selected practices and meanings. Schools act as agents of cultural, economic

and ideological hegemony by interpreting, emphasizing or diluting practices to serve the interests of dominant economic and political forces. This framework makes it possible to differentiate between the ideological and hegemonic dimensions of the nuclear industry influence. And although it acknowledges that schools and educational systems are not just passive systems, but rather dynamic systems which include resistance to ideological initiatives, this study does not examine that resistance.

The Setting

Saskatchewan's north encompasses 100,000 square miles, 40 percent of the province. Interspersed with lakes and rivers, the north begins where agriculture ceases to predominate and forests take over. Rugged precambrian shield occurs about 200 miles north from the treeline (McArthur 1978, 1). Of the present population of about 28,000 in northern Saskatchewan, 21,000 are aboriginal peoples—11,000 Metis and non-Status Indians, 10,000 Indians, and 7,000 non-Natives. While the white population tends to be congregated in the two largest centres, the vast majority of the native population resides in the more than 35 villages and small towns which represent more than 70 percent of the population (Brooks 1985, 11). By the 1860s when the fur trade period was in decline, native people in the north became increasingly dependent on the white power structure for gainful employment. These opportunities have become increasingly scarce and, so, poverty has become a fact of life. Since the Second World War, governments have attempted to humanize living conditions through increased services. However, there has been little corresponding political and economic control by northerners. And while the traditional occupations of hunting, fishing and trapping have been complemented by wage labour, transfer payments and other economic developments, unemployment and underemployment reach as high as 95 percent in some communities.

Northern provincial schools are administered through the Northern Lights School Division and two other independent school boards. Twenty-five schools on Indian reserves in Northern Saskatchewan are administered through the Prince Albert and Meadow Lake Districts of the Department of Indian Affairs. In the last ten years, northern school administration has evolved to give more direct power to northerners, and it has undertaken major school construction programs and has increased school attendance. This system, which has recently experienced rapid expansion, is characterized by a high rate of drop-outs and a very high rate of age grade displacement.

Unbeknown to Saskatchewan residents, uranium mining began in 1953 in an isolated area of the most northern part of the province, in response to United States military needs for weapons production (Bothwell 1984, 317). After a number of U.S. contracts ended in 1969, uranium markets slumped and the industry declined. In the mid- to late 1970s, the demand from nuclear

utilities and the nuclear arms race put uranium back on the world market. Through the assistance and support of the provincial government intense exploration ensued, new mines and mills were opened in northern Saskatchewan and with more than seventy-five companies in exploration, several corporations moved offices to the province (Davis 1981, 90).[1] With some of the richest deposits of uranium in the world, Saskatchewan became the world's largest producer of uranium.

The dominant influence of the nuclear industry in northern schools reflects the nuclear industry's increasing dominance over other sectors of the economy. A 1976 study identified domestic production, that is, the subsistence economy or the bush economy, as the major economy of the two northern bands of Status Indians studied. The study estimates that the domestic economy contributed 58 percent to the total value of production per household (expressed in cash values), compared to 42 percent from cash income and transfer payments. Other areas of the economy include: agriculture—508 licence holders for rice farming in 1983 earned an average income of $2,850 while 85 persons were employed in farming; forestry—of 1,150 jobs in the forestry industry in 1981 over 900 were estimated to be held by southern commuters; construction—after a major public building and road expansion in the late 1970s, provincial capital works and federal funding has declined dramatically; tourism—of 150 private tourist camps where most work is seasonal, 10 percent are owned by aboriginal peoples; mining—although gold mining is beginning to show signs of expansion beyond a single operating mine, present employment in uranium mining is about 1,500 with about 480 positions held by residents of the north (Brooks 1985, 12–15).

Since the mid-1970s, uranium companies have invested more than a billion dollars into mine and mill construction and the provincial government has invested more than $600 million in joint ventures and northern infrastructure to serve the mines. During the same period, several companies staked mineral claims in a vast area of northern land, and foreign multinationals purchased shares in northern property holdings. In contrast, and against the objections of northern communities, the government passed the Northern Municipalities Act which limits the jurisdiction of northern communities to the immediate periphery of their communities, rather than allow jurisdiction over land surrounding the communities to serve and protect their interests in the subsistence economy (Dobbin 1985; Pinehouse Local Community Authority 1985, 17–19). At the same time, Status Indians and the Saskatchewan Metis have been attempting to have their land and constitutional claims acknowledged.

As the nuclear industry continues to receive the attention of government and capital, estimated at $1 million per permanent job produced, northern communities experience chronic unemployment rates reaching as high as

95 percent. With 60 percent of northern jobs estimated to be held by non-northerners, and 46 percent of northern employment held by non-native residents, the unemployment rate for the north, based on a study of Status Indians, has been estimated at 68 percent. Based on the same study, welfare dependency was estimated to be at 60.8 percent—ten times the provincial rate—and 50 percent of residents are estimated to live below the poverty line. Based upon a 1984 job gap of 5,300 positions and a projected increase of 5,100 labour force entrants, 10,400 jobs would have to be created by 1994 to create full employment for native people in northern Saskatchewan (Brooks 1985, 11–12).[2] While the political economy of job creation serves the nuclear industry, little investment is made to serve the other indigenous economies.

Initially, the industry was opposed by northern organizations and groups, including the Prince Albert and Meadow Lake District Chiefs (1977) who represented Status Indians and by the northern board of the Association of Metis and Non-Status Indians (*The Herald* 1980). Concerned about northern environment, employment, land rights, economic development, lack of political influence and the use of uranium for weapons production (Prince Albert and Meadow Lake District Chiefs 1977), this opposition complemented a larger anti-nuclear movement in the province and in Canada. In 1980, the Saskatchewan anti-nuclear movement effectively prevented an attempt by Eldorado Nuclear to establish a uranium refinery in the province, then turned its attention to uranium mining.

In response to mounting opposition and expressions of concern, a major government inquiry was commissioned. In 1977, this commission recommended that uranium mining should proceed in northern Saskatchewan (Government of Saskatchewan n.d., 429). A subsequent inquiry, a hearing and a review process which considered the social and environmental impact in the opening of new mines also supported the expansion of the industry.[3] Contracts for trucking chemicals, fuel and yellow cake to and from the mines; and mine security contracts were let out to the Saskatchewan Indian Nations Company; some northern communities benefitted temporarily from the construction of mines and mills, and continued employment of native residents brought northerners to support the industry (Cluff Lake Project 1982, 54–136).[4] Northern organizations found it increasingly difficult to oppose the industry since it provided at least some employment to a seriously unemployed and underemployed population.[5] At the same time, the nuclear industry sought to forestall criticism of its expansion.

Throughout the rest of the province, the industry was supported by vested interests including the government, the universities, the Canadian Nuclear Association, and other mining companies and the Saskatchewan Mining Association.[6] A central proponent in advancing the industry's interests in the north was the Saskatchewan Mining Development Corporation (SMDC), a crown corporation of the provincial government.

The Saskatchewan Mining Development Corporation

SMDC was the most effective institutional force in penetrating the school establishment in northern Saskatchewan. SMDC was formed in 1974 through an order in council under the Saskatchewan Crown Corporations Act and was established by a special act of the legislature in 1977. Governed by a board of directors appointed by the cabinet of the Government of Saskatchewan, this corporation "behaves like any privately owned corporation, with the same freedoms and restrictions and the same pressures to generate profit for its shareholders" (SMDC n.d.). It is empowered to explore for, develop, mine, refine, and market all minerals found within the province, except oil, gas, potash and sodium sulphate. As a fully integrated mining company active primarily in the exploration, mining and milling of uranium, it reported its participation in over 273 exploration and development projects in 1980 (SMDC 1980, 14–23). And until 1982, this corporation had to be offered part ownership of any uranium exploration and mining project in the province. Consequently, it became a 20 percent owner of Cluff Mining with AMOK, a consortium of French corporations, with which it operates a major uranium mine and mill, and a 50 percent owner of Key Lake Mine claimed to be the largest and richest uranium mine in the world (*New York Times* 1981).

The Northern Opportunities Branch (NOB) of SMDC works in conjunction with the company's divisions of Corporate Communication, Mining and Engineering, Corporate Development, Marketing and Corporate Affairs that has extended influence into the educational establishment. The mandate of the NOB is to explore for and develop economically viable ways to develop the north. This branch consists of one researcher and support staff located in La Ronge, the administrative centre of northern Saskatchewan, and the coordinator located in Saskatoon who reports to the Corporate Affairs vice-president. It collects information from other divisions in the company, prepares reports and develops social programs in the North pertaining to SMDC mining operations. It claims to identify and study problems of the social impact of uranium mining on northern communities in response to which it undertakes programs. The Corporate Policy Manual clearly states that SMDC has a responsibility to facilitate employment training, post-secondary educational training, and business development opportunities (MacLean and Regnier 1983, 5–8).

Northern Opportunities Programs

Although the formal and institutionally defined purposes of SMDC are laid out in its handbook, SMDC's strategy for "immunizing" teachers to deter criticisms of the nuclear industry were laid out by the Corporate Affairs vice-president at Future-Scan, a conference for business and industry held in Saskatoon in the spring of 1983. At this conference, the vice-president laid out three stages of the relationship between the uranium mining industry and the public. He located many "stakeholders" as potential allies and presented SMDC's public relations strategy. The stakeholders in the southern part of the province were identified as the media, the medical profession, business, churches, labour, the education profession, and women's groups. In the north, they were divided into the categories of adolescents, post-adolescents, and middle-aged people (Smart 1983, 24). In his presentation, he advocated developing a strategy to deal with critics of the industry rather than responding in a "knee-jerk" fashion. He expressed preference for an "indirect approach . . . the facilitating a crown corporation can do." He explained:

> When you set up . . . interaction between industry and one of the stakeholders, you produce antibodies. And when something happens, that group or somebody from the group can respond to it, so, that person [or group] is like attacking it" (Smart 1983, 23–24).

The implementation of the corporation's strategies is discerned in various contacts, events, programs, grants, and materials through which the company's relationship with the educational establishment is structured and through which the educational establishment is drawn into the company's sphere of influence. Some of these areas are outlined below.

Bursaries

SMDC has offered an estimated forty-one bursaries at a total value of $56,000 per year in three bursary programs. In one program, it has awarded five, $1,350 bursaries per year since 1977 to assist qualified candidates entering their first year of post-secondary courses related to the mineral industry (MacLean and Regnier 1983, 8–9). Of the five bursaries awarded in 1982, three went to residents of northern Saskatchewan although it is not known how many went to "native northerners." As this program was advertised in Saskatchewan's major daily newspapers and some weeklies, the company received considerable positive publicity. Posters were circulated to northern schools for display, information was sent to guidance counsellors, and NOB staff visited northern high schools to provide details about the post secondary programs and the bursaries. As a partner with AMOK in Cluff Mining, SMDC offers eight bursaries worth $1,350 each to first-year students entering technical institutes and their equivalent or university. As a partner in Key Lake Mining, SMDC also offers bursaries through the Key Lake Bursary Program (MacLean and Regnier 1983, 8–9).

Besides direct financial incentives for students to remain in school, the bursary program gives SMDC a high public profile, and access to and presence in schools. Quite naturally, then, bursary recipients feel a sense of loyalty, and appreciation. Eventually, posters on school walls in even remote communities became common place and the SMDC logo and images became an everyday experience. Through visits to school guidance counsellors, teachers and principals, the public relations officer presents the human face of the

industry, responds to questions, provides information and offers the hope of employment to students. The school staff, in turn, draws upon the presence of the officer as an occasion to encourage student attendance and achievement. The bursaries identify SMDC with the educational success of many of the small number of northern students who graduate each year and link these future northern leaders with the industry.

Geo-Focus North

In 1982, SMDC operated the first five-week summer program as a reward for academic achievement and school attendance of selected students to promote understanding and interest in geological sciences and to learn about the environment. The project was funded and co-sponsored by SMDC, the Northern Lights School District and the La Ronge School Board (SMDC Information Sheet, p. 1). Four $700 bursaries were awarded to students and a $1,500 grant was supplied to operate a five-week program (Brooks 1982, 1). In this program, students conducted geological research, learned photography, and wrote the script and produced a slide-tape show. The slide-tape show, about the geological discoveries made during the field trip, was circulated to northern schools and made available to the public. Completion of the 1982 project was marked with a banquet and attended by dignitaries, representatives of SMDC, the La Ronge School Board, the Northern Lights School Division, and others. This socially constructed success story was publicized on the front page of the La Ronge weekly paper and SMDC was profiled as an active educational benefactor (Brooks 1982, 1). This program has continued and in 1983 included a one-week seminar, a nine-day field trip excursion, and a nine-day workshop to produce a slide-tape show that circulated through northern schools and was made available to the public (SMDC Information Sheet).

This program has several benefits to the industry. Taught to communicate about geology by industry, these students became ambassadors for the company on their return home. Enjoying increased status and prestige through the events and publicity as well as through their own academic success, these students conferred credibility and validity on SMDC and upon geology as a science. With circulation of the slide-tape show throughout northern schools, SMDC is linked to the success of the students. Northern school boards benefitted from identification with the company's participation for they wanted their students to stay in school longer, to develop a career orientation and to graduate. Furthermore, geology, which had previously received little attention as a subject worthy of study, became publicly legitimated as an important category of knowledge.

Tours to the Mines

Tours are provided for schools, teachers and school boards. For example, the Northern Lights School Division office staff, responsible for administration of about thirty schools in the north, has been flown in to the Key Lake Mine

(Northern Lights School Division 1982, 8). Such trips have several attractive features, including the excitement of an air flight, refreshments at the mine site, a kit of pen, paper, carrying case and literature, a guided tour of the mine and mill with a professional employee, and an opportunity for students to climb on huge trucks in the mine pit and have their questions answered by skilled technicians (MacLean and Regnier 1983, 38). Assured by health and safety precautions, impressed by the high level of technical expertise, and overwhelmed by the sheer magnitude of the project on the twenty-five square mile site in the apparently vast emptiness of the north, it is little wonder that teachers, students and board personnel often return home persuaded of the value and safety of the project, rather than critical of it. The experience of the tour then becomes a historic event of sorts which can be recounted by teachers and students.

Directions

In 1981, SMDC initiated a project to publish *Directions*, a twenty-four-page glossy publication distributed at no cost to as many as 3,200 students and teachers in grades seven to twelve in northern schools. It was published at a reported $15,000 per issue, about $5.00 per copy, or $50,000 per year (Glew 1983b). This sum was far more than the $10,755 provided by the government in innovative curriculum grants (Government of Saskatchewan 1980–81, 10) and three times more than the Department of Northern Saskatchewan Materials Development budget which served the whole Northern Administrative District. The magazine, an expensive clearly pro-nuclear publication, which won the International Association of Business Communicators Gold Award of Merit, featured the uranium industry and related issues supplemented with hands-on types of resource materials and work done by students in northern communities. This publication, designed for science and social studies teachers and guidance counsellors, filled a significant gap in northern curriculum by relating communities to one another.

In other areas, SMDC has donated books to forty-five northern libraries given small grants to the Northern Area Teachers' Association and other teacher associations, provided a speakers' bureau and resource service, organized and funded field trips, and been available to northern schools through the northern office (MacLean and Regnier 1983, 12–13; SMDC, 1980, 31).

Before and Beyond Ideology: Hegemony in Northern Schools

SMDC has had direct access to students, teachers and school boards through information, visits, publications, public activities and events. To legitimate its presence, and to produce "antibodies" that can forestall criticism, the nuclear industry need not convince everyone of its importance and validity. However the nuclear industry has created structures which permit it to undertake initiatives and to establish relationships with various educational actors in a manner that allows it to serve its interests.

Through publication of *Directions* magazine alone, SMDC personnel established several contacts and sets of social relations. The Corporate Affairs vice-president held discussions with the Department of Education and "personally visited every provincial school board in northern Saskatchewan as well as the federal schools" (Smart 1983, 24; Northland News 1982). The Director of the Northern Opportunities Branch travelled to seventeen schools with grades seven to twelve where he met with the teacher responsible for science at each school, according to the SMDC-produced "Background Information on the Directions Magazine" (page 2). To secure distribution and to prepare the magazine, SMDC consulted extensively with the Academic Branch of the Department of Northern Saskatchewan, the federal Department of Indian Affairs, members of northern school boards, and Indian band schools and Northern Lights School District (SMDC 1982; Northland News 1982). The editorial board of *Directions* consisted of teachers, a community member, a representative of the Materials Development Branch of the Department of Northern Saskatchewan, and a representative of Materials Evaluation and Acquisition Branch of the Department of Education in Regina, under the Corporate Affairs vice-president who was editor (SMDC 1984, 24). Although the project was terminated after two years because of considerable criticism (Glew 1983a),[7] SMDC had set up important relationships with the education establishment.

With scientific subjects already commanding more prestige than other subjects in corporate economies (Apple 1979, 35–41),[8] the development of geology and related subjects in northern schools serves to legitimate uranium mining and similar occupations as high prestige areas compared to traditional native and other sciences which lack the same standing and value. While the nuclear industry is legitimated as a modern scientific economy, the domestic subsistence hunting and fishing economies are allowed to dwindle, although they remain major economies for many northerners. Traditional economies lose their status and traditional values lose ground in relation to scientifically related values. Through years of schooling, students incorporate definitions of knowledge and attitudes that support the nuclear industry over other economies.

A significant nuclear presence in northern schools is structured through the organization of the NOB. The NOB is given a budget, personnel and a mandate through which the nuclear industry recreates and actively perpetuates its presence in events, activities, meetings, resources, and publications. The NOB is maintained, in turn, through the interests of government policies and legislation which mandates SMDC to mine for and market uranium. This interest is maintained by the profits made selling uranium in a world market that demands electricity and weapons production. Through this structure SMDC extends the bursary programs annually to needy students, tours which provide an awe-inspiring experience at a uranium mine and mill complex, films and personnel to clarify and advocate pro-nuclear views, industry-

supervised summer programs for students, the presence of a northern office with personnel to monitor and maintain relationships, public relations visits to the schools, planning discussions and consultations with school administrators, and ministerial collaboration in the cabinet within government policy that prefers corporate to indigenous economic development. Through these structures and initiatives, the nuclear industry and its views increasingly become a reality, taken for granted and incorporated into everyday language and experience.

While the bursary program, tours, resource services, summer programs, field trips, the presence of an office with research, budget and public relations staff and support services may constitute the invisible taken-for-granted elements of a corporate society, these elements stand in relief to the northern indigenous economies. Indigenous northern economic and social organizations cannot organize, maintain or fund such symbolic and material presence. In contrast to the nuclear industry, the Saskatchewan Association of Northern Local Governments (SANLG), the Trappers' Association, the Fisherman's Association and the subsistence economic interests have no comparative resources or organizational structures with and through which to advance their economic interests and influence upon the schools. The industry massages the education system by extending the hope of employment to students, by providing resources and programs to teachers, counsellors and principals, by sharing a profile of educational activity with school boards and collaborating in the provincial government's "open for business" ideology. The effect is to give the nuclear establishment a form of influence in schools which other economic groups cannot hope to attain. This has been achieved through the creation of relationships, expectations, patterns of activity and meanings brought about through the structural presence and interaction of the industry with educational actors. Over time, the overt initiatives may become less necessary to secure the industry's interest as the educational establishment becomes saturated with industry interpretations.

The nuclear industry's influence in the north is only part of broader sets of recent initiatives in Saskatchewan schools at large. The following examples serve as evidence of this claim. The Corporate Affairs vice-president of SMDC was invited to and participated in the Deliberative Conference on Science and Education, the first of a series of such conferences and part of the Science Council of Canada's consultative process in the development of its report on science education in Canada. By not including environmental, native and northern specific representation at the conference, the conference offered legitimation to the right of the nuclear industry over other groups to define science. At the conference, the vice-president recommended that industry personnel work with teachers in the school, or let teachers take "industrial sabbaticals" to keep up to date on the new technology,[9] a proposition that directly serves the interests of the nuclear industry.

In a public relations visit, the vice-president made a presentation to the

Deans and interested members of the College of Education, University of Saskatchewan, to review materials produced for northern schools.[10] The Public Relations Officer of SMDC chaired Career Days, a major career exposition for industry and business for high school students in the province of Saskatchewan.[11] SMDC co-sponsored a science fair with the Saskatoon Catholic Board of Education at two high schools which hosted five pro-nuclear speakers and no speakers critical of nuclear development.[12] The chief geologist of SMDC participated in a newspaper debate in which he attempted to defend the claim that there was no relationship between nuclear weapons production and Saskatchewan uranium mining.[13] SMDC participated in the administration and funding of an energy curriculum development project with other crown corporations and government departments (Government of Saskatchewan 1982). Teachers have toured uranium mines on all-expense-paid annual tours of Saskatchewan mines sponsored by the Saskatchewan Mining Association (*Prince Albert Daily Herald* 1983).[14] As a member organization, SMDC has been represented through the Saskatchewan Mining Association to the Curriculum and Instruction Review Committee responsible for changing provincial curriculum;[15] and SMDC educational initiatives are linked to the minister of Education, through the minister responsible for SMDC in the provincial cabinet.

This paper is limited by its discussion of a particular aspect of the work of the NOB of SMDC in northern Saskatchewan. It does not document or discuss the post-secondary, community and other programs of the NOB and the initiatives of other uranium companies in the north and throughout the province. Nor does it examine how other educational institutions such as community colleges, the university and technical institutes serve the interests of the nuclear industry. However, this study does show direct and active initiatives of the nuclear industry to establish its hegemony over the schools in northern Saskatchewan.

Notes

1. This book "examines the largest multinational corporations, both private and government owned in the uranium industry in Saskatchewan."
2. All the information in this paragraph is taken from Brooks's analysis.
3. See *The Final Report of the Key Lake Inquiry, The Transcripts of the Gulf Minerals Collins Bay B-Zone Development*, the Submissions to the Cluff Lake Phase II Environmental Review Process, Environmental Assessment Secretariat, Saskatchewan Environment.
4. This study documents the percentage of hiring of northern natives for construction and the ongoing work at Phase I and as projected for Phase II of the Cluff Lake mining venture. The surface lease for the agreements outlined the arrangements for native northerners to be hired.
5. The Saskatchewan Association of Northern Local Governments (SANLG), representing thirty northern communities, has indicated on several occasions that while it opposes and has concerns about uranium mining, the mines provide employment for some of their relatives and friends and they do not want to jeopardize the employment. (See Saskatchewan Association of Northern Local Governments 1983, 1–2).
6. A discussion of the roles of the Cabinet Committee on Uranium, Deputy Ministers' Cabinet Committee on Uranium, various government departments, the Saskatchewan Mining Development Corporation, the Saskatchewan Mining Association, the Saskatchewan Research Council, and the universities is outlined and discussed in Woods (1981, 22–25).
7. In this article, the language arts consultant for the Prince Albert District Chiefs said the magazine was welcomed by teachers who are desperate for curriculum and the Executive Director for the Prince Albert District Chiefs viewed the distribution of the publication as an ethical question and compared it to the Keegstra Affair (which involved the trial of a teacher who was charged with the dissemination in his classes of anti semitic views and materials, and who claimed that the Holocaust was a myth).
8. Apple discusses how technical knowledge and the sciences become high status knowledge in the service of corporate economies.
9. For example, "Deliberative Conference Held, Science Education Issues Discussed," *Saskatchewan Bulletin*. Saskatoon: The Saskatchewan Teachers' Federation, 31 March 1983.
10. Memo to members of the Elementary Program Advisory Committee and the Secondary Program Advisory Committee from Earle Newton re: Materials Developed by SMDC for use in northern Saskatchewan, 20 December 1983. This meeting was called in response to a request from the vice president of Corporate Affairs.
11. Career Days, held May 11, 12, and 13, 1982. Part of the Century Saskatoon celebrations, it was billed as the largest careers exposition ever held in the city and was to include as many as eighty participating organizations with the nuclear industry prominently featured (*Saskatoon Star Phoenix* 1982).
12. "The Science Departments of E.D. Feehan High School and Holy Cross High School Parents' Science Festival 1982—financial support by the Saskatoon Catholic Board of Education and the Saskatchewan Mining Development Corporation" (pamphlet) and Regnier (1982).
13. See *Saskatchewan Bulletin*. Saskatoon: Saskatchewan Teachers' Federation, 30 May 1984.
14. A severe critique of one Saskatchewan Mining Association (SMA) tour was given by Gary Irvine, professor of Science Education, at a seminar for faculty at the College of Education in the spring of 1982. Based upon his experience with an SMA tour the previous summer, he detailed the public relations dimensions of the tour, including the failure of uranium mine

guides to provide a full discussion of scientific issues particularly related to environmental protection, to show the visitors to working areas of the mill where working procedures could be witnessed, and to provide a critical framework for considering science-society related issues.

15. The name of the submission, "The Interdependence of Society, Economics and the Mineral Industry," by the Saskatchewan Mining Association, is listed in *Directions: Curriculum and Instruction Review—The Final Report*, the Minister's Advisory Committee, Curriculum and Instruction Review, February 1984.

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