THE UNIVERSITY OF MANITOBA

# AN INVESTIGATION OF THE RELATIONSHIP BETWEEN HEALTH AND DEVELOPMENT IN NORTHERN MANITOBA

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# AN INVESTIGATION OF THE RELATIONSHIP BETWEEN HEALTH AND DEVELOPMENT IN NORTHERN MANITOBA

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# CHAPTER I

# INTRODUCTION

## I PURPOSE

The purpose of this paper is to investigate the relationship between health and development in northern Manitoba. The hypothesis is that health and development levels are positively associated because the same factors that sustain underdevelopment in northern Manitoba sustain poor health.

## II EXPLANATION OF THE PROBLEM

Pipeline developments and the search for alternative energy sources have focussed the attention of governments and the general public on northern development problems. After a period of neglect, the North has come to figure prominently in decision-making at the federal and provincial levels.

The Berger Commission Inquiry into the impact of pipeline development and other studies, such as that completed in 1974 by Gemini North for Canadian Arctic Gas[1], have begun to highlight some of the potentially negative impacts of rapid large scale industrial development in the Arctic. Primarily, two negative impacts are cited. They are the destruction of the natural environment and an increase in social patholoty as a land-based people with a traditional economy are forced to become more urban-based and a part of a wage economy.

Among the residents of northern Manitoba, similar kinds of concerns have and are still being raised. The existence of the Northern Flood Agreement, to which federal and provincial governments, Manitoba Hydro and the Northern Flood Committee (on behalf of the Cross Lake, Norway House, Nelson House, Split Lake and York Landing Indian Reserves) are signatories is one testimony to this. The Northern Flood Agreement developed from the concerns of the five Indian Bands that the Lake Winnipeg Regulation and Churchill River diversion project, proposed in 1971 by Manitoba Hydro, would have negative impacts on these reserves. The Flood Agreement, signed December 1977, was preceded by an Economic Development Agreement, signed in September 1977 which established a development corporation to promote resource and economic development while preserving the fundamental way of life for the natives.

Although the Berger Report and Gemini North Report suggest that certain forms of industrial activity, controlled by private southern capital, may have negative impacts on social development, this relationship has not yet been well researched for northern Manitoba. What is known is that government activity in the Manitoba North in the last ten years has not substantially improved the socio-economic circumstances of native northerners.[2] Despite this level of expenditure, a small percentage of native northerners is employed full time, their incomes are lower, and they have fewer educational opportunities with which to prepare themselves for the job market.

Their standard of living as measured by maternal and child health and nutrition levels and by amenities like sewage and water systems and quality of housing is lower than it is for most other Manitobans.

Yet financial investment over a span between 1969-1979 from just two of the major government departments, the Federal Department of Regional Economic Expansion and the Manitoba Department of Northern Affairs, who are partially responsible for northern development work, has exceeded 190 million dollars.[3]

In view of the substantial financial investment and the apparently poor response to it, an investigation of a possible relationship which may shed light on what are the real constraints to development and what financial investment may lead to more successful policy interventions is pertinent. As the role of health as a factor in regional development has been given insufficient attention up to this point, the purpose of this paper is to investigate that factor.

## III DEFINITIONS

### A. Health

The World Health Organization defines health as, ".... a state of complete physical, mental and social well-being and nor merely the absence of disease and infirmity". The WHO definition of health is not used in this paper since it would present the difficult research task of analyzing

the relationship between physical, mental and social factors. The analysis presented here for the most part is limited to physical aspects of well-being, though it is recognized that social and mental factors contribute to and benefit from improvements to health defined as freedom from disease and illness. No attitudinal data were gathered, for example, to measure the psychological benefits of improved health.

B. Development

Defining development is a particularly controversial matter for two reasons. Development theorists present theories with different degrees of precision and they also tend to use different concepts to account for development.

For example, the theorists who defined development in the most specific terms are Franck, Maegraith and Lewis.[4] For Franck,

> "Development and underdevelopment are products of one single but dialectically contradictory economic structure and process of capitalism."

Maegraith equates development with self-reliance and independence from direct outside assistance. Lewis thinks development is determined by natural resources and human behaviour and institutions. His definition gives equal weight to concrete factors, while also stressing the factors of energy of mind, and a willingness to save and invest productively. For poor countries, in Lewis' view, development also means transformation of beliefs, habits and institutions.

Theorists like Watkins offer definitions which in

themselves are simultaneously objective and procedural.[5] For example, Watkins defines underdevelopment as marginality and says it "shows itself as poverty, unemployment and welfare". He also defines development as an internal process whereby men develop themselves "out of" rather than "by" something or someone.

Myrdal, Galbraith and Schumacher all define development as a process. Myrdal calls it a process of moving away from underdevelopment which is a constellation of numerous undesirable conditions for work and life. Development to Myrdal means movement upwards of the whole system. Galbraith says that "at each stage along a continuum, there is an appropriate policy for further advance". His stages include popular enlightenment, popular rewards, capital, etc. As countries become more developed, further development becomes dependent on complex forces - scientific and technical skills, imaginations, quality of work force, ability to use resources and clear national goals. Schumacher speaks of development as a process in which people and their education, organization and discipline figure highly. Getting the work of development done requires motivation, know-how, capital and a market. Singer and Revelle describe development in terms of structural change requiring a reorganization of society's division of labour. Their definition of development is a change for the better in living conditions.[6]

Göran Sterky defines development as being geared to

the satisfaction of man's needs, material and non-material. Malenbaum equates development with motivation.[7]

The definition of development that is going to be used in this paper is the definition that the natives themselves use. When native leaders today in Manitoba, both Metis and status Indians, speak of development, their meaning is very clear.[8] Development means more jobs, new roads, good houses, and other aspects of infrastructure. They speak of these things with the expectation that they will maintain their spirituality and their traditionally harmonious relationship with nature.

One current example of the use of this definition where it has a positive connotation is the well-publicized recent sit-in of nine Norway House residents. Nine native residents of Norway House were protesting a poor response from government to their demands for more development activity. They refer to jobs, roads, community centres and other infrastructure in this context.[9]

In other context, development defined in this way is given negative connotations. For example, the Dene Indians in the Northwest Territories accuse the white-dominated oil and gas interests of wanting to 'develop' their homeland at the expense of their culture.[10] D. P. Usher's study on the Banksland Inuit, who, prior to taking inferior jobs working for oil companies, had a per capita income close to the Canadian average, is another illustration of the negative

impact of development.[11]

C. Northern Manitoba

Northern Manitoba is being defined in this paper as a region, the southern border of which is that used by the Manitoba Department of Northern Affairs (see Appendix I). The northern border is the 60th parallel. While covering 80 percent of the Province, northern Manitoba contains only about eight percent of the Province's entire population. Approximately five-eighths of northerners live and work in eight of the larger industrial resource centres (Thompson, Flin Flon, The Pas, Leaf Rapids, Gillam, Lynn Lake, Snow Lake, Churchill). The remaining three-eighths, treaty Indians and Metis, are scattered throughout the North in remote settlements and on reserves. These communities, because they do not conform to traditional municipal concepts of local government, are governed by the Manitoba Minister of Northern Affairs who has powers similar to those of a mayor in a municipality. The smallest communities appoint community committees to advise the Minister while the larger communities elect community councils. In practice, the community committees and councils manage many of their own affairs.[12]

## IV PROCEDURES

This paper will examine the relationship between health and development through a review of relevant literature and through an examination of available data. A review of the

literature provides a theoretical perspective - a context or framework in which to examine the relationship. A review of relevant literature will assess what is already known about the relationship between health and development. For this purpose, literature on health and health economics, development in general and Third World development in particular, and Canadian regional policy will be reviewed. A discussion of the findings of this review is presented in Chapter II.

Chapter III follows with a description of the current socio-economic circumstances in the North, using information on the demographics, the economics, the physical infrastructure, and the social framework. These circumstances are then reviewed in the context of the findings in Chapter II to assess how well northern Manitoba may conform to the theories described in the literature review.

In Chapter IV some primary data are presented which bear on the relationship between health and development in northern Manitoba. They are analyzed in the context of the findings of Chapter II.

A complete discussion of the methodology employed in this study will be presented in Chapter IV, together with the data bearing on the relationship between health and economic development. For the purpose of familiarizing the reader in a general way with data sources and with analytical techniques, a brief summary of relevant methodology will be presented in the beginning of each chapter.

The paper will conclude with a statement on the dimensions of the relationship between health and development and will point out some implications for government development policy.

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1. Cited by Weick, Ed, Socio-Economic Advisor, "Socio-Economic Consequences of Arctic Industrial Development", University of Manitoba Medical Journal (Special Issue: 1977 Churchill Health Conference Proceedings) Volume 49, No. 1, 1979.

2. Department of Regional Economic Expansion, Manitoba's Changing Northland, 1976.

3. Source: DREE Annual Report, 1968/69, 69/70, 70/71, 71/72, 72/73, 73/74, 74/75, 75/76, 76/77, 77/78.

   Government of Manitoba, Public Accounts, 1972/73, 73/74, 74/75, 75/76, 76/77, 77/78.

4. Franck, Andre Gundar, Capitalism and Underdevelopment in Latin America, Monthly Review Press, New York, 1967, p. 9.

   Maegraith, Brian, One World, University of London, The Athlone Press, London, 1973, p. 5.

   Lewis, W. Arthur, Theory of Economic Growth, Richard Irwin Inc., Homewood, Illinois, 1955, p. 430.

5. Watkins, Mel, Dene Nation, The Colony Within, University of Toronto Press, Toronto, 1977, pp. 92 - 108.

6. Myrdal, G., Asian Drama, An Inquiry Into the Poverty of Nations, Pantheon Books, New York, 1971, pp. 427-8.

   Galbraith, John Kenneth, Economic Development in Perspective, Howard University Press, New York and London, pp. 12-14.

   Schumacher, E. F., Small Is Beautiful, Sphere Books, London, 1976, p. 194

   Singer, Paul, "Population and Economic Development in

Latin America", International Journal of Health Services, Vol. 3, No. 4, 1973, p. 73.

Revelle, Roger, "The Balance Between Aid for Social and Economic Development and Aid for Population Control", International Journal of Health Services, Vol. 3, No. 4, 1973, p. 669.

7. Sterky, Goran, "Towards Another Development in Health", Development Dialogue, 1978-1, pp. 4-5.

Malenbaum, W., "Health and Economic Expansion in Poor Lands", International Journal of Health Services, Vol. 3, No. 2, 1973, p. 166.

8. As could be expected from any fast-growing national movement, the views of native leadership in Canada today are far from homogeneous. However, for the purposes of this study, it is neither practical nor useful to reflect minority positions.

Native leaders are taken to be those representing the major native organizations, the Manitoba Indian Brotherhood, the Manitoba Metis Federation, and the Northern Association of Community Councils. The definition of development has often been articulated in their major organization papers.

For example, in 1977, the Manitoba Indian Brotherhood released another in a series of position papers on long-term native development since their original publication Wah bung was published in 1971. In this recent paper, circulated amongst federal government departments which concern themselves about native issues, the M.I.B. again states its views on what is development and on what role government and the Brotherhood should respectively take to achieve their development objectives. Development includes "security from want, shelter and a decent standard of living; to obtain real access to the widest range of opportunity options and freedom from exploitation". A community-based economic development strategy which the Brotherhood favours would mean that communities would have control over the delivery of services and over the development of community capital.

The Manitoba Metis Federation submitted to the Government of Canada on January 4, 1978, a major economic development proposal which called for the merging within M.M.F. jurisdiction many current federal/provincial agreements and programs (Canada Works, Special ARDA and Northlands were specifically mentioned). Within this master plan, the M.M.F. called for industrial development through

renewable resource enterprises, commercial development through business enterprises and multi-purpose business centres, and social development of Metis people through education and training programs, cultural awareness activities, gainful employment projects and information-communication systems.

9. Press coverage, Winnipeg Tribune, August 4, 1979, and Winnipeg Free Press, August 7, 1979, of the Norway House sit-in sets out what the Metis are seeking when they speak of development: recreation centres, internal roads, more jobs and less reliance on welfare. Subsequent press coverage emphasizes the same points:
   (Tribune August 17, 1979)
   (Winnipeg Free Press August 20, 1979)
   (Winnipeg Free Press August 23, 1979)
   (Tribune August 23, 1979)

10. Statements to the MacKenzie Valley Pipeline Inquiry (condensed in Watkins, Dene Nation, The Colony Northern University League for Social Reform, University of Toronto Press, Toronto and Buffalo, 1977.

11. Phillips, Paul, Regional Disparities, James Lorimer and Company, Toronto, 1978.

12. W. Henderson, "Demographic Research in Northern Manitoba", Demographic Series Working Paper, No. 3, paper presented at the Northern Demographic Workshop, North Hatley, Quebec, May 9-12, 1976.

# CHAPTER II

## LITERATURE REVIEW

The initial step to an investigation of the relationships between health and development is a literature review. The purpose of such a review is to examine any research that has been conducted on health and development for regions whose situations closely parallel that of northern Manitoba. To carry out the review, a Medlars bibliographic search was conducted on the combined titles of "northern", "remote", "health", "development", and "economic development".

The literature review considered the causes of underdevelopment in northern Manitoba and the economies of regional development, and health. An attempt was made to generalize from other regions since very little literature which dealt directly with the specific situation in northern Manitoba could be found. The topics of health, Third World development and Canada regional economic development will be reviewed in that order, followed by a summary of the main findings.

### I HEALTH LITERATURE

There is ample recognition of a connection between the health status of populations and development efforts in both the public health literature and the literature on the

economics of health care. A good example is the work of Dr. S. Mushkin. In her work "Health As An Investment", she argues that:

> "The concept of human capital formation through both education and health services rests on the twin notions that people as productive agents are improved by investment in these services and that the outlays made yield a continuing return in the future. Health services, like education, become a part of the individual, a part of his effectiveness in field and factory."[13]

Mushkin goes on to discuss the inter-relations between health and education. Many of these inter-relations are obvious.

1. A child needs to be healthy to enjoy and profit from school.
2. Many health programs depend on education in hygiene and sanitation. Necessary health personnel are trained in the educational system. Lengthening life expectancy through better health increases the return on the investment in education.
3. Increasing productive efficiency through education increases the return on investment in health.
4. Increasing productive efficiency through health also increases the return on investment in education.

The most dramatic evidence for Mushkin's contention that health is an investment for development can be seen in the example of China where health policy has been a major objective since 1949. Research by Drs. J. H. de Haas and de Haas - Posthuma, Dr. Joshua Horn, S. B. Rifkin and others,

documents the enormous success China has enjoyed in the last thirty years in the reduction of venereal and other infectious diseases, elimination of vectors of parasitic diseases, mass vaccinations, and in the education of the masses towards shared responsibility for creating a healthier population which can labour more effectively for national objectives. The Chinese Ministry of Health has emphasized prevention, especially through services to rural areas, as one means of promoting national development objectives. As will be discussed later in the section of Third World literature, the socio-political context has been highly influential in the advancements made to date. Clearly, with labour as its major resource, China has had to invest in building up the health of its population in order to carry on with the building of other infrastructure, crucial to its development.[14]

Other health economists focus on the "cost" of poor health in developing or developed parts of the world. Weisbrod describes the following economic consequences of poor health which apply to developed or developing regions but with differing incidences:

1. premature death with consequent loss of production
2. sickness with a loss of production
3. illness may reduce individual's resistance to other diseases and, therefore, his/her productivity
4. illness causing temporary absence from work may mean costly adjustments to the production process

5. poor health affects size and composition of the population through differential effects on mortality
6. detection costs, treatment and rehabilitation
7. existence of disease may involve people in attempts to avoid disease.[15]

In estimating the loss of worker efficiency through debilitating diseases that represent the chief cause of low productivity, Winslow documents that before malaria control, 30 to 40 percent more workers than necessary were recruited in the Transvaal and in Natal in order to allow for absenteeism due to sickness. He further documents the 90 percent reduction in working days lost to malaria in the Copperbelt, the reduction by 40 to 50 percent of school absenteeism in the Phillipines associated with malaria control and the increase in productivity in the Ruhr when caloric intake was improved for workers in heavy industry.[16]

Some of the problems relating to health and development are simply not present in the Canadian context. There are no diseases in Canada whose debilitating effects on worker efficiency can be compared to those of malaria and similar diseases frequently found in the Third World. Effects between health and productivity in Canada are best measured by indicators such as productivity losses due to occupational injuries.

In 1977, in a submission to the Manitoba Government, the Manitoba Federation of Labour drew attention to mining

accidents as a major factor in worker efficiency losses.

The report states:

> "In 1976, the mining industry in Manitoba experienced 932 lost time injuries; this translates into a loss of 17,347 production man days. On the basis of 15,785 man hours worked, the frequency of the number of lost time injuries per one million man hours is 59.04."

Further:

> "forty members of Local 6166, United Steelworkers of America, have suffered fatal accidents between 1962 and November 1977. Four workers at the Thompson operation were killed in 1977 alone ... Accidents reported by Inco employees to the company and to the Workers Compensation Board exceed six hundred.[17]

The Federation report also touches on the likely implication of "speed-up" practices and fatigue caused by over-time as major contributors to accidents.

Freedom from illness and injury is, therefore, a contributing factor to sustained productivity. Some health economists have suggested that the contribution of good health goes beyond such obvious direct economic benefits to include indirect social benefits. For example, Campbell, an American public health physician with considerable experience in aid programs, argues that development can only be measured by a combination of economic and social indicators. He suggests the indicators of life expectancy, maturity (age pyramid of population) and literacy. His conceptualization of the development process assigns great importance to improved health:

> "With enlightened public action, these indicators

> will reflect the fact that children with improved health opportunity have more vigor. Because they are better developed physically they will have the sustaining capacity to learn and develop skills and they will have the energy and enthusiasm to pick up and use the tools of agriculture and industry. As they become increasingly positive-producing members of society, their mental attitude toward the family will change from one of desperation to one of hope engendered by the fact that they may have a healthy family."[18]

Dr. Brian Maegraith, formerly dean of medicine, Oxford University and dean and emeritus Professor at the Liverpool School of Tropical Medicine, agrees with Campbell that standard cost-benefit analyses of health spending are too narrow or limited in scope. Most analysts assume that health follows from development, that is, as the standard of living improves, improved health will follow. According to Maegraith, the relationship is more ambiguous because both "health" and "development" are multi-faceted and vulnerable to many influences. Unfortunately, he doesn't attempt to delineate or even speculate on the precise nature of the relationship.

Maegraith contends that, since most economists are interested in clear economic return for investment, they do not view health improvements as essential measures of "development" success. Some economists even fear that if the population becomes too healthy, economic return may be offset by high population growth.[19] Too often, economists are content to leave the biological problems to medical planners and simply continue to assume that economic development and more education