Brown Flour and Beriberi: The Politics of Dietary and Health Reform in Newfoundland in the First Half of the Twentieth Century

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INTRODUCTION

> I have been closely and intimately associated with our people. I have fished with the fishermen, logged with the loggers; I have gone down underground with the miners; held trade union meetings right inside the paper mills. I was never so close to our toilers as during those years of the dole, and always, so long as I live, I will remember those friends of mine, those toilers who were stricken down by beri-beri, those children who felt the pinch of hunger. I saw the heartbreak in the eyes of patient mothers who had not enough to give their young ones. I saw the baffled, sullen rage of fishermen whose greatest toil and endurance could not provide their families with enough to eat or wear (J.R. Smallwood's final speech to the National Convention, January 23, 1948).[1]

J.R. SMALLWOOD made this statement in a speech before the National Convention which argued that confederation with Canada be made an option in the referendum to decide the political future of Newfoundland. By that time the problem of vitamin deficiency in Newfoundland was largely a thing of the past. Vitamin enriched foods had been introduced in the mid-1940s and the war had produced improvements in living standards. Even so, the bitter memories of unemployment, poverty, hunger and disease in the 1930s were still fresh enough in many people's memories to give his words tremendous political force.

This paper explores the rocky and uneven path to dietary reform followed in Newfoundland in the first half of this century. It focuses particularly on the problem of vitamin deficiency and on the disease of beriberi. The paper examines the discovery of beriberi and discusses the measures that were taken to combat the disease in the period up to the introduction of government by Commission in Newfoundland in 1934. Under this new form of government, an attack on beriberi was launched which saw its virtual elimination, at least among those who were on public relief. Finally, the politics of nutritional reform in the 1940s will be briefly examined.

NEWFOUNDLAND'S HEALTH REFORM MOVEMENT

What developed in the first quarter of the twentieth century in Newfoundland was a fairly wide-ranging, if limited, reform movement which focused its attention on health and social problems. A measure of this was the creation in 1905 of a permanent Medical Health Officer with national responsibilities, the launching of an anti-tuberculosis campaign in 1908, and the extension of the activities of Wilfred Grenfell in Labrador and Northern Newfoundland with the formation of the International Grenfell Association in 1912.[2] Much of the early concern was with tuberculosis, but soon other health problems were taken up. By the 1920s attention was being directed towards child welfare, youth, housing and slum clearance, and poverty.

Many of these reform efforts were led by philanthropically-minded members of the professional and business classes in St. John's. They looked towards self-help, individual responsibility and charity for the solutions to many social problems rather than to an expanded role for the state. Things changed somewhat under Commission of Government in 1934 when the state came to have a greater, but still limited, role in dealing with health and other problems.

The reform movement of the first part of the century was in part a response to pressure from the labouring classes for a better standard of living and improved health care, social security, and education. The Fishermen's Protective Union (FPU) and the Newfoundland Industrial Workers' Association (NIWA) as well as the first Newfoundland Federation of Labour, founded in 1925, all pressed for extensive reform. However, members of the ruling elite were also part of the reform movement. Some were persuaded that providing concessions to the lower classes was necessary to undermine or limit the growing influence of labour in politics. Others supported reform because they were concerned about what was termed "national efficiency." The poor physical condition of the population of Newfoundland had been dramatically revealed during recruiting for World War I. Some 47 percent of volunteers and 57 percent of conscripts had been rejected as medically unfit to serve.[3] Those who were concerned about national vitality and the need to conserve

"manpower" became anxious to improve the health of the people. The following statement by Dr. Brehm, Newfoundland's Medical Officer of Health, in 1916 is revealing:

> In every enlightened country great attention has been paid during recent years to the saving of infant and child life, and this movement has lately received a great impetus on account of the terrible sacrifice of life in the war.[4]

In an era of great imperialist rivalry large numbers of fit men were needed for military purposes. Wars could not be fought and won with weaklings.

Some of those also supporting reform did so because they saw it as a way of cutting state expenditures over the long term. Not only did tuberculosis lead to a tremendous loss of productive people, but it was also a great drain on the health care system.[5] Prevention was preached as a way of limiting this financial drain.

Many of those involved in health reform began to see nutrition as a key problem to be addressed if substantial improvements in health were to be made. Nurse Godden's report on tuberculosis in 1916 argued that the disease was associated with "poverty and dirt" and "laziness and ignorance." But to do anything about the poverty which was thought to be one of the root causes of the disease was a task which was beyond the nurse:

> Chelsea and New Melbourne; found here extreme poverty. "Bread and tea" seemed to be the only diet. Here is one place where I felt my work a bit discouraging; as to talk to these people and advise them about the food line seemed absurd. They seldom see or taste fresh meat, very little milk, or any of the principle necessities.[6]

The Child Welfare Movement emerged as a force for reform in 1917.[7] A public health nurse from the Henry Street Settlement in New York was brought to St. John's and soon three public health nurses from New York were hired. The movement to promote child welfare led to the registration of births, the training of midwives and the development of rules and policies for their guidance, and eventually the opening of the Child Welfare Centre. The Women's Patriotic Association also became involved in child welfare at the end of the War. It collected money to pay for the nurses and provided free milk to children and food and clothing to the needy.

The War did stimulate action on the medical front. However, much of what was done was done by charities and by volunteers. Many health reformers recognized that state involvement in health care would be needed to do anything substantial about most of Newfoundland's endemic problems. However, movement along this path was slow and halting. Much of the work done during the War was of a very basic nature. A disinfection program attempted to "mitigate the fly

nuisance," sanitary inspection was started and food inspection and control initiated.[8] Measures to control the spread of infectious diseases were improved.

Many of the problems faced were formidable. Control of food quality was urgently needed. However, milk production was in the hands of a large number of small producers averaging two cows each. The difficulties of putting in place a modern system of meat inspection were also significant, with 80 private slaughter houses in St. John's alone.[9]

Improvements in medical facilities were clearly needed. Study of the diphtheria epidemic of 1916 revealed that the mortality rate for people treated in hospitals was 2.9% while it was 8.3% for those treated at home.[10] Brehm was of the opinion that practically every death from diphtheria was due to a delay in treatment and a failure to apply antitoxin in sufficient time. Lack of effective treatment was also a factor in the high number of deaths from measles — 448 people in 1916.

By the early 1920s there was quite widespread awareness of the need to improve diets as a way of fighting disease. Throughout the country small numbers of people were trying to bring some small changes in this area. In 1921, for example, the Reverend Maidment of Bonne Bay urged the government to provide people on relief projects with an "anti-beri-beri diet" consisting of brown flour or white flour with rice, beans, oatmeal, and Indian meal.[11] But even though the cause of beriberi was known, little had been done outside the work of the Grenfell Association to systematically combat the disease. And still far too many officials seem to have been ignorant of the problem. When, in 1921, for example, the Governor of Newfoundland asked Magistrates to report on the extent of destitution in their districts only two reported cases of illness and death resulting from lack of food. But that such people were not really qualified to make such judgements is clear from the following statement by one Magistrate:

> I cannot report any case of illness directly due to want of provision. [T]he cases mentioned as sick some were crippled or otherwise disabled and unable to work and the persons sick were suffering from Berri-Berri and slight Pneumonia, which left them in too weak a condition to work.[12]

This Magistrate, despite his cases of beriberi, reported no cases of sickness or death due to shortage of food. Similarly, no cases of death or illness due to shortage of food were reported from the Northern Peninsula and Labrador. This is surprising in view of the fact that Wilfred Grenfell was conducting an active campaign to get the government of the day to do something about "starvation...on the Coast."[13] Grenfell noted that hospital records showed "repeated cases of disease from starvation, and already three deaths." Beriberi was identified as a particular problem:

> Beri-beri results from lack of certain vitamines, not found in white flour diet, and forms a vicious circle, paralysing the victim from earning anything, and so leaving an enfeebled manhood.

To support his argument, Grenfell cited the case of two brothers who had been incapacitated by beriberi since the previous year. He informed the government that efforts were being made to get the people to consume "cheaper foods" such as potatoes, cornmeal, oatmeal, and rye, but that because of the difficulty of growing vegetables it was proving difficult to teach people not to depend on white flour.

From this, it is clear that Magistrates were ill-equipped to make judgements about health matters and the effects of destitution. This is important since it was Magistrates who very often played a key role in deciding who would get public relief and the medical attention that was provided for paupers.

Efforts to improve diets were also being made by many of those most directly affected by the low standard of living which prevailed in Newfoundland. The standard of living had been made a political issue by organized labour during the War. And it was labour pressure which played a key role in bringing into being some basic food controls during the First World War. It was organized labour which provided the first estimates of a minimum living standard for urban workers — what would now be called poverty lines — in Newfoundland in the period immediately after World War I. Needless-to-say, actual living standards for the majority of workers fell well below estimated minimum requirements of approximately 20 dollars a week for a family in the 1920s.[14]

By the late 1920s there was a growing awareness of the importance of diet in many diseases. This awareness was evident in the Health and Public Charities Report of 1930. That there was a problem of beriberi, for example, was clearly recognized:

> It is an indubitable fact that the poor living conditions of many families are responsible for certain ills prevalent throughout Newfoundland. Insufficient and improper food are root causes of beri-beri or tuberculosis.[15]

This comment was made as part of a discussion of the inadequacy of Old Age Pensions and allowances for Necessitous Widows. It was suggested that even an allowance of twice the $50 per year which was allowed would "still leave much to be desired."

Poor diet, either by directly causing nutritional deficiency diseases or indirectly by undermining resistance to other diseases, was recognized as "causative of a large annual expenditure of funds for medical and hospital services." It was for this reason that many officials argued for "prevention":

> Beri Beri disables large numbers of our fishermen. Taken at its inception, it is easy of treatment and of cure. Neglected, it leads to grave consequences, calling for prolonged and expensive treatment.[16]

It was argued that some of the strain put on services by beriberi, for example, might be eased by the use of "competent investigators" who would not send cases to St. John's which were "unsuitable for treatment or which could have been easily cured at home."[17] However, "real eventual economy" would only be achieved, it was argued, by raising allowances for pensioners from $50 to $100.[18]

The need was to get people to take "the necessary and simple dietary precautions" to prevent beriberi. But how was this to be achieved with only a rudimentary health care system and without an "adequate and competent field force" of health care workers?[19]

In the late 1920s those involved in responding to the unemployment problem by sending men to work in the woods had also become acutely aware of health problems. These efforts very often ran up against the fact that many of the men were of "poor physique, badly nourished, and not properly outfitted."[20] The undermining of people's ability to work was one of the factors which led the government to make the consumption of brown flour compulsory for those on public relief in the 1930s.

One way in which an attempt was made to improve the situation was by education. By the late 1930s considerable attention was being given to health matters in schools. And *The Way To Health*, brought out under the auspices of the Association for the Prevention of Consumption and the Commission on Public Health in 1930, included a chapter which dealt with vitamins.[21]

Poor diet was increasingly linked to a variety of medical problems. A review of medical services in St. John's by H.M. Mosdell in 1933 pointed to the fact that the Division of Public Health had no field staff to handle the many public health problems of the city.[22] Infant mortality was a particular problem, the rate in St. John's being "far in excess of that recorded by the most backward communities in any part of North America." One of the reasons put forward to explain this was "dietary shortcomings."

What emerged in the first few decades of the twentieth century was a gradual awareness of the important role that diet played in many health problems in Newfoundland. Efforts to improve diets had been made, but these met with limited success.

BERIBERI IN NEWFOUNDLAND

Beriberi appears to have been first identified in Newfoundland in 1912 by J.M. Little, a doctor working with the Grenfell Hospital in St. Anthony.[23] Little was

familiar with research on beriberi in rice eaters and he recognized the disease. Little identified the principle cause of the disease as being the fact that at certain times of the year the population "came down to a diet of bread and tea," the bread being made from fine white flour. Little treated the problem by providing a diet of wholemeal bread, fresh meat and beans.

At Little's suggestion Ohler carried out a series of experiments in Boston on beriberi.[24] He fed white bread to hens and found that they developed polyneuritis. Hens fed on wholewheat bread remained healthy. This confirmed observations made in Newfoundland that hens fed with white bread scraps in winter became "leery" and died.

From 1912 the Grenfell Association was identifying and treating cases of beriberi at the St. Anthony hospital. Little had offered an explanation for and cured a condition which, in Grenfell's words, "formerly we were utterly unable to understand":

> The use of white flour, huskless rice, and an absence of vegetable proteins of certain variety are shown to be, without doubt, the determining factor in this painful and troublesome disease, all the more cruel to our people as it develops usually after the privations of winter, and so by paralysing their functions and laying them up in the summer from being able to gather their harvest of the sea, a vicious circle is established. Like a cumulative drug, the disease tends to perpetuate its evil influence and if only the use of whole meal flour, tapioca, white beans, etc., will cure it, or if some one will extract and supply the principle missing from the highly milled products on the market and now only within reach of the fishermen, a very great real benefaction will have been afforded at a very small outlay. We have made sailors' hard biscuit of whole meal, which are very palatable.[25]

In 1913 Grenfell reported that the Association was importing whole meal flour and having whole meal biscuits and buns made up in St. John's for their use.[26] The Grenfell Association was also distributing whole meal flour along the coast of the Northern Peninsula and Labrador. The news of these experiments quickly reached the ears of those in government circles, including Dr. Brehm, the Medical Officer of Health for Newfoundland. That the use of brown flour was a cure for beriberi was certainly known by many government officials by 1916.

The Grenfell Association tried to prevent beriberi by encouraging changes in the diet of the population. The aim was to reduce their dependence on white flour by an education program designed to encourage people to broaden their diet. Schemes intended to encouraged people to establish vegetable gardens were also initiated. One such scheme was started in Brig Bay in 1915.[27] By the 1920s brown flour was being used extensively in the St. Anthony hospital and widespread nutritional work was being undertaken in the North. In 1921 summer nutrition classes were conducted in six centres by trained volunteers from the United States.[28] Two hundred and fifty-two children attended these classes. This work continued

throughout the 1920s and into the early 1930s.[29] The IGA reported some success in breaking down local prejudice against the use of brown flour using promotional material like this:

> Now polished rice is extremely nice
> At a high suburban tea,
> But Abuthnot Lane remarks with pain
> That it lacks all vitamine B.
> And Beriberi is very, very
> Hard on the nerves, "says he".
> "Oh, take your vitamine B, my dears,"
> I heard the surgeon say,
> "If I had not been fed on standard bread
> I should not be here to-day."[30]

The practical work of combatting the disease was accompanied by further detailed investigation of food-deficiency problems in Newfoundland. Following Little's pioneering work, these studies documented the extent of beriberi, rickets, scurvy, night blindness and xerophthalmia and pellagra and suggested remedies for these conditions.

Appleton's study of deficiency diseases in Labrador and Northern Newfoundland published in 1921 is typical of this work.[31] An instructor in paediatrics at the University of California, Appleton made a major contribution to the understanding of the relationship between diet and disease in Newfoundland. He compared diets and patterns of deficiency disease on both sides of the Straits of Belle Isle. On the Newfoundland side, an epidemic of beriberi and xerophthalmia occurred in the summer of 1920, whereas the Labrador side of the Straits was relatively free from disease. In Labrador the diet consisted of white flour, tea, molasses, butter or butterine, salt meat and salt fish, and dried peas and beans. Limited amounts of fruit and vegetables and canned milk were also consumed, particularly by the more prosperous families. Some game was eaten in the winter months and fresh fish was eaten in the summer and autumn. Bread, butter and tea sweetened with molasses formed the basis for every meal. Meat, salt fish, potatoes and dried peas were only eaten once a week. The health of the population was not good. There was a pattern of "prolonged and stubborn constipation" and "gastro-intestinal disorders." Dental problems were common. Night blindness was widespread in April and May and isolated cases of xerophthalmia, scurvy, pellagra, beriberi, edema and rickets were found. One woman had died of beriberi and there was a high incidence of tuberculosis amongst men. Poor diet was linked to mental problems:

> The first seasonal signs of the effect of restricted diet appeared the end of March and the beginning of April, four or five months after fresh food was lacking in the diet. A sudden increase in nervous instability was evident at this season. Psychoses developed in persons with a predisposition or under special strain, such as the period of lactation or unusual mental worry. In most cases improvement or recovery followed the establishment of a proper diet.[32]

But, although food supplies were very often exhausted in April, deficiency diseases were rare.

On the Newfoundland side of the Straits over one hundred cases of beriberi were observed and xerophthalmia was very common in March. It was this time of year when people also suffered from "sensory disturbances," swelling of the legs and ankles, and pain and numbness in the extremities. Shortness of breath and abdominal pain were also experienced. The motor symptoms were described locally as "weakness." Infant mortality was also very high on the Newfoundland side of the Straits compared with Labrador.

Appleton described both areas as being part of a dietary "twilight zone" where slight changes in food intake could cause deficiency diseases. He suggested that the higher incidence of disease in Newfoundland was due to "slight but distinctive" differences in patterns of food consumption between that area and Labrador. In particular, Newfoundland families had no canned milk and no fresh vegetables. They ate little game and the consumption of fresh fish ended two months earlier than in Labrador. Those on the Newfoundland side of the Straits were, however, considered to be more prosperous than the people in Labrador. They owned cows, but the milk was made almost exclusively into butter.

Gradually the relationship between diet and disease in Newfoundland was explored by doctors, particularly those working with the Grenfell Association. Detailed investigation of dietary patterns were even undertaken. Dr. Helen Mitchell, a nutritionist from Battle Creek, Michigan, undertook survey and educational work in Northern Newfoundland and Labrador in the summer of 1929 at the request of Dr. Grenfell.[33] She collected and analyzed some fifty dietaries from more than twelve communities in an effort to uncover the "nutritive value of the year's food supply." For many the diet was indeed limited:

> In those settlements where there are few, if any, gardens, no cattle, goats, sheep or hens, the situation is by far the worst. A barrel of flour per adult per year, molasses, salt pork, salt beef, butterine or oleomargarine, a few beans and peas, a good supply of salt codfish, and a generous amount of tea, is the variety provided by most of these families.[34]

On this diet few families experienced a shortage of calories. Protein, fat and carbohydrate were thought to be in "reasonable proportions." However, there was a deficiency of minerals and vitamins. A calcium shortage was also noted and this,

together with general malnutrition, was held to be responsible for the poor state of the population's teeth and the high incidence of dental caries. The vitamin content of the food was "extremely low" and this produced the complex of deficiency diseases identified by previous investigators as "an ill-defined lack of 'pep' and ambition."[35] It also lowered resistance to diseases such as tuberculosis, according to Mitchell. The most common ailment encountered was chronic constipation and the doctors received a constant stream of requests for "opening medicine."

Mitchell's work was remedial as well as investigative. She had arrived with a wide range of "corrective foods" (milk, bran, orange juice, etc.) donated by companies such as Kellogs and Quaker Oats in the U.S.A. This food was distributed to families in exchange for participation in the health and nutrition survey.

The project was continued in 1930 by M. Vaughn, a nutritionist working under Mitchell's supervision.[36] Intensive work was carried out in Flowers Cove where the health worker also managed the Grenfell Mission's clothing store. At the time the population was suffering "great economic depression" due to the lack of fish and poor fish prices. Many people had been forced onto the dole and were living on a diet of white flour, molasses and tea. Some families were, however, raising vegetables and drinking small amounts of milk, although the former did not usually last beyond December and the latter was scarce due to the poor feed available for the cows.

The pattern of health problems was essentially the same as those already noted for the area. M. Vaughn and H. S. Mitchell did, however, provide a detailed survey of the incidence of tuberculosis, rickets and beriberi in 14 communities ranging in size from five to twenty-nine families. Beriberi was the most common disease. Its incidence varied from 3.3 to 21 per cent of the population of the communities.

Extensive educational work was undertaken by Vaughn in 1930.[37] She organized baby shows, cooking demonstrations, health talks, and a variety of competitions, including an agricultural fair with chinaware prizes, for the women. The consumption of whole grains and evaporated milk was encouraged and a program of school lunches introduced. The children were gradually induced to eat vegetables and even to like them — tomatoes proved an exception. Weight gains of from 4 to 6 pounds were recorded after the first week of lunches. So confident were Vaughn and Mitchell that things were at last changing that they reported that the people were "beginning to realize that their future living must come from the soil rather than the sea" and that "good nutrition and future health are dependent upon their own efforts to better their living conditions and that the government dole is an uncertain and unsatisfactory solution to their problems."

The most comprehensive review of food-deficiency diseases in Newfoundland in this period was provided by W.R. Aykroyd in 1930.[38] As House Surgeon at the General Hospital in St. John's, Aykroyd had begun to investigate vitamin deficiency diseases in Newfoundland. Throughout his career he was to stress that in order to improve diets and health detailed fieldwork was needed to obtain a

"knowledge of how people, and particularly poor people, really do live and behave."[39] After leaving Newfoundland, Aykroyd became a research fellow at the Lister Institute in London, Director of nutritional research for the Indian Research Fund Association, and eventually one of the most influential nutritionists of the postwar period as a World Health Organization consultant. In the 1930s he was also a member of the Health Section of the League of Nations (1931-5) and he wrote several influential books on nutrition and diet.

In his 1930 study of Newfoundland he noted that evidence of food deficiency was widespread. Dental problems were very common. Nervous disorders, bad stomachs and constipation were universal. And most people accepted "spring weakness" as being in the nature of things. March and April constituted the beriberi season and, while the death rate from the disease was not considered to be high — 15-20 per year according to official records in the period up to 1916 and about one death per year since then — it did constitute a major health problem. The disease could be completely debilitating and it was suspected that it was partly responsible for the high infant mortality rate in Newfoundland. Investigating the medical records of the St. Anthony Hospital, Aykroyd calculated that in the period 1912-28 up to twelve per cent of the admissions to the institution in April, May and June were due to beriberi. The disease was most common amongst men, who accounted for eighty per cent of all identified cases.

As a result of detailed investigations of the food supplies consumed by two samples of families in Northern Newfoundland and Labrador — those free from beriberi and those with one or more cases of the disease — Aykroyd concluded that most families met their basic "fuel requirements," but that those with less varied diets suffered from acute vitamin deficiencies. In particular, the families with beriberi were those which had few vegetables —many had had none for six months — and little fresh meat (game) in winter. Aykroyd noted that beriberi was less common in Labrador in spite of the generally poorer diets because of the higher consumption of game in winter and spring.

Aykroyd argued that beriberi was a disease of poverty:

> The association between beriberi and poverty is so close that, in examining a suspected case of beriberi, a very useful short-circuiting question is to ask whether the patient was successful at the previous year's fishing.[40]

He also noted that the disease tended to recur in individuals: A person suffering from beriberi could not go fishing and would be forced onto a poorer diet and the dole the following winter. According to this doctor, ignorance only "occasionally" played a part in preventing variety in the diet. Generally speaking, those who could afford to did provide themselves with a diet which prevented the occurrence of deficiency diseases. Because of this it was Aykroyd's view that education could only play a limited role in eliminating beriberi:

> Its prevention is an economic rather than a medical problem. The number of cases occurring in reasonably well-to-do families has always been negligible. While the better understanding of the causes of beriberi has done little for prevention, it is disappearing at present with the rise in the standard of living. In connection with Newfoundland beriberi there is no necessity, as perhaps exists in the case of tropical beriberi, for attempting to alter ingrained food habits. The general adoption of whole wheat flour would improve the health of the people but, since its advocacy for the last 15 years on the part of the Grenfell Association has produced no effect, the possibility of introducing it generally may be outside the sphere of practical politics. Whole-wheat readily deteriorates and good keeping properties, under the circumstances, are of vital importance. Moreover, whole-meal flour would check only one dietary deficiency and it is wiser to aim at a general all round improvement. It is possible that more headway would be made with beriberi in the tropics if administrators would come to regard it, not as a question of polished or unpolished rice, but simply as a problem of poverty.[41]

Aykroyd, writing after a period of relatively good conditions in Newfoundland in the late 1920s and about an area where a great deal had already been done to improve the diet of the people, was guardedly optimistic about the disappearance of beriberi. Within two years, however, the situation had changed drastically. The fishing industry collapsed in the early 1930s, poverty became widespread, one third of the population was thrown onto public relief, and people began to talk about an "epidemic" of beriberi.

BROWN FLOUR AND BERIBERI IN THE GREAT DEPRESSION

> Year by year, in season and out of season, in the hospital at St. John's, you have cases of beriberi coming in. Before I went to Newfoundland I thought that beriberi was an oriental disease, never seen in the West except when they brought up a case from the docks. But in Newfoundland it is chronic. That suffering ought not to be.[42]

During the early 1930s the effects of the Great Depression began to be seen in Newfoundland. Poverty, already an ever-present problem, became even more common. The export price of a quintal of salt cod fell from 9.00 dollars in 1929 to 4.00 in 1936 and the total value of this, one of the country's main exports, fell from 16 million dollars to 7.3 million in the same period. As fish prices fell and work became scarce up to 90,000 people, one-third of the total population, were forced on to public relief. Most of those who managed to remain employed suffered cuts in wages and salaries. Although there was a decline in the cost of many basic commodities in the period, the impact of this was very much lessened by increases in customs duties on imported goods. All the evidence points to a growth in poverty in the period. To make matters worse, governments made drastic cuts in expendi-

tures in many areas, including medical services. The budget for the General Hospital was cut from 163,441 dollars in 1931 to 114,574 in 1934.[43] Support for the Tuberculosis Sanatorium was also cut, as was medical aid for the poor — from almost 27,000 dollars in 1929 to 10,000 dollars in 1932.

We have no precise way of gauging the impact of growing poverty on people's health. That information is lacking is not surprising given that, according to a 1930 estimate, at least 70 per cent of the population was unable to obtain medical and nursing services.[44]

However, what evidence we do have suggests a substantial rise in nutritional deficiency diseases. Outbreaks of beriberi, in particular, were reported from many districts, especially those where a large percentage of the population was on public relief — the South Coast and Placentia Bay, for example. And it is quite possible that a great deal of disease related to poor diet was not recognized as such by those suffering from the disease or by at least some of the country's 80 or so doctors. Mosdell's comments on the rising expenditures for the sick poor in 1931 provides some sense of the health crisis of the early Depression:

> Perhaps as a result of times of depression and of the very hard and weakening conditions under which people have been living, we have had a series of four wide spread and virulent epidemics during the fiscal year just coming to a close. Measles, Scarlet Fever, Influenza and Beri-Beri have affected both our juvenile and adult population throughout the length and breadth of the land.[45]

By the early 1930s a campaign against beriberi had been waged in Newfoundland for many years. The Grenfell Mission had led this campaign and some limited success had been reported from parts of the area under Grenfell's control. By the early 1930s the campaign was also established in Notre Dame Bay. There it was Dr. Charles Parsons, the Superintendent of the Notre Dame Bay Hospital in Twillingate, who spearheaded efforts to combat beriberi. The following letter, written by Parsons to business people in the vicinity of Twillingate, tells us something about his work and his thinking on this topic:

> It is an acknowledged medical fact the world over that people who are on a very limited diet deficient in certain chemical substances called "Vitamins", are bound to contract diseases and physical deficiencies.
>
> People who live on bread and tea are certain to develop serious troubles if the bread is made from white flour. Why is this? The vitally important "Vitamin" which is necessary for health is present in the HUSK of the wheat. White flour in the milling process eliminates this HUSK and also eliminates the "Vitamin." As a consequence people who are dependent upon a meagre diet largely of white bread and tea do not get the necessary vitamin and as a result become sick with beri-beri which may go from the extent of a simple weakness to extreme paralysis. If people must live on only

> white bread and tea, which is the diet of most dole people, they are practically certain to develop beri-beri in greater or less extent which may develop in complete paralysis.
>
> If the dole recipients were given a mixture of half brown (or whole wheat flour) and half white flour, even if they had no further addition to their diet, they could be absolutely insured against beri-beri.
>
> Beri beri is a tremendous economic loss annually to Newfoundland. WHITE FLOUR ALONE WITHOUT BROWN IS POISON.
>
> Why not follow this simple prevention and save the taxpayers of Newfoundland thousands of dollars annually and the individual people uncountable misery and suffering.
>
> Write to me and to the Prime Minister insisting that ALL DOLE CASES MUST HAVE THIS MIXTURE. Try to co-operate in stocking brown flour and selling as much as possible to your customers.
>
> I am leaving for St. John's in about ten days and would greatly appreciate an individual letter from you stating your willingness to co-operate and your wish that the Government make this half brown flour and half white flour — mixed — a fixed policy of the Government for all dole orders.
>
> In case you are already stocked entirely with white flour for the dole orders I would suggest that you ask the Government to help you stock brown flour, and I will personally take the matter up with the Government, Royal Commission and the Governor and use every possible influence.
>
> I am taking the matter up with most of the merchants in White Bay and Notre Dame Bay.[46]

By the early 1930s agitation by such people as Grenfell and Parsons had led to limited action on the part of the government. That there was growing awareness of the problem of poor diet and nutritional deficiency disease amongst politicians is indicated by the following statement made in 1931 by J.H. Scammell, arguing through the medium of the *Fishermen's Advocate* for a reopening of caribou hunting — closed since 1925:

> It is the general opinion of the medical profession that as a result of the restricted variety of food which people will be able to obtain in these bad times, we may confidently expect an epidemic of beri beri, scurvy and such other maladies as malnutrition brings in its wake. This we ought to obviate by all the means in our power.[47]

A state-financed anti-beriberi campaign was launched in 1930, spending $2,844.49 in its first year and $6,249.10 in 1931-2.[48] The campaign continued into 1933. However, the situation continued to be serious. When Brehm, the country's Medical Health Officer, appeared before the Amulree Commission in April 1933, in reply to a question about the health of the population, he replied that there was a great deal of sickness due "entirely...to the condition of under nutrition of the

people."[49] According to Brehm, people had "got into the habit of living on a diet of bread and tea, especially in the winter" and this was giving rise to an epidemic of beriberi. He noted that the situation was "very chronic" in Placentia Bay and in Bonavista and that the disease made it impossible for a man to work. When asked how the government was combatting the problem, Brehm stated:

> Not very well. The patient should be brought in for treatment in some Institution. We have been supplying some of them with whole meal bread. But they do not seem to like it, they prefer the fine white flour, but it contains very little food. Those who take the whole meal bread for some time gradually get better, and of course under-nourishment brings on tuberculosis.[50]

Brehm acknowledged that the reason for the increase in beriberi was lack of employment, but argued that the government was unable to give the population much assistance due to lack of funds.

Commission of Government, Diet and the Dole

> We want British Fair Play;
> Why call us dole recipients;
> We work for our cash;
> We want money and not cattle feed.
> (Unemployed banner, St. John's, February 26, 1935).

> Brown flour does not correspond with the laws of gravity (Pierce Power, February 25, 1935).

It was with the introduction of Government by Commission that really significant action was forthcoming. Apparently, the decision to arrange for the use of brown flour by recipients of public relief was made even before the Commission was officially established in February, 1934. The plan to use brown flour was put into practice during the Commission's first winter in power.

This was not the first state involvement in food in Newfoundland, but it was an involvement on an unprecedented scale. During World War I a Food Control Act had been passed. This was similar to legislation passed in Canada and Britain as part of wartime efforts to control food consumption and food price. Flour, molasses and sugar were subject to controls in Newfoundland. Maximum prices were set for flour to limit war profiteering and as an economy measure from July 1918 the use of wheat substitutes was made mandatory. Later War Standard Flour — a high extraction, or brown, flour — was introduced. By 1919 this was the only flour allowed to be imported into Newfoundland. It is worth asking the question

why, with this precedent, the government did not make the consumption of brown flour compulsory for the whole of the country rather than just those on public relief?

It was not until the Fall of 1934 that the general public became aware of the Commission's plan to introduce brown flour. On October 13, 1934 an announcement appeared in the press to the effect that the Department of Public Health and Welfare was importing a special brand and quality of flour to be used for relief purposes throughout the country during the winter of 1934-5 and that this flour alone was to be used by people on relief.[51] The Council of the Board of Trade reacted strongly to the government's departure from "their usual procedure in connection with the issue of flour for relief purposes."[52] What upset the Board was that the government had purchased the flour in bulk direct from English millers at a discount price. Half the estimated 100,000 barrels of flour needed for relief had already been ordered. Those merchants involved in the flour trade complained that the government's actions would cause them "unwarranted injury." Not only would they lose a profitable business, but many claimed that they would have to carry excess stocks of flour over the winter.

The government responded to criticism by defending its decision on the basis of cost savings and the requirements of public health:

> Reports to the Department from many sections of the country make it plain that a considerable number of persons are suffering from beri-beri, many totally disabled thereby. The occurrence of this disease is not peculiar to these times. It has long been in existence in many parts of Newfoundland. Until about five or six years ago, however, it was not generally prevalent. Such cases as were discovered were, for the most part, cured by the correction of the dietary of those affected, and particularly by the substitution of whole wheat flour for the quality ordinarily used. During the last few years the number of cases reported has shown a marked increase, notably in sections where destitution is unusually prevalent or where garden crops have been a failure or have been restricted because of lack of agricultural opportunity.[53]

In fact, in March 1934 the government had tried to arrange the supply of standard flour (brown flour) through the local merchants. Samples of the flour had been submitted to the Royal Pharmaceutical Society for analysis. A flour close to whole wheat had been chosen for those on relief and arrangements made with importers to supply this flour. The financial savings expected by the government did not materialize, however, and it proved difficult to control the quality of the product when supplied by a large number of importers. The decision to import flour directly was related to the need to control the quality of flour and its distribution. Arranging the purchase of the flour through the Crown Agents for the Colonies also led to substantial financial savings. The need for saving was linked by the government to its decision to increase the dole ration.

Early in November, 1934 the arrival of the first shipment of brown flour was announced.[54] The flour was presented as a short-term solution to the problem of

beriberi, it being argued in the press that whole wheat flour was not suitable for human consumption over long periods of time because it contained too much roughage and because it had a tendency to go rancid.

The arrival of the flour and its use in the dole ration led to a concerted effort by state officials to persuade the dole recipients to accept the new product. Bread was baked on a trial basis in the City's bakeries.[55] The Commissioners, those at Government House and various other state officials did their duty and ate with gusto bread baked with brown flour. Instructions as to how to handle the flour for best results were circulated. But in spite of this the introduction of brown flour met with considerable resistance.

Both those on the dole and some of those who opposed the Commission took up the brown flour issue. *The Newfoundlander* was an early opposition newspaper. It conducted an anti-brown flour campaign by printing articles critical of the use of whole wheat flour. Typical of this kind of material is the item "The Nutritive Superiority of Bread vs. Fads" printed in November 1934.[56] The article drew on the work of Dr. J.W. Read of the Division of Chemical Research to support its argument that white bread was nutritionally superior to brown bread. It argued thus:

> There is no reason under heaven why man should adopt the dietary habits of a guinea pig just because cabbage is rich in Vitamin C, or restrict his diet to nuts because squirrels do not have appendicitis. The introduction of white flour brought no new ills of mankind. The stature, strength and health of modern man are far superior to his more or less distant ancestors who consumed whole grain and natural food just about as Nature made them.... The allied soldiers in the trenches ate white bread for the soundest of scientific reasons and they won the war. Every cult which has been hatched up to point its accusing but ignorant finger at white bread, finds itself to-day without the support of a single scientific reason.

The *Fishermen's Advocate*, also an opponent of Commission of Government, took an anti-brown flour stance. In a number of articles it attempted to expose what it called "the dole racket."[57] The *Fishermen's Advocate* opposed the introduction of brown flour from the same position as did the merchants. The Fishermen's Protective Union trading company would under the new arrangement be denied part of its lucrative trade in flour. Their argument was that the new arrangements — which incidentally also involved the bulk purchase of tea for those on the dole — were an "interference with legitimate business."[58]

But the Fishermen's Protective Union, through the *Fishermen's Advocate*, was also critical of other policies aimed at improving diets and health. They objected to the provision of milk and buns to 5,000 school children in St. John's on the grounds that this "favour" was being provided at public expense while outport children were denied a similar favour.[59]

The *Fishermen's Advocate* also questioned the nutritive value of brown bread. In fact, as early as October, 1931 the *Advocate* had launched an attack on brown

flour while supporting white flour.[60] The argument was that brown flour furnished "less nourishment" than white flour and that it was less digestible.

Not everyone objected to the introduction of brown flour. One writer to the newspaper thought that the innovation was less useful for bettering the diet of the poor than the introduction of "rabbits" in the nineteenth century, but that it had led to "improved appearance and ruddy cheeks."[61] Others, while acknowledging the beneficial effects of brown flour in dealing with the problem of beriberi, argued that:

> The standard grade ordered might have an unpleasant effect upon the digestive organs of people on restricted diets; that it would make less bread than the same bulk of white flour and therefore prove no economy; that even the hungriest dole recipients will not take kindly to it.[62]

The strongest opposition to dole flour came from those on relief. Here people objected strongly to being forced to eat what was variously referred to as "dog's food," "cattle feed," and "sourbread." One representative of the unemployed argued that humans should at least be as well fed as prize hogs and that on these ground an appeal might be made on behalf of the unemployed to the Society for the Prevention of Cruelty to Animals.[63]

The system of public relief provided the state with almost complete control of many aspects of people's lives. Relief was provided not in cash, but in the form of a standard ration valued at just under $2.00 per month per adult. To be granted relief, the applicant had to be totally destitute. Every cent of previous income had to be accounted for. All aspects of a person's life were subject to detailed investigation by the police or relieving officers. Once on relief, every meal had to be carefully rationed.

Most of the unemployed struggles in the 1930s were for the basic right to exist. This involved a struggle for access to the dole, meagre as it was. But there was constant agitation over the level of dole and the quality of the rations supplied. There was also a struggle for basic freedoms. They demanded work for wages, not dole. They wanted the requirement that work be required of the able-bodied who were on the dole abolished. They wanted to be treated like human beings, not animals, by government officials. They were against "the third degree." People wanted more food and they wanted a choice of what they would eat. They wanted cash, not rations. And they did not want brown flour. This brought them into direct conflict with the Commissioner responsible for relief, who was described by one of the leaders of the unemployed as "the most scientific starvationist that ever existed."[64] People fought brown flour and the stigma that it imposed in a variety of ways. They fought it in song (Figure 1). They fought it in protests on the streets. Eventually a degree of choice in the dole ration was gained by the unemployed of St. John's.

Figure 1

Brown Flour
by
Chris Cobb

Oh boys did you hear of the shower?
From Russia we're getting brown flour,
With a mixture of bran and corn-meal it is grand,
Guaranteed to rise in one hour.
Some say for duff it has power,
For more their bread turned out sour,
If you want to get fat, and wear a quiff hat,
Just try a sack of brown flour.

Eat one slice and be merry,
You'll turn so red as a cherry,
The doctors all claim out in Holland and Spain
It kills and it cures beri-beri.

Source: D.W.S. Ryan and T.P. Rossiter, *The Newfoundland Character: An Anthology of Newfoundland and Labrador Writings* (St. John's, Jesperson Press, 1984), pp. 120-1. The published version of this song contains another 7 verses.

The government's flour arrangements did not please the Board of Trade and this issue continued to be a source of disagreement and tension throughout the 1930s. The Board's position was that the state had no business taking control of what was a profitable trade. As part of this battle with the government the Board investigated the dole trade and health matters. The Board of Trade attempted to prove that the use of white flour would improve the diet of those on the dole, sending a sample of the brown flour in use to the Pharmaceutical Society in London in 1938 for analysis.[65] Opposition to state control of part of the flour trade led to a broad attack on the whole dole system in the late 1930s.

The introduction of brown flour did not eliminate the problem of beriberi. In the late 1930s, Dr. J.M. Olds, Medical Director of the hospital in Twillingate, reported to the Board of Trade that in Notre Dame Bay "there exists a state of semistarvation for a large percentage of the people."[66] The diseases of poverty and malnutrition were, he argued, "definitely on the increase." These problems were noticeable amongst those on the dole:

> The able-bodied on relief very definitely do suffer from malnutrition, and I am of the opinion that several years on relief will render any man unfit for hard work, later — morally and physically. It is not only the men who suffer, however. They continue to reproduce and the women in pregnancy suffer tremendously on dole diet and as a

> consequence the child suffers, possibly not so much in the period of in utero as during the period of nursing and afterwards.

But the problems were not confined to dole cases:

> There is a class of people whom I believe suffer more than those on dole. The dole diet is infinitely better than it was four or five years ago and brown flour has practically stopped the incidence of beri-beri among dole recipients. Those who are not on dole, but perhaps should be; those who can just afford to supply themselves do unwisely — brown flour is a stigmata and it is to be avoided if possible — it is those people who have no real surplus of food, but have white flour that get in trouble. It is among those that we see considerable beri-beri at present.

Poor economic circumstances were made worse by the "ignorance and prejudice" which prevented people from using foods that were available.

Contemporary statements support the idea that those who were not compelled to eat brown flour refused to eat it. One doctor writing from Fogo put it this way:

> The average Newfoundland fisherman would rather eat white bread and tea and die happily of beriberi, than eat whole wheat bread and avoid it.[67]

Opposition to the dole flour was based not only on the fact that its forced consumption set those on relief apart, but also on the fact that in some cases the product received was distinctly inferior to the white flour that was generally available. Brown flour presented a particular problem because of its poor keeping qualities — due to its high fat content. Transportation was poor in rural Newfoundland. Because of this flour was often stored for long periods, especially during the winter months. Very often it was stored in poor conditions in the stores of small merchants, without inspection or controls. Not surprising there were many complaints about flour being rancid and "insects."

The decision to introduce brown flour was the least cost solution to what was a serious medical problem. The problem of malnutrition could have been solved more completely by providing those on the dole with an adequate and varied diet. But to do this would have cost more than the government was willing to spend. It would also have provided those on the dole with a better standard of living than many of those who continued to be independent of the dole. An improved dole ration would, it was argued by some government officials, have undermined the will to work. And so, as government policy people were only provided with an estimated 50 per cent of what was considered necessary to keep a person alive and well in the 1930s.

NUTRITION IN THE 1940s

> This country is threatened with a crippling outbreak of deficiency diseases, many of which operated in the past and will operate in the future in greater measure to rob the young of proper development and restrict the activities and productive capacities of the people.[68]

The Second World War is generally thought of as a period of unprecedented prosperity in Newfoundland. There is some truth to this account. However, contemporary accounts suggest that poverty was still widespread in the early 1940s. Contemporary evidence also suggests that many nutritional deficiency diseases were widespread. Steven and Wold's study of Northern Newfoundland and Southern Labrador published in 1941 found 32 out of 353 people surveyed suffering from beriberi.[69] All of the cases were "acute," that is, "characterized by clinically clear neural or cardio-vascular disturbances." Over 80 per cent of the cases of beriberi were in males. And in females beriberi was most common in the period of lactation following childbirth. The conclusion was that:

> Beriberi is endemic in Northern Newfoundland. The number of hospital admissions is only a crude index of its incidence. In general only severe cases are admitted, in which the limbs are paralysed or the heart dilated. Symptoms of less severe deficiency are widespread among the population. A syndrome known locally as "Newfoundland stomach" is probably at least in part due to mild thiamine deficiency; its symptoms are prolonged constipation and a number of vague general complaints, such as irritability, dyspepsia, itching and burning sensations, and lassitude. Doctor La Salle of Port Saunders, Newfoundland, has treated this ailment with thiamine chloride and in some instances observed almost immediate relief of symptoms.[70]

There is some evidence to support the idea that deficiency diseases such as beriberi reappeared in the early 1940s as people went off the dole and back onto a diet of white bread.[71] This was a repeat of a pattern which had been noticed during the 1930s when, because of supply difficulties, those on relief had been forced to consume white flour for a period.

In the 1940s, people might be employed, but wages were still very low and wartime inflation must have made it very difficult for many to maintain an adequate diet. Soon a great deal of concern was being expressed about the problem of nutrition. During the Great Depression there had been no use for the vast army of surplus labour which lay dormant in Newfoundland. With the war human labour was at a premium. Efficiency became an obsession and poor nutrition meant poor workers. It was in this context that increasingly the problem of nutrition received attention.

In 1943, for example, Humphrey Walwyn, the Governor of Newfoundland, informed Clement Atlee, the Secretary of State for Dominion Affairs, that "certain

dietetic factors" were causing the Commission of Government "considerable concern."[72] Walwyn commented:

> Before the advent of the era of prosperity contingent on the war the dietary of a large proportion of our people was under the control of the department of Public Health and Welfare. This was particularly the case in connection with supplies of flour and with the issue of other items of food that should enter into a normal and well-balanced dietary. Since people formerly on the relief lists have resumed a position of independent support this control has disappeared and we have reason to conclude that there is again appearing an upcropping of diseases of malnutrition such as we experienced before the issue of relief became fairly general throughout the country.

Of particular concern to the Governor was beriberi:

> There is bound to be a rise in the incidence of beri beri and the mortality rate from this condition.

Before the outbreak of war this disease had been "under full control," but reports of its reappearance had led to surveys by Dr. J.M. Olds at Twillingate and by a special investigator from New York University in Bonne Bay. These studies "conducted under scientific auspices and with meticulous care and over a considerable period of time" demonstrated "a marked increase in beriberi and rickets."[73] Olds' report had been presented to the Newfoundland Medical Association Convention in 1941 and it had stimulated the formation of a Nutrition Council by that organization. The Council approached the government formally in early 1943.

Based on the surveys conducted by Olds and others the Nutrition Council was able to "outline...the Newfoundland nutritional problem."[74] It estimated that 70 per cent of the population had less than satisfactory blood vitamin C levels. The same percentage exhibited symptoms of B complex deficiency.

The Council suggested the immediate introduction of a program to educate the population in helpful dietary habits and methods of using and preparing local food stuffs. However, it was recognized that even intensive and persistent propaganda along these lines would not solve the problem. What was needed was a carefully-planned campaign to raise the living standard of the population. The problem was thought "sufficiently acute" to warrant the establishment of a full time division of the Department of Public Health and Welfare with special responsibility for mounting a nutrition campaign:

> As the situation is studied it becomes apparent that the Nutritional Council will bear the relationship to this campaign that reconnaissance bears to a military campaign. Tactical moves are really the concern of the Government.[75]

It was in this context that the introduction of national (brown) flour was *again* considered. However, the possibility of use of vitamin and mineral enriched white flour to prevent deficiency diseases was also considered. The wartime Food Control Board provided a mechanism by which action could be taken — Britain, the United States, and Canada had already moved in the direction of food control. It emerged as the Council's "firm conviction" that "chemical reinforcement" of white flour would be the "only method which would appeal to our people." This suggestion was endorsed by the government on both "economic" and "health" grounds.[76]

In June 1944 white flour, "enriched" on the minimum American pattern, was introduced in Newfoundland. This was white flour which on the order of the US War Food Administration had been enriched with B complex vitamins (thiamine, riboflavin and niacin) and iron to bring it up to the content of whole wheat flour. Fortified margarine was introduced shortly after.

It was not only the nutritional deficiency surveys of the early 1940s which stimulated concern about the poor diet of Newfoundlanders. The 1930s, generally, had seen a growth in concern for nutrition. Groups like the International Labour Organization took up the cause and several studies revealed the extent of nutritional problems in Britain's Colonial Empire. By the early 1940s nutrition was becoming a very political issue, especially in a colonial context. A series of articles in the *Daily Express* by Morley Richards brought the whole problem of destitution in Newfoundland to the attention of the British public and stimulated discussion of the health matters.[77]

The employment of people to work on the construction and operation of the Canadian and American military bases also led to expressions of concern about nutritional problems in Newfoundland. The very high labour turnover in the early 1940s and the inability of Newfoundland workers to perform to expected standards struck many observers in the period.

Similar concerns were expressed throughout the war. In 1945 Dr. Frederick Tisdall of the Department of Paediatrics at the Hospital for Sick Children in Toronto forwarded to Dr. J. McGrath of St. John's his observations on the capacity for work of Newfoundlanders employed in Canada:

> I have been in touch with our own people and find that they had a somewhat similar story to tell, namely, that they had to "feed up" the average labourer for two to four weeks before they could expect him to do much work...Also I have been in touch with a friend of mine, Mr. H.M. Morris, Plant Superintendent of the Bell Telephone Company, who were responsible for the installation of telegraph wires and other communications in Newfoundland, and he stated to me, confidentially, that the Newfoundlanders who worked for him were not strong and were under-sized. He says they had a terrific appetite for the first six weeks, eating two helpings of meat and everything else. After that he stated they did about one-half as much work as the average Canadian. He was of the opinion that this was due to the fact that they were not as strong as the average Canadian.[78]

Attention had been drawn to this problem by a book by US Senator J.M. Mead *Tell the Folks Back Home*, published in 1944. Mead had toured American military bases, making this comment on Newfoundland:

> The natives around here are fine people but quite a shock. They look just like the Irish, English and Scotch whose descendants they are, but for the most part they're a feeble and neglected lot of poor folks. You stop even a bright-looking one to talk to him, and he may hold his hand over his mouth most of the time, to hide the condition of his teeth. "And these are the good ones, believe it or not, that you're seeing," said an officer."The Canadian Pacific tried to recruit ten thousand war-workers from this province of three hundred thousand people. And they couldn't get 'em — not able-bodied enough. We tried the same thing when building our bases but we ended up with about two hundred and fifty and had to import the rest of our workmen all the way from the USA. After a week, we officially rated those two hundred and fifty as equal in output to about one hundred ordinary Americans.[79]

By the mid-1940s the state of health of the population of Newfoundland had become a very sensitive issue. Comments like that made by Mead were also found in magazine articles, leading to questions being raised in the British parliament about the problem of Newfoundland.[80] The whole issue of health became politically problematic and the Commission of Government even went so far as to try and control Newfoundland's negative image by vetting and editing nutritional research before it was published in scholarly journals.[81]

CONCLUSION

What this paper does is to outline something of the slow and uneven process of dietary reform in Newfoundland in the first half of this century.

The basic economic and social structure of Newfoundland generated widespread problems of unemployment and poverty and, related to this, problems of nutritional deficiency and disease. The story of reform is one which suggests that humanitarian considerations played only a very limited role in bringing about measures to improve diets. Even when the movement for reform was guided by economic considerations action was limited and often very late in coming. Even when action was taken, as in the case of the decision to make brown flour compulsory for those on public relief, it represented a least cost, limited, and in many ways inadequate way of dealing with dietary deficiencies. That the underlying problems of poverty and poor diet were not dealt with in the 1930s is indicated by the fact that in the early 1940s deficiency diseases began to reappear. During the War, however, action to deal with deficiency diseases was relatively swift. Nevertheless, the decision to introduce vitamin enriched white flour also indicates an unwillingness or inability on the part of government to deal with the basic causes

of deficiency diseases. And into the 1940s the basic problem continued to be that incomes for a substantial part — perhaps a majority — of Newfoundland's inhabitants were unable to provide them with the amount, quality and range of food needed to maintain a healthy body.

Notes

[1]M.J. Harrington and J.K. Hiller, eds., *Newfoundland National Convention, Debates*, Volume 9 (St. John's: Memorial University, 1990), page 2722.

[2]For useful background see, M. Baker, "The Appointment of a Permanent Medical Health Officer for St. John's, 1905," *The Newfoundland Quarterly*, 14 (2), 1983, pp. 23-5; Joyce Nevitt, *White Caps and Black Bands: Nursing in Newfoundland to 1934* (St. John's: Jesperson, 1978). J.K. Crellin, compiler, *The White Plague In Newfoundland: Medical and Social Issues c. 1900 to 1970 and Beyond* (St. John's: Medical History Program, MUN, 1990).

[3]C.A. Sharpe, "The 'Race of Honour': An Analysis of Enlistments and Casualties in the Armed Forces of Newfoundland: 1914-1918," *Newfoundland Studies*, 4(1), 1988, pp. 27-55.

[4]R.A. Brehm, "Report of the Public Health Department for the Year 1916." *Journal of the House of Assembly of Newfoundland* (St. John's: Government of Newfoundland, 1917), p. 523.

[5]See, for example, the early cost-benefit analysis of "Consumption in Relation to the Taxpayer," Appendix A, "Report of Commission on Public Health, 1911," *Journal of the House of Assembly of Newfoundland* (St. John's: Government of Newfoundland, 1912), pp. 603-5.

[6]"Report of the Tuberculosis Public Service for the Year 1915," *Journal of the House of Assembly of Newfoundland* (St. John's: Government of Newfoundland, 1916), pp. 650-1.

[7]Nevitt, *op. cit.*, p. 121.

[8]Brehm, *op. cit.*, p. 515.

[9]*Ibid*: pp. 518-19.

[10]*Ibid*: pp. 510-11.

[11]Public Archives of Newfoundland and Labrador (PANL) GN 1/3A File 741 1921: Harris to Colonial Secretary, October 8, 1921.

[12]PANL GN 2/5 File 411 (1): Magistrate Duggan to Colonial Secretary, July 10, 1921.

[13]PANL GN 2/5 File 399 (3): Wilfred Grenfell to Richard Squires, August 4, 1921.

[14]See, "The Cost of Living," *Evening Telegram*, May 7, 1921, p. 10. Earlier cost of living surveys had been conducted by the N.I.W.A. and used to support demands for improved wages.

[15]*First Interim Report of the Royal Commission on Health and Public Charities June, 1930* (St. John's: King's Printer, 1930), p. 201.

[16]*Ibid*: p. 127.

[17]*Ibid*: p. 128.

[18]*Ibid*: p. 201.

[19]*Ibid*: p. 128.

[20]PANL GN 2/5, 524 (1929).

[21] *The Way to Health* (London: Dent, 1930), pp. 104-7.

[22] PANL GN 13/1, Box 357, File 12, Public Health and Welfare, September 13, 1933.

[23] J.M. Little, "Beriberi caused by fine white flour," *Journal of the American Medical Association*, 58 (26), 1912, pp. 2029-30. The first diagnosis of beriberi in Newfoundland was made by Cluny MacPherson almost ten years earlier at Battle Harbour in Labrador. He identified several Norwegian sailors as suffering from the disease. See, Cluny MacPherson, "First recognition of beriberi in Canada?" *Canadian Medical Association Journal*, 95, 1966, pp. 278-9. Thanks to Ron Knowling for this reference.

[24] J.M. Little, "Beriberi" *Journal of the American Medical Association*, 63 (15), 1914, pp. 1287-90.

[25] "Dr. Genfell's Log," *Among the Deep Sea Fishers*, October, 1912, p. 12.

[26] "On Stewardship in 1912," *Among the Deep Sea Fishers*, January, 1913, pp. 4-5.

[27] "Dr. Grenfell's Log," *Among the Deep Sea Fishers*, October, 1915, p. 160.

[28] M.R. Mosely, "The Third Year of Health Work," *Among the Deep Sea Fishers*, January, 1923, pp. 106-9.

[29] See, for example, M.D. Lynon, "The Summer's Health Work at Poverty Cove." *Among the Deep Sea Fishers*, February, 1928, pp. 74-5; W. Murdock "Fighting Famine at Forteau," *Among the Deep Sea Fishers*, January, 1935, pp. 154-5.

[30] "Vitamins," *Among the Deep Sea Fishers*, July, 1932, p. 79. This is one verse from "The ABC of Vitamins," by C.H.A. The complete poem is to be found in L.J. Harris, *Vitamins in Theory and Practice* (Cambridge: Cambridge University Press, 1955), pp. xvii-xviii.

[31] V.B. Appleton, "Observations on Deficiency Diseases in Labrador," *American Journal of Public Health*, 11, 1921, pp. 617-21.

[32] *Ibid*, p. 618.

[33] H.S. Mitchell, "Food Problems on the Labrador," *Among the Deep Sea Fishers*, 27 (3), 1929, pp. 99-103.

[34] H.S. Mitchell, "Nutrition Survey in Labrador and Northern Newfoundland," *The Journal of the American Diatetic Association*, 6, 1930-31, pp. 29-35, quote p. 32.

[35] *Ibid.*, p. 33.

[36] M.Vaughn and H.S. Mitchell, "A Continuation of the Nutrition Project in Northern Newfoundland," *The Journal of the American Dietetic Association*, 8, 1933, pp. 526-31.

[37] *Ibid.*

[38] W.R. Aykroyd, "Beriberi and other food deficiency diseases in Newfoundland and Labrador," *Journal of Hygiene*, 30, 1930, pp. 357-386.

[39] W.R. Aykroyd, *Human Nutrition and Diet* (London: Butterworth, 1937), p. 229.

[40] Aykroyd, "Beriberi." *op cit.*, p. 367.

[41] *Ibid.* p. 375.

[42] PANL GN 14/1/A, Finance, File 304.2, Statistical Record 1935.

[43] *Report of Royal Commission on Health and Public Charities*, 1930, *op cit.*, p. 20.

[44] J.L. Paton, "Newfoundland: Present and Future," *International Affairs*, 13 (1934), p. 404.

[45] PANL GN 2/5 File 373A (3): H.M. Mosdell to A. Barnes, Colonial Secretary, May 11, 1931.

[46] *Evening Telegram*, December 2, 1933: 4.

[47] *Fishermen's Advocate*, November 13, 1931.

[48] PANL GN 2/5 File 581.

[49]C.A. McGrath Papers. NAC MG 30 E82: Brehm appeared before the Amulree Commission on April 6, 1933.

[50]*Ibid.*

[51]*Evening Telegram*, October 13, 1934.

[52]PANL P8/B/11 Box 27 File 5: Board of Trade to W.J. Carew, October 15, 1934.

[53]*Ibid*: Puddester to H.G.R. Mews, October 23, 1934.

[54]*Daily News*, November 8, 1934.

[55]PANL GN 13/1 Box 166 File 70.

[56]*The Newfoundlander*, November 3, 1934.

[57]*Fishermen's Advocate*, December 7, 1934.

[58]*Fishermen's Advocate*, November 2, 1934.

[59]*Fishermen's Advocate*, December 28, 1934.

[60]*Fishermen's Advocate*, October, 23, 1931.

[61]*Daily News*, March 19, 1935.

[62]*Observer's Weekly*, November 3, 1934.

[63]PANL GN 13/1 Box 172. James Kelly's words are to be found in a police report dated December 6, 1934.

[64]PANL GN 13/1 Box 172. The comment was made by Pierce Power and is to be found in a police report of an unemployed meeting on January 11, 1935.

[65]PANL P8/B/11 Box 34 File 29: Board of Trade to K.H. Coward May 27, 1938.

[66]*Ibid.* File 27: Olds to Renouf, June 13, 1938.

[67]*Ibid*: S.A. Beckwith to Renouf, June 17, 1938.

[68]PANL GN 38 S3-5-3 File 25: L. Miller and R.F. Dove to Commissioner for Public Health and Welfare, March 23, 1943, p. 2. This was a report of the Council on Nutrition of the Newfoundland Medical Association.

[69]D. Steven and G. Wald, "Vitamin A Deficiency: A Field Study in Newfoundland and Labrador," *Journal of Nutrition*, 21 (5), 1941, pp. 461-76.

[70]*Ibid.*, p. 368.

[71]PANL GN 38 S3-5-3 File 25: Humphrey Walwyn to Clement Atlee, April 30, 1943.

[72]PANL GN 38 S3-5-3 File 25: Walwyn to Atlee, April 30, 1943.

[73]*Ibid.*

[74]*Ibid.*

[75]*Ibid*: Miller and Dove, p. 2.

[76]*Ibid.*

[77]Morley Richards' articles appeared in the *Daily Express*, March 27-31, April 1, 1939.

[79]PANL GN 38 S6-1-8 File 3: F.F. Tisdall to Dr. J. McGrath, April 12, 1945.

[80]*Ibid.* See also R. Morgan, "Barren Bastion," *This Month*, March 1945.

[81]PANL GN 38 S6-1-8 File 3: Puddester to McGrath, April 6, 1945.