MEDDELELSER OM GRØNLAND
UDGIVNE AF
KOMMISSIONEN FOR VIDENSKABELIGE UNDERSØGELSER I GRØNLAND
BD. 150 · NR. 1

ECONOMIC PRINCIPLES OF THE GREENLAND ADMINISTRATION BEFORE 1947

BY

P. P. SVEISTRUP

WITH 10 FIGURES IN THE TEXT

KØBENHAVN
C. A. REITZELS FORLAG
BIANCO LUNOS BOGTRYKKERI
1949

CONTENTS

INTRODUCTION

Throughout the nineteen years that I have been in the Administration of Greenland, I have regarded it as one of my tasks to grasp, in all its bearings, the economic policy followed by Denmark in relation to Greenland. It has been a rather difficult task, because Greenland, both from the point of view of economic geography and the general conditions of human life, is very different from the subjects generally treated by writers on political economy. It has therefore been necessary to make a sober estimate of the economic geography and the historical background of the work done in Greenland and then, on the strength of this material, to try to set up the theoretical economic premises, which are somewhat different from those most commonly used, and by this means to explain the economic-political dispositions on the part of the Administration.

This being so, I have not considered it expedient at the outset to try to state the economy of Greenland from a theoretical point of view, but have contented myself with elucidating the conditions of this country in a number of special works on particular aspects of the subject. These special works partly deal with historical and partly with economic-geographical and statistical subjects, and it was my intention at some future date to provide a complete description of the principles underlying the economic policy, which Denmark has followed in Greenland. I considered this all the more important, as only by realizing this problem it seemed possible fully to appraise the dispositions to be made in the future.

The attacks which after the war have been directed against the Danish Administration of Greenland are thus not the immediate cause of this publication, any more than the changes which in later years have taken place in Greenland itself. As a matter of fact I should have preferred to spend several years on special investigations of the relations of the Danish Government to Greenland, the particular achievement of Dr. Rink and the work done by Denmark and individual Danes in the country itself. But though these comparatively recent attacks were in a way the immediate cause, if not of this work at

any rate of its date of publication, I am still of the opinion that some of the material collected through many years might be of interest in the discussions going on just now, as to the relations of the Danish Government to Greenland. But even then conditions have progressed more rapidly than could be expected at the time, when this work was finisheden, which with a delay in printing has made it appear at a time, when vital changes are already going on. Many of the arguments set forth have rather become a matter of history, and the treatment of them is consequently not quite to the point, but the principles hitherto followed and the material collected for the elucidation of the latter should in my opinion be of value, even if the present basis is in some ways changed or going to be changed. As regards the actual text only minor alterations or rather omissions have been made.

"Economic principles of the Administration of Greenland" is written in Danish and translated from the Ms. into English. This method has its obvious draw-backs, as an English writer equally conversant with conditions in Greenland would probably in many ways lay stress on other points of view or at any rate express them in a different manner. The actual translation has been made by Mrs. ASLAUG MØLLER (MIKKELSEN) M. A. who has translated a number of the "Meddelelser om Grønland" and i. a has collaborated with Captain MIKKELSEN and myself in "The East Greenlanders Possibilities of their Production and Consumption", Vol. 134 No. 2., and also in this case may be said to have taken a personal interest in the work.

Lyngby, May 1947. P. P. SVEISTRUP.

CHAPTER I

THE DANISH ADMINISTRATION AND ITS CONDITIONS

A. The Self-sufficient Economy.

The economy of the Greenland community must always, to a very large extent, be characterized by the natural conditions of the country. In an age when the inhabitants did not have access to the technical resources of Europe, the cold climate, the mountainous, infertile country, the masses of ice and the relative abundance of sea mammals and at certain seasons also of fish would leave only one possibility of human existence, viz. hunting and fishing, possibly also a very limited amount of cattle-breeding, all of this more or less following the same lines which are known from all primitive peoples living in arctic regions (i. e. north of 10° July isotherm) without any knowledge of the technique developed in Europe.

It is a current misunderstanding that the individuals of a primitive people are relatively homogeneous, but as far as I know, this has not been proved by exact investigations. In the case of Greenland it is not quite correct, the individuals having undoubtedly been as different as regards ability (here especially for hunting) as the population of other countries. As to Greenland information regarding the individual differentiation is naturally not available from an older period. In this context attention may, however, be directed to the oldest surviving Greenland legends, where mention is repeatedly made of great hunters, their position and paramount importance in the small communities, here and there also of persons, who were worthless in all trades, and the resulting economic division of the population into prosperous and poor families. It is perhaps also noteworthy that a hunter or bread-winner is sometimes called a "kayaker", and that the Greenland language has a very large number of different original words for the individual branches of the hunting trade, both from a quantitative and from a qualitative point of view. In the present century an investigation has been made of the individual distribution of the economic capability as expressed in the hunting results achieved for those parts of Green-

land, where the economic life of the population bears the greatest resemblance to an older period.

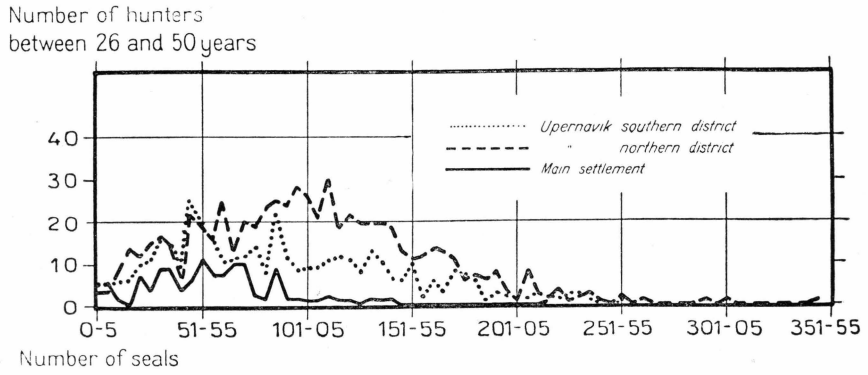
The investigation comprises areas and periods, where the population of a district has almost exclusively subsisted by means of sealing. For such areas a distribution has been made of the number of seals caught per individual in the periods 1903/04—1925/26 and 1932/33—1934/35, co-related with the ages of the hunters. For the Upernavik main district this has been given in "Summary of Statistical Information regarding Greenland", table 420, and for the Christianshaab and Ritenbenk districts in table 421. From these tables it must presumably be possible to conclude that both the very young and the very old hunters have a smaller hunting capacity, whereas the intermediary age classes, i. e. 26—50 years, must be taken as those of the fully productive bread-winner, and so constitute the natural starting point of an investigation of the yearly catch of the "normal" hunter.

For these age classes in areas, where natural economic conditions and trade implements are more or less alike, an enumeration has been made of the number of seals caught annually by a "normal" hunter; these figures have then been arranged in a diagram, the number of hunters being the ordinate and the number of seals the abscisse.

In the diagram for the Upernavik district (diagram I) which might be supplemented with corresponding facts for the Christianshaab and Ritenbenk districts (diagram CXIV of the "Summary of Statistical Information regarding Greenland") a distinction has been made between hunters residing in the actual settlement, and those from the northern and southern districts. The figures for the settlement are of less interest, the population here being less confined to sealing as their chief means of subsistence, but both for the northern and—though in a lesser degree—for the southern district, where the number of sealers is smaller, there is a regular curve with a very considerable distribution in the number of seals caught annually by each sealer. This distribution may, it is true, to a certain extent be explained by dissimilarities in the hunting possibilities of the various years and the various dwelling places. According to men acquainted with the localities in question, these dissimilarities are not so great as to obscure the general picture, which one might be inclined to find presented in the diagram, i. e. that there must be a very considerable difference between the hunting ability of the individual Greenland hunters.

It will hardly be possible to explain this difference in the district in question as the result of any great dissimilarity in the equipment of the individual hunters. Here the trade implements almost entirely consist of a kayak and a gun, as well as of a dog team and a sledge. The great divergences must in the main be caused by the different mental

Diagram 1. The individual distribution of sealing in the Upernavik district.



(From Summary of Statistical Information regarding Greenland, diagram CXII).

and physical equipment of the individuals, in other words, their ability of making weather forecasts and of estimating hunting possibilities, as conditioned by the latter, as well as the energy with which the chances are exploited in any given case. Thus tables and diagrams should support the general estimate that the individual members of the population of Greenland, as of other countries, differed very much in ability, and there is reason to suppose that this estimate, based upon information from the present time, also holds good for the economic possibilities of the population in earlier years, from which no exact facts are at hand.

Before the contact with Europe was established, the income of the Greenlanders was almost exclusively derived from sealing and must therefore for the different seasons depend upon the presence of the individual species of seals.

As to the seals of passage (and here the Greenland seal, more particularly in South Greenland, played a very considerable part as a basis of subsistence) it is beyond a doubt that the animals have only been present in very large numbers at certain seasons, and the sealing therefore has been limited to definite hunting periods. Also within the months when sealing was in itself possible, conditions often differed rather considerably for longer or shorter periods, owing to climatic conditions, ice conditions etc.

When passing to the stationary seals it is true that hunting possibilities existed all the year round, though varying with the places where the seal gathered, with the possibility of getting within hunting range, with the variations of the shorter periods as to climate, light or darkness, ice cover etc.

Finally, it should be mentioned that in the older period it was occasionally possible to catch large whales. When this happened, huge

quantities of meat were at the disposal of a limited local population, but the hunting periods were so uncertain and irregular that whaling could never, within historical times, make any kind of basis for the economic existence of the native population.

Besides the fluctuations in hunting possibilities, both within the year and within shorter periods, it must be mentioned that there have also been variations throughout the centuries[1]). Thus in medieval times the climate seems to have been milder than in the following centuries. The climate has always been of great importance in Greenland, as this country from an economic point of view is so very near the limit of minimal existence, but with the knowledge which we possess of hunting conditions in the past, it must be supposed that these fluctuations have played a greater part for the Norsemen, who in medieval times lived in Greenland, than for the Eskimos.

The economic possibilities of the Greenlanders being what they are, a great element of risk must be attached to hunting and living conditions. When sealing was good, it covered the immediate needs of the population, both as regards food, clothing, light and heat, when bad, hunger periods might quickly arise. Thus there was a decided risk, both for the individual hunter and for the whole dwelling place.

The simplest way to minimize this risk was by dividing the catch among all who lived together at the dwelling place, and from the earliest times on record there has been a customary law as to such a division between the hunter and the other members of his dwelling place. This customary law might vary somewhat from one dwelling place to another, presumably according to the particular conditions of the individual area. As a main effect may be mentioned that the customary right as to the distribution of the catch considerably reduced the risk of the individual, and presumably was an independable qualification for the primitive economic life under the inclement natural conditions.

When assuming the above-mentioned division, it must be supposed that there have been people who were inclined to profit by the rules for the distribution of the catch in order to avoid, as much as possible, the personal effort and the greater personal risk attaching to the pursuance of the hunting occupation. A counteracting of this tendency was also attempted by the provision of the customary right that any one who did not, to the best of his ability, bear his share of the hunting risk was more or less deprived of the esteem of the small community. It was particularly dangerous for the individual to place himself outside the economic unity and the social fellowship, as he was completely dependent for his subsistence upon the support of this community. It therefore seems as if the necessity of social respect would be sufficient

[1]) Cf. M. o. Gr. Bd. 130. Nr. 3 e. g. pp. 258—59.

to induce the majority of the Eskimos to contribute, to the best of their ability, to the satisfaction of the common need, and this was in fact all that was required of them.

Besides this individual element of risk mention was made of the threatening possibility that hunting might fail at all dwelling places within a given period. In certain places there were annual periods when hunting was minimal or possibly stopped altogether. In order to counteract the collective risk meat and blubber were laid by, when hunting was good, so as to form a spare supply for coming times of stress. These supplies were frequently stored at a certain distance from the dwelling places, in order to make sure that they would not be used, before it was absolutely necessary. If, owing to particularly favourable hunting conditions, such spare supplies had proved less necessary for only a few years, the population quickly became negligent in their endeavours to collect them. This psychological feature also makes itself felt at the present time among the sheep-farmers of South Greenland, who in case of a number of good i. e. mild winters are often tempted not to collect the necessary winter supplies at the appropriate season.

Everything considered, the Eskimos had thus built up an economic system in which the great element of risk, caused by natural conditions, was reduced in accordance with the capabilities and possibilities of the local population.

There have been authors who regarded this self-contained community as an ideal, in comparison with which present-day Greenland with the gradually very strong European influence is a distinct retrogression. As an example of this point of view it will be natural to refer the reader to the important work "Dansk Indflydelse i Grønland"[1]) by H. KJÆR, District Physician in Greenland. KJÆR distinguishes between two forms of communities, which he characterizes by "the seal" and "the store", respectively. Of the community characterized by the seal he says: Before the invasion of the Danes the greatest blessings of the Greenlanders were independence and economic self-sufficiency. They were independent, in so far as no foreign hand had been laid on their national property; and so they were able to live their own lives. They were economically self-sufficient, for their occupations supplied all their needs; and they would be able to remain so in the future, as long as their means of subsistence were unmolested[2]). As to the economic self-sufficiency Kjær states elsewhere: "Old-fashioned Greenland prosperity is never wealth; it is the direct result of work which might yield a perhaps fairly abundant livelihood for a certain member of individuals, but not for more; it cannot be put to any strain, neither

[1]) Copenhagen 1906.

[2]) KJÆR, p. 87.

in the form of excessive giving up of necessaries for purposes of trade, nor in the form of gifts to contemptible persons, or to parasites who do not fill their places in the economic unity"[1]). Of the work of the physician, which work he knew best from his own life among the Greenlanders, he writes: "For me there is no doubt that under the original sanitary conditions, partly in connection with a natural understanding of anatomy, so as to be able to help in case of accidents, the health of the population was better safeguarded than it would be by the appointment of a physician at each of the 150 dwelling places ... As a matter of fact, it is only in a very few cases that it is of vital importance for the patient that the physician should be able to appear within a very few days"[2]).

KJÆR entertains no doubt whatsoever that the transition to an economy based upon the store was a disaster for the population of Greenland. In his opinion both the independence and the economic self-sufficiency disappeared at the same time. He calls attention to one point: the introduction of money, as to which he says: "The Greenland community has hardly suffered greater injury by anything than by money being made a power in it; but no one seems to have realized the danger, not "the Trade", the name which with far too much justification had been given to the Greenland Administration, not the members of the Mission, who every Sunday offer up their prayers for the population: "Lead us not into temptation", and there seems to have been no guiding principle beyond that of imitating conditions at home[3])."

As to the influence of money as a dissolving element in the social unity KJÆR writes: "Money once being there, the time was not far off when help of the kind which presupposes some sort of efficiency and experience (e. g. assistance at childbirth), and which in former times was sufficiently remunerated by the person in question being given a certain standing was now paid for in cash by the Administration, the latter also giving wages to the natives, who directly entered its service".[4])

The fundamental idea underlying this estimate of the old social order of Greenland, as compared with the social economy characterizing the period immediately after 1900, when Kjær wrote his book, must have been that the social structure of the olden times was naturally rooted in the economic geography of the country, whereas the new order, "the store", was a far too slavish importation of social organizations, which were much better adapted to European countries than to

[1]) KJÆR, p. 33.
[2]) KJÆR, p. 45.
[3]) KJÆR, p. 32.
[4]) KJÆR, p. 30.

Greenland. From this he drew the conclusion that he would wish the Danish authorities to abandon their economic policy and, to as large an extent as possible, to permit the Greenlanders to return to their former state. If this were out of the question, he proposed as a subsidiary measure that the Danish administration should do as little as possible towards Europeanizing Greenland and its native population.

This point of view was naturally not one to be generally adopted at a time, when in Denmark, as elsewhere, people were fully convinced of the superiority of Europe, not only in material, but also in all other respects. There were not many, who were inclined to think that there might be any objection to an economy resting upon money in Greenland as well as in other countries.

Nor is there any reason to think that views such as these would be acceptable at the present time, and considering the technical progress of recent years it would probably be quite impossible to stop the advance of European culture and the generally accepted idea of the importance of civilization for primitive peoples. On the other hand, the experience gathered by KJÆR throughout his long years of work in the service of the Greenlanders may raise a slight doubt as to the possibility of transferring everything from the European culture sphere, and to regard it in the light of progress for the native population. Further than that no one will at the present time be able to follow KJÆR's line of thought, the population having mentally grown too much for that, and economic conditions having undergone too drastic a change.

The Indirect Effects of a European-American Economy.

Even though one might in theory imagine Denmark to be willing to follow the suggestions made by KJÆR and to withdraw as much as possible from Greenland, and even though a general international agreement might perhaps be arrived at, to the effect that other countries would not interfere, the economic life of Greenland could hardly be expected to go on along the same lines as in the olden days.

As explained above, the economy of Greenland was originally based upon a fairly constant occurrence of seals and whales in the surrounding seas. This stock has not been materially reduced by the hunting of the Greenlanders, which was in any case comparatively scattered and insignificant. There were many places along the coast, where the animals could live in peace from attacks and, what was even more important: The Greenlanders had no opportunity to attack the migrating animals at their breeding grounds.

This maintaining of the stock from one year to another was changed, when the attention of Europe was directed towards Greenland. In the

17th century whalers—first from Holland and subsequently from other European countries—commenced a systematic pursuit of the valuable whales, and more particularly in the areas where they were found in greatest quantities. At first the hunting was concentrated to the sea round Spitzbergen, but even the rather large stock there could not keep pace with the forced hunting, and in the course of a few generations it was greatly reduced in the northern Atlantic. In the 18th century Dutch vessels carried on a very intensive whaling in Davis Strait, and also here the stock was gradually reduced. In the 19th century the whalers gradually proceeded farther north or west, in the direction of the northern Canadian islands, and also here the Greenland whale was practically exterminated. The large valuable whales, also of other species, are now only met with scattered and in comparatively small numbers in the northern seas.

Whaling cannot at any time be supposed to have been the chief means of subsistence in Greenland. Nevertheless the capture of these animals, though scattered and of a casual nature, must have meant a very valuable addition to the supply of meat for those tribes, which at any rate in certain regions live dangerously near the borderline of human existence. Thus it is not improbable that there is some sort of connection between the decline and extinction of the Eskimos in north-eastern Greenland and on the islands north of Canada, and the reduction proved in the number of the large whales. At any rate the ruins of Eskimo houses in north-eastern Greenland contain a comparatively large number of whale bones, and this in its turn shows that the population greatly needed the addition to their larder, which resulted from the occasional catching of a whale[1]).

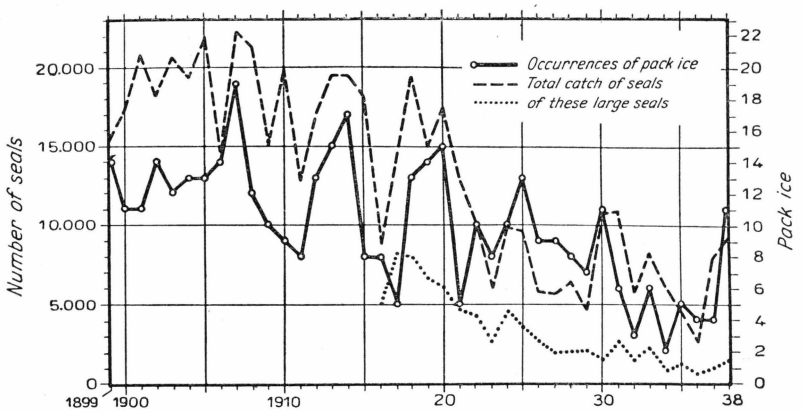
The hunting of seals by Europeans has, however, been a far more important factor in the economic life, both of the populations of East and West Greenland. It would, as particularly emphasized by RINK, be impossible for Europeans to compete with the Greenlanders in the hunting of scattered seals along the coasts, as this presupposes a very great individual hunting ability, while at the same time yielding a comparatively modest result.

On the other hand, European and American sealers have as a matter of fact entered into competition with the Greenlanders by attacking the seals of passage at their breeding grounds. These grounds are limited to relatively small areas at the mouth of the Lawrence River, the waters round Jan Mayen and the White Sea, and here thousands, even hundreds of thousands of seals in the months of spring

[1]) For further particulars see: MIKKELSEN and SVEISTRUP: The East Greenlanders' Possibilities of Existence, their Production and Consumption, M. o. G., Bd. 134, No. 2.

crawl on to the ice to breed, in which helpless state they make an esay prey for European or American sealers. Particulars are at hand as to the extent of this European-American sealing at the mouth of the St. Lawrence River (New Foundland), and these records, which cover very long periods are contained in "Summary of Statistical Information regarding Greenland", table 162. From these it appears that the number of seals of passage caught within the period 1830—60 amounted to as

Diagram II. The occurrence of pack-ice and seal hunting in the Julianehaab district 1899—1938.



(From Summary of Statistical Information regarding Greenland, diagram XLIII).

many as 500.000 annually, and it is not to be wondered at that the stock of seals in the regions round Davis Strait could not hold its own against such intensive hunting, and that this is one of the causes of the decline of the hunting of seals of passage (Greenland seals), which was formerly the safest basis of the economic existence for the Eskimos in South and North Greenland.

The reduction of the stock of seals in the seas round Greenland, caused by the hunting at the breeding grounds, is however hardly the only cause of the factual decline of sealing in South Greenland. Another explanation is, it is thought, the change of the climate which as a matter of fact has taken place within the present century; this change i. a. finds an expression in the smaller quantities of pack-ice (Storis) which is otherwise carried along by the East Greenland current in the spring and summer months and drifts into the Julianehaab Bugt. The pack-ice, as is well known, carries large quantities of seals (bladdernose) along with it, and it appears from an investigation that there is rather a close connection between the occurrence of seals and the extent of seal hunting in the Julianehaab district in the years 1899—1938. The result of the investigation is given in diagram II. This diagram first

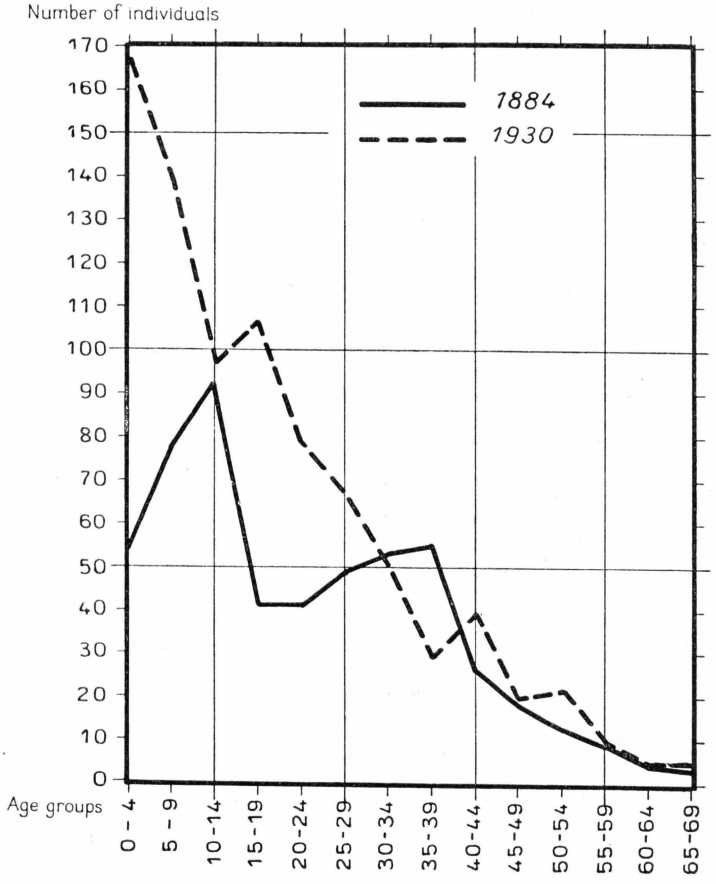
shows the decreasing quantity of ice in the district and then the number of seals caught. There seems to be some connection between the results of the two sets of investigations, which also agrees with the estimates of men acquainted with local conditions.

As to East Greenland it seems possible to observe a connection between the European sealing operations in the ice and those of the Greenlanders along the shore. Here it is perhaps less the pursuit of Greenland seals at their breeding ground off Jan Mayen than that of bladdernose seals, which has gone on since the eighteen-seventies in Danmarksstrædet, not far from the Angmagssalik district, the only area in East Greenland which was inhabited at that time. When GUSTAV HOLM arrived at Angmagssalik in 1884, this Eskimo tribe was a decidedly declining or perhaps rather a dying people, chiefly consisting of older persons. This has been proved in details through a comparison of the age distribution in East Greenland in 1884 and 1930, as shown in diagram III. The very small number of children, particularly under four years, bears silent witness to the correctness of the reports, which GUSTAV HOLM received from the population as to one hunger year after another in recent times, and there is perhaps some connection between this and the increasing intensive hunting of seals not far from there in Danmarksstrædet. Nor is it improbable that the intensive hunting with fire arms from sealing vessels has made the bladdernose seals so shy that it has been more difficult to come so close to them as was necessary, if the Greenlanders were to reach them with their primitive hunting implements, such as harpoons etc.

When trying to understand the effects of the clash between the pursuit of the European sealers and that of the original population of the east coast on the stock of seals in Danmarksstrædet, it is well worth noticing that the meat of the animals of capture as a rule was without any value for the European hunters, whereas for the Greenlanders it was the very basis of existence. This tremendous difference in the subjective prizing of the seal meat shows in a nutshell that the wish, which as already mentioned, has been expressed by KJÆR, viz. that the Greenland population should be left to continue their primitive and untouched life, must necessarily remain an ideal, which cannot be realized and cannot make part of a practical Greenland policy.

However, the formerly mentioned considerable decline of sealing in West Greenland has not deprived the group of people living there of the economical basis of their existence, seeing that the occurrences and catches of seal during the last generations have been replaced by huge occurrences of cod. Cod fishing is now the chief means of subsistence of the population of South Greenland, and this has raised various new problems in relation to the outer world. The great quantities

Diagram III. The age distribution of the East Greenland population in 1884 and 1930.



(From Summary of Statistical Information regarding Greenland, diagram CXXI).

of cod are of importance, not only for the population of Greenland, who ply their trade along the coasts, but also for fishing vessels from far-off countries, which carry on extensive fishing operations in Davis Strait. The latter are partly interested in being able to fish in the Greenland coast waters, possibly also within the fjords, partly in obtaining permission to call at its ports and to stay on shore, at least for purposes of watering, or for preparing the catch and, if possible, to overhaul and repair their vessels before starting on the return journey across the rough northern Atlantic.

Whereas the population of Greenland in an older period were protected from the outer world by the situation and natural conditions

of the country, so that no one would think of encroaching upon their natural economic areas, all this has changed in the course of these last centuries. If there were no means of shutting out strangers and limiting their access to the country, they might be expected to come to Greenland, perhaps only for shorter periods, in order to profit by hunting and fishing. Thus the protection given to the economic life of Greenland by its natural conditions crumbles away, not only because of the reduction of the stock of seals and whales by the ruthless hunting for reasons of profit and far from the coasts of Greenland, but also on account of the economic interest taken by foreigners in the great quantities of fish in the immediate neighbourhood of the coast.

The protection arising out of the geographical conditions have of late been still further reduced by the development of aviation. The main transatlantic route, it is true, passes considerably further south than the southern point of Greenland, but for various other possible routes the shortest way between two economical centres will be across Greenland. This country is now in many ways not so far removed from the outer world, as it used to be, and it must be foreseen that economic forces from without will in the future be more directed towards Greenland, than was the case in the past. Therefore, the Greenlanders themselves can not be expected to go on living under their old economic and cultural conditions and to keep free of the contact with the outer world, which contact may in the future furthermore be supposed to increase in intensity. With the present contact the economic problem for Greenland has therefore been to combine the geographical conditions of the country with the economic effect produced by the outer world, and to do it in such a manner as to benefit the population to the largest possible extent, as it is not possible to imagine the Greenlanders living on under their old economic and cultural conditions, even if it might be the happiest existence for them. The task at hand may be accomplished in various ways, according to the character of the factors of valuation which make themselves felt in the premises, and the central point in the following statement will be to show the manner in which Denmark has tried to solve the problem.

C. The first Trading.

There can be no doubt that the comparison made by KJÆR between a Greenland economy based upon natural products, and another based upon money must at any rate be regarded as one-sided. In the Greenland economy based upon natural products some of these must naturally have a very small marginal utility. When the Greenlanders caught seals (in order to obtain the necessary meat for food and skins for clothing)

it was a joint production of meat, blubber and skins; a certain amount of the blubber the producer had difficulty in utilizing without some sort of trade connection, and in the same manner he would have a supply of sealskins, the marginal utility for which must be comparatively small.

Also by his hunting activity in other fields the Greenlander would have the possibility of acquiring a considerable quantity of fox- and partly also reindeer and bear skins, and these would as a rule be of comparatively little use for him and his family.

On the other hand, when exclusively limited to an economy based upon natural products, the Greenlander would have to do without many things which, once the contact had been established, he would discover to be in the possession of the Europeans, and which gradually became indispensable to himself. As such may be mentioned fire arms, with which the animals of capture could be killed with surer results and at a far longer range than with the older hunting implements; other very important articles were sewing needles, for though bone needles, it is true, existed in the days when the economy of Greenland was exclusively based upon natural products, the difference in use between these and the needles of the store was so great that the East Greenlanders from the primitive Angmagssalik district would in former times undertake voyages lasting for several years to the southernmost trading posts on the west coast, only in order to buy needles and a few other easily transported articles. It may also be mentioned that the original population had cooking utensils made of soapstone, and it was of great importance for them to replace the latter with copper-kettles, saucepans etc. Neither should it be overlooked that the original Greenlanders were only able to secure larger pieces of timber in the shape of driftwood, which was carried by the current from the Siberian rivers across the Polar Sea, and they would consequently have good use for considerable quantities of timber (not least for the building of houses). This as well as other commodities, more particularly tools and iron objects manufactured and used in Europe, came in very useful for the Greenlanders, even though they otherwise still lived under the original economic conditions.

Against the value set upon the various articles for use stand supply and demand on the general international market. In the 18th and 19th centuries there was especially a very great demand for the oil produced from seal and whale blubber, and as the hunting everywhere was rather limited in proportion to the market, the prices obtained were relatively high. There has also always been a not insignificant, though greatly varying demand for skins of seals, foxes and bears. On the other hand the original international demand for fishing products, such as dried

fish, was not greater than that it could easily be satisfied from fishing areas, considerably nearer the market.

On the other hand, the European technique could, also in earlier times, produce relatively cheap fire arms, cheap needles, cheap cooking utensils, cheap wood etc., and there was consequently a possibility of a mutually profitable interchange of products.

An interchange of this kind could easily be brought about, as European and especially Dutch whalers in the 17th and still more in the 18th century carried on whaling in Davis Strait, and they were naturally interested in pocketing the sure profit derived from trading with the Greenlanders along the coast, and more particularly in buying their surperfluous blubber. In a trade of this kind, the costs of which were very small, the whalers held a natural powerful position, as they were able to go elsewhere, if not satisfied with the relation of prices offered by the Greenlanders in one place.

When in 1721 HANS EGEDE began his mission work in Greenland, he was also interested in trading, as he intended in this manner to provide the economic basis for his mission work. As contrasted with the interests of the Dutch captains this trade would have to be carried on with a view to the future, and consequently it rather aimed at selling such commodities to the Greenlanders, as would profit them in the long run, and at the mutual benefit of both countries throughout the years.

Until the beginning of the 19th century all trading with the population of Greenland was carried on in the form of barter, the profit standard of value being a barrel of blubber. For Norwegian-Danish long-run trade it was naturally in the interest of all concerned to work out a system for settling the account so as to stabilize the interchange.

In 1764[1]) the following "prices" were used:

A barrel of blubber was calculated equal to 5—6 good grey fox skins, to 10—12 white fox skins, to 6 seal skins (Greenland seal), to 8 small seal skins, speckled seal, to 10 ordinary seal skins etc. As to the commodities in demand among the Greenlanders it may be mentioned that a rifle was calculated equal to 5 barrels of blubber, a pound of fine powder to $^1/_2$ barrel of blubber, a pound of Dutch tobacco to $^1/_6$ barrel, a trading box $^1/_3$ barrel of blubber etc.

These prices naturally did not apply to the foreign captains, who traded in a more casual way along the coasts. In such transactions the European buyer and seller would occupy the position of a double monopoly. If he could not get the prices he demanded, he only needed to go somewhere else along the coast, whereas the Greenlanders would have to content themselves with the utility value of his commodities,

[1]) M. o. G., Bd. 131, No. 9, p. 46.

and possibly to wait for a chance connection with some other Dutch captain.

The Danish-Norwegian trade gradually prevailed, and when in 1774 the State took it over, a more fixed system of prices was worked out, the principles of which are still applied, and which we shall therefore return to in the following.

The commodities acquired in this way the Greenlanders could use for bartering among themselves, more especially at a time when, as has already been mentioned, every settlement did not as yet have a permanent store of its own. The East Greenlanders sometimes came as far as the trading posts of the west coast; at other times the trade connection took place through intermediaries, and there have also been attempts at establishing fairs, where the population from larger areas could meet in order to trade.

Thus, at first sporadically, the population of East Greenland through the offices of the Danish Government gradually entered upon a regular trade communication with the world market, and once opened these channels have constantly been made wider. The development has never gone the other way, nor have there been any great fluctuations.

In the present century the connections have greatly increased, not least because sealing nowadays—particularly in South Greenland—does not play an essential economic part, but has been replaced by cod fishing. Where this is the prevailing trade, the Greenlander gets the greater part of his income through the store. The cod can only to a limited extent supply him with food, and not at all with clothing, the tools required by his trade, fuel and lighting. In short, the Greenland families are now in every way dependent upon their connection with the world market.

In this development the form of the channels of communication—the trading possibilities—has not changed in essentials, and it might perhaps be expedient to stop here and to try to make out the causes of the special forms, and the reason why they have been able to withstand attacks and criticism, which at any rate throughout the last century right down to our own days have been set forth time after time and supported by the most widely differing arguments.

CHAPTER II

SUPPLY AND DEMAND

When Greenland is made a link in the world economy, this may be imagined to take place in different ways. The individuals may enter into free trade communication with independent individuals elsewhere, and supply and demand may then be determined as the sum of supply and demand of the individual. Or Greenland may, as a closed economic circle, enter into communication with the outer world, possibly only with a single country. The consequence would be that this intermediate link (the economic circle) in its calculations can insert special regulating valuation factors, both in view of the commodity and in view of time.

A basis for the understanding and valuation of the various possibilities must be an investigation of what Greenland has to offer, and what it must demand from abroad, and in both cases a realization of what can be estimated as to the elasticity of supply and demand.

In order to understand the formation of markets in the individual areas, as far as possible both actually and potentially, it will be expedient first to glance at the geographical conditions.

A. Geographical Conditions.

A very essential condition of the economic policy of a given area must necessarily be its climate. Table IV gives a summary of the average monthly temperatures in the various regions of Greenland, the period covered extending over several years, Reykjavik, Thorshavn and Denmark having been inserted for comparison.

The table shows that by far the greater part of Greenland has a negative yearly mean, and only the two southernmost measuring stations have a yearly mean of between 0° and 1°. The information relating to July is of particular interest, showing that the whole of Greenland lies north of the 10° July isotherm. Furthermore, the summer being short, it is easily understood that grain cannot ripen, and that there can grow no forests anywhere in Greenland, in other words, the carbonic hydrates necessary for existence under modern conditions in the shape

Table IV. Temperatures of air° Celcius.

Month	Nanortalik 1884—1925	Ivigtut 1880—1925	Godthaab 1876—1925	Qornoq 1876—1925	Jakobshavn 1876—1925	Godhavn 1923—1930	Upernavik 1876—1925	Thule 1916—20	Scoresbysund 1925—1930	Angmassalik 1895—1930	Reykjavik 1873—1920	Thorshavn 1873—1920	Denmark 1886—1925
	W N H*)	W N H	W N H	W N H	W N H	W N H	W N H	W N H	W N H	W N H	W N H	W N H	
	45°11′ 60°8′ 7 m	48°10′ 61°12′ 30 m	51°43,5′ 64°10,5′ 20 m	50°58′ 64°26′ 3 m	51°2′ 69°13′ 31 m	53°31′ 69°14′ 11 m	56°7′ 72°47′ 35 m	68°48′ 76°34′	21°58′ 70°29′ 17 m	37°33,5′ 65°36,5′ 29 m	21°56′ 64°9′ 5 m	6°44′ 62°2′ 9 m	
January	÷5.3	÷7.4	÷9.8	÷10.8	÷17.7	÷16.6	÷21.8	÷29.2	÷17.4	÷8.0	÷1.2	3.2	0.1
February	÷5.2	÷7.1	÷10.1	÷10.9	÷19.1	÷18.7	÷23.2	÷29.4	÷18.7	÷9.1	÷1.2	3.1	÷0.1
March	÷3.3	÷4.5	÷7.5	÷8.0	÷15.9	÷15.7	÷21.3	÷26.2	÷16.8	÷7.3	÷0.5	3.0	1.6
April	÷0.5	÷0.5	÷4.0	÷3.8	÷9.6	÷10.0	÷14.3	÷17.3	÷12.4	÷4.0	2.4	4.9	5.5
May.....	3.0	4.5	0.8	2.2	÷0.3	÷0.8	÷3.8	÷5.0	÷4.4	1.0	6.0	6.8	10.7
June	5.0	8.0	4.4	6.4	4.8	4.6	1.8	1.5	1.8	4.9	9.2	9.3	14.2
July.....	6.2	9.9	6.5	8.5	7.6	7.5	4.9	4.7	4.5	7.1	10.9	10.6	16.0
August	5.8	8.6	6.3	7.7	6.6	6.9	4.9	3.8	3.3	5.9	10.3	10.4	15.3
September ...	4.0	5.0	3.2	3.4	1.9	2.5	0.8	÷2.2	÷0.2	3.1	7.5	9.1	12.3
October.....	1.4	1.1	÷0.8	÷1.1	÷3.7	÷1.6	÷4.0	÷10.0	÷7.0	÷1.2	4.0	6.7	8.1
November....	÷1.6	÷2.9	÷4.6	÷5.1	÷8.6	÷6.3	÷9.9	÷18.0	÷12.7	÷5.0	1.0	4.7	4.1
December....	÷3.9	÷5.9	÷7.9	÷8.8	÷12.6	÷10.8	÷17.0	÷25.2	÷15.5	÷6.7	÷1.1	3.5	1.6
Yearly average	0.5	0.8	÷1.9	÷1.7	÷5.6	÷5.0	÷8.6	÷12.7	÷8.0	÷1.6	3.9	6.3	7.5
Maximum....	..	20.6	15.7	16.9	17.5	16.2	15.9	..	..	19.6	17.6	17.6	..
Minimum....	..	19.2	÷22.2	÷23.9	÷36.0	÷26.8	÷34.1	..	..	÷25.2	÷15.7	÷9.0	..

*) W = Western longitude. N = Northern latitude. H = Height above sea.

(From Summary of Statistical Information regarding Greenland, table I).

of food stuffs and timber must be conveyed to the country from foreign parts.

The yearly mean temperatures in Greenland seem to have been rising during the present century. With a view to illustrating this, table V gives the mean temperatures at Jacobshavn 1881—1938. From this table it appears that there has been a not insignificant rise, and this observation, as is well known, is the same as the one recorded from a great number of other measuring stations scattered about the whole of the polar area.

Even though there have been no systematic investigations of the sea temperatures, such as those made of the air temperatures, there are however so many scattered observations and measurings as to make it seem a likely supposition that there has been a corresponding rise in the average temperatures of the sea along the coasts of Greenland during the present century. Diagram VI shows the surface temperatures

Table V. The mean temperature at Jakobshavn 1881—1938.

Month	1881–1900	1911–15	1916–20	1921–25	1926–30	1931–35	1936–38
January	÷18.0	÷16.3	÷16.0	÷17.3	÷10.1	÷14.1	÷14.9
February	÷20.5	÷19.2	÷16.5	÷19.4	÷12.6	÷12.5	÷14.5
March	÷17.2	÷17.4	÷11.9	÷13.1	÷10.1	÷11.4	÷11.8
April	÷10.9	÷9.3	÷10.9	÷7.3	÷ 5.9	÷6.1	÷8.6
May	÷0.8	÷0.2	0.2	0.0	1.5	1.1	0.2
June	4.8	5.1	3.4	5.0	5.9	6.3	3.1
July	7.6	7.4	7.1	7.0	8.4	9.2	8.7
August	6.1	8.6	7.0	6.4	7.7	7.2	6.9
September	1.4	2.9	2.4	1.6	3.7	3.6	2.5
October	÷3.7	÷2.6	÷4.7	÷3.8	÷3.2	÷3.3	÷5.6
November	÷9.8	÷7.4	÷9.4	÷6.1	÷7.3	÷7.5	÷7.4
December	÷14.6	÷13.0	÷12.6	÷ 10.8	÷9.6	÷8.8	÷13.6
Yearly average	÷6.3	÷5.3	÷5.1	÷4.8	÷2.9	÷3.3	÷5.1

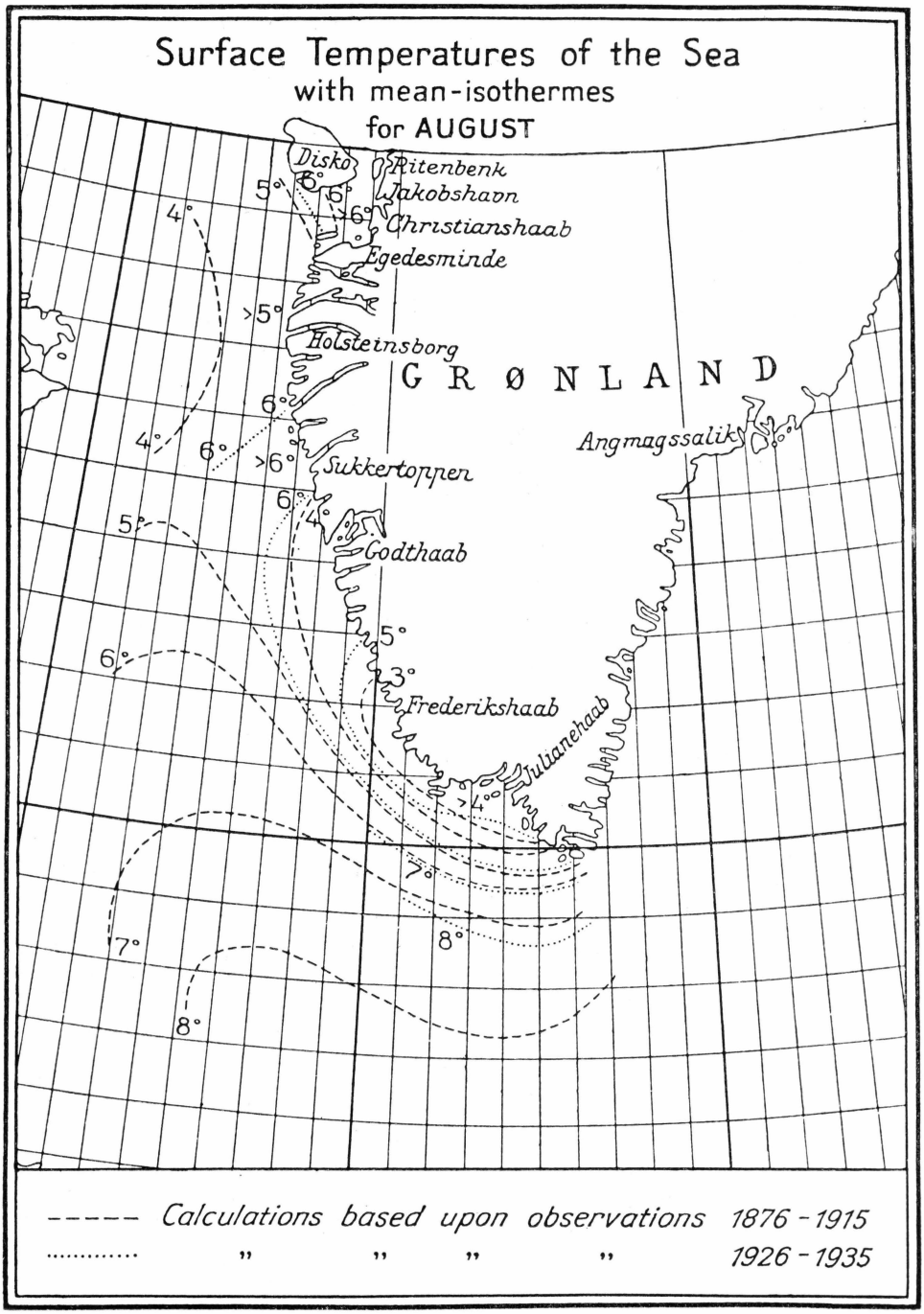
(From Summary of Statistical Information regarding Greenland, table 3).

with the mean isotherm for August, calculations being based on the periods 1876—1925 and 1925—1935 respectively.

From the diagram it seems to appear that there has been a fairly considerable rise of temperature in the sea, in the same manner as was shown above for the temperatures of the air. The cause of the rise in the air and sea temperatures is not known. Several theories have been put forward, but nothing is known for certain. It seems to appear from LAUGE KOCH's formerly mentioned investigation of the ice off East Greenland that considerable fluctuations have taken place in the course of the centuries, and as far as can be estimated a confirmation of these suppositions may be expected as the result of the pollen investigations which are going on just now. From the point of view of economics we may consider the observations and dispositions as conditioned both by rising temperatures and by trade conditions, based upon a return to the temperature level of the 19th century. This conclusion is of great economic importance, as it has proved that with the climate of the present day there are such huge quantities of cod along the coast that the latter, at any rate in South Greenland, have been able to form a base for the economy of trade, whereas in the 19th century the occurrences of cod were more limited, both as regards time, locality and quantity.

Sealing, however, still plays an important part, so much so that besides contributing largely to the food supply of the population, it yields very considerable quantities of blubber, which in the form of oil can be sold on the world market; in the same way Greenland has been able to supply fairly large quantities of sealskins, always pre-

Diagram VI. Surface temperatures of the sea in the period 1876—1925 and 1926—1935.



(From Summary of Statistical Information regarding Greenland, fig. VII).

supposing that other clothing materials can be supplied from without. The seals, it is true, cannot as formerly supply a basis of existence for a population of the same size as e. g. a century ago, at any rate not in present-day Greenland, and far less make an adequate supply of the material conditions for a cultural development.

During the last generation the occurrence of cod has been of particular importance for the Greenland supply on the world market. The cod occurs, as already mentioned, in greatly varying quantities. Thus in the years preceding 1850 there were very considerable quantities, and this gave rise to comprehensive investigations. It appeared from these that there might, it is true, be large shoals, but their occurrence fluctuated so much that it was impossible to reckon with fairly reliable fishing possibilities from one year to another. During the following fifty years or more, the occurrence of cod along the coasts of Greenland was very sparse, and the fishing carried on was of no great importance from the point of view of export.

As mentioned in connection with the climate very large occurrences of cod have again, during the last generation, appeared off the coasts of South Greenland, and during the last war these occurrences have even penetrated farther north to the southern districts of North Greenland. At the present time cod occurs in such large and apparently regular shoals that plentiful and rather regular fishing can be carried on. There is, however, the peculiarity that the occurrence of cod and so the fisheries off Greenland are based upon comparatively few years in which the spawnings have lived in great quantities, whereas the intermediate years are only sporadically represented by adult specimens (cf. Summary of Statistical Information regarding Greenland, section 2).

The reason why spawning only occurs in certain years is not known, but from an economic point of view it means a very great element of risk, as no one knows whether in the future the plentiful yearly occurrences will follow so closely upon one another as not be interrupted by periods with very small quantities of cod. This may possibly apply to certain areas, but it may also, as shown by former experience, be the case along the whole of the coast. When chiefly basing the economic life of Greenland upon cod fishing, the element of risk assumes very great proportions, and this risk may in its turn be regarded both from a short-run and from a long-run point of view. When the former view is adopted, it will be a question of developing and exploiting the immediate fishing possibilities to the largest possible extent, as long as the favourable situation is there; when the latter, it will be a question of developing other possibilities of subsistence with lesser elements of risk, so that the population would be better equipped to cope with a permanent change in the abundance of fish.

As important secondary fisheries mention should be made of halibut, salmon, Greenland halibut, shark and finally, from the very latest years, shrimps.

From an older period halibut was found in rather considerable quantities in Davis Strait, and as it has played a considerable part on the world market, the fishing of it has been undertaken both by Greenlanders and by large foreign fishing vessels operating out in the strait. The price of salted halibut being comparatively low, a canning factory was established at Holsteinsborg in 1927. As the halibut grows very slowly and may become very old, there has always been the risk that the stock would not be able to bear up against the effective fishing; already about 1930 the large halibuts seem to have been exhausted, and the Greenland Administration had to be on the look-out for another use of the canning factory.

Salmon may occur in rather considerable quantities, but very scattered and somewhat irregularly in the many comparatively small rivers of Greenland. At the individual fishing grounds salmon fishing has been carried out and may perhaps be extended, though only to a very limited extent. During the first world war an experiment was made to take up canning at one of the largest rivers, but owing to the varying occurrences and the shortness of the season it proved impossible to make the establishment yield a satisfactory return. Therefore, the market can now only be supplied with salted salmon.

The Greenland halibut occurs in comparatively few places, and more particularly at the mouth of Jakobshavns Isfjord. Within limited areas it can be utilized for trading purposes, and it is sent home salted. In the Julianehaab district it has formerly occurred in rather considerable quantities, and a rational exploitation was attempted, but of later years the quantity has declined very considerably, presumably because of the rising sea temperature, which does not suit this polar fish.

On the other hand, shark seems to be far more permanent in its occurrence, both along the whole of the coast, throughout the season and from one year to another. The shark's liver yields an oil, which is in fairly great demand on the world market, and it is supposed that shark's, skin, when tanned, may become a valuable commodity. Acting on the long-run view mentioned above the Administration of Greenland has taken an interest in the further development of this fishery.

Finally, mention should be made of the shrimps which, at any rate at certain localities, occur in abundant quantities, and which it would seem possible to catch at all seasons, when trawling is not prevented by the quantity of ice and the cold. The abundant occurrence and the considerable demand yield a possibility of utilizing them for industrial purposes and of establishing canning factories with fairly satisfactory

prospects of profit. One such factory is already in existence, and more will probably be built in coming years. Owing to the great market value of the shrimp in proportion to its weight, the costs of transportation both for the sending out of the necessary means of production and the sending home of the finished article will be less then e. g. in the case of cod.

Besides the economic possibilities of the sea, which are of importance from a long-run point of view, mention should be made of possibilities ashore. The average temperature in connection with the July isotherm should in itself be sufficient to render a considerable growth of grass possible, and this in its turn might form the basis of an extensive agriculture (breeding of sheep, cattle and reindeer). These possibilities are, however, considerably reduced by the fact that especially the southern regions, where climatic conditions are best, are so mountainous that the areas fit for a good and plentiful grass-growth are so very limited, and those suitable for homefields so very small as only to permit of a very limited development of farming. Farther north there are large plains with a fair growth of grass, but these are too far away from human habition, where the other possibilities of subsistence are to be found. Attemps to breed reindeer on a large scale have not even been made, although—i. a. when comparing conditions with those of Alaska—it must be supposed that there is here a unused possibility of not inconsiderable importance.

Farther inland there are a great number of blue and white foxes. More particularly the skins (furs) of the former are under good economical conditions in great demand and have yielded excellent profit. Further, there are along certain parts of the coast a greatly decreasing number of bears, the skins of which at times may petche good prices.

Mention may further be made of the eider as a possible future source of income. In former times it occurred in very large quantities, but the stock has in the course of time been greatly reduced, owing to an intensive and reckless pursuit. Of other species of birds there are some which—as will be mentioned later on—may be of importance in the food supply of the Greenlanders, and the feathers of which may have some, though not very great value as an article of export.

The huge mountain area of Greenland should contain possibilities for the occurrence of valuable minerals, and many imaginative people have spoken and written of the great mineral wealth of the country. Until now only the cryolite has been of considerable economic importance; it has been known since the middle of the 19th century and has, not least in more recent years, contributed very largely to the economy of Greenland.

Apart from that, relatively small quantities of a number of minerals have been found, but up till now in such concentrated occurrences that

it has not been possible to start a profitable mining. Further, it must be borne in mind that there are several rather large occurrences of coal, partly in the immediate neighbourhood of the sea. The quality is, however, not particularly good, and under ordinary conditions it would not pay to work the occurrences in Denmark, but one cannot quite shut one's eyes to the possibility that—possibly after having been made subject to preliminary treatment—these may become useful as an article of export, in case the Danish need of foreign exchange should grow even more strained, and so put a great value on the Greenland coal. On the other hand, the occurrences of coal already now play a great part in the supply of fuel of the Greenlanders themselves.

Besides the coal mines mention may be made of the marble occurrences. These are large and the quantity partly good, but the distances between them are rather considerable, and the economic importance will depend on the future demand, as to which it is now impossible to form any opinion.

The fundamental condition of the factual market demand for the products which Greenland has to offer, is that these products are able to bear the costs of transport. As Greenland is far removed from all the possible markets, and the costs of transport are consequently high, the necessary condition of commercial intercourse must be that it is possible to supply the Greenland products with lower costs than those with which they are to compete, and which come from other and better situated places of production. The lower costs may, in their turn, be of a different kind; they may be due to a lower level of wages in relation to the work done, or the Greenland occurrences must be richer or more easily accessible than elsewhere. Where this is not the case, competition in the commonly prevailing form cannot take place.

To this must be added that the occurrence of most of the products mentioned above are very scattered, so that not only the costs of transport from Greenland to the market are very considerable, but that there are also very extensive transports in Greenland to the places of debarcation, and owing to the scattered places of production this local transport must take place in small and expensive units.

B. Supply and Elasticity.

The supply of commodities from the economic circle of Greenland will naturally depend upon the price obtainable on the market. By the elasticity of the supply is understood the relation between the relative changes in prices and the relative changes in quantity. In such cases where a comparatively small reduction of prices brings about a great change in the supply, the latter is said to be very elastic, whereas in

such cases where a great change in prices brings about a small alteration in the quantity supplied, the supply function is said to be elastic. Particularly in Greenland the relation between price and quantity may vary greatly as to time, and in some of the cases to be dealt with in the following it will therefore be natural to regard the function of supply as having three dimensions.

A characteristic feature of the supply function for seal products is that the production takes place at any point along the coasts of Greenland, but that it is everywhere very small in relation to the market. The supply from the individual localities must, as far as stationary seals are concerned, be termed very unelastic, for the seals of passage, it is true, somewhat greater, but hardly so great that the population of a settlement can be very much increased without suffering by it. Generally speaking the function of supply for seal blubber and seal skins must be characterized as unelastic, both in relation to varying prices but also throughout the years in relation to an increasing population.

At a period when sealing is the chief trade, the result of the relatively narrow range of the function of production and supply at the individual settlements will be that the population is only able to exist, when it lives very scattered, and we see how the demand for an increased production in the West Greenland of an older period and in the East Greenland of to-day results in a wish for the scattering of the population, its moving out to outposts and dwelling places, and the founding of new outposts etc. The distribution of the population, which in the first place was conditioned by the hunting of seal, is illustrated by table VII, which shows the number of inhabited places divided into groups according to size.

The table shows the pronounced decentralization of the population, and in the history of Greenland there are examples of the decentraliza-

Table VII. Inhabited places divided into groups according to size.

	1886	1901	1921	1938
Inhabited places in South Greenland				
with 1— 50 inhabitants	34	44	31	29
— 51—100 —	22	23	24	22
— 101—200 —	15	15	19	18
— 201 —	4	4	7	11
Inhabited places in North Greenland				
with 1— 50 inhabitants	23	56	46	30
— 51—100 —	22	25	31	30
— 101—200 —	17	13	14	16
— 201 —	0	1	3	7

(From Summary of Statistical Information regarding Greenland, table 21).

tion being tentatively promoted by public dispositions. Thus, the Moravian Brethren a hundred years ago had caused a considerable concentration round the mission stations, but this development was systematically counteracted both by the Danish inspector in Greenland and by the directors of the Royal Greenland Trade.

The moving out must necessarily be limited by the existence of places to which the increasing population could emigrate, and where there were satisfactory hunting conditions. The number of such possible new dwelling places is very limited in the West Greenland of the present day. This is of interest when regarding the facts given in table VIII as to the number of inhabitants in Greenland.

Table VIII. The population of Greenland.

	Greenlanders	Europeans
1805	6,046	?
1840	7,877	251
1860	9,648	232
1880	9,720	280
1901	11,621	272
1911	13,075	384
1921	14,081	274
1930	16,222	408
1938	18,040	391

(From Summary of Statistical Information regarding Greenland, table 16).

From this it appears that the population has been trebled within the period 1805—1938; and when bearing in mind the description given in the history of Greenland as to the difficulties of finding suitable trading places for the population, with a view to carrying out a desirable greater distribution, this strengthens the idea that the Greenland of the present day is over-populated, if sealing is to be regarded the dominating trade. A doubling of the productivity of sealers will presumably not by any means double the production, whereas a reduction of their number will hardly bring about a similar reduction of the sealing, and this we will express by saying that the relative population optimum has been exceeded.

The exceeding of the relative population optimum not only applies in relation to the sealing trade, but also in various other fields. The best known example from an older period is the hunting of the flocks of wild reindeer, found in large areas of Central Greenland. When through communication with Europeans the Greenlanders became possessed of fire arms, the animals could be killed at a greater distance, and so

the hunting capability of the individual hunter was greatly increased. As the number of hunters could hardly be reduced, there was soon an increase of the hunting results. The number of animals killed, particularly in the period 1840—50, was so great that the marginal value of the meat at the hunting grounds became practically nil. The hunters, therefore, only took those parts of the animals, which were of immediate value for them (the skin, the tongue, the very best parts of the meat), whereas the remainder was left behind. The stock of reindeer could not hold its own against such excessive hunting, as clearly appears from the trading with reindeer skins at the settlement of Sukkertoppen and Holsteinsborg in the middle third of the 19th century. The decline was very great, and this contributed to the impoverishment of the settlements, which at one time had been quite prosperous. For a long period the lessening of the stock led to a still more ruthless pursuit, with the result that the stock was farther diminished and the future possibilities of production lessened.

As with the reindeer so also with the eiders. The great quantities originally existing in Greenland were pursued in the most reckless manner. From a short-run point of view this naturally brought a good deal of cash, but the stock quickly decreased. The function of production must also here be regarded as declining and that very strongly in the course of time. We have already mentioned several fields, where it has proved difficult to keep up the function of production throughout the years. Face to face with a development of this kind a short-run consideration would lead to the wish of a still more intensive pursuit, whereas a long-run consideration first and foremost must lead to efforts towards safeguarding and, if possible, increasing the stock.

Efforts towards preserving the stock may be imagined to aim at a lowering of the relative prices, an economic policy which the Greenland Administration was very reluctant to adopt; the reasons of this reluctance will be mentioned later on. As remaining possibilities must, in particular, be mentioned the development of the stock through hunting regulations in the areas and within the periods, where the stock was most valuable, or by carrying out other dispositions, which favoured such an increase.

As regards the former line in the policy of supply and production, viz. the protection, it must be borne in mind that this would *a priori* be a difficult task for a people consisting of hunters. However, the representatives elected by the Greenlanders themselves very soon realized the importance of this step and agreed to a proposal aiming at preservation, and this proposal in its turn has gradually been carried out. It has later proved that these regulations did not lead to any unproportionally large number of transgressions, from which it may be

concluded that the whole of the population have grasped the idea underlying the regulations. The whole of this question has, however, been exhaustively treated by Oldendow in his book on the preservation of nature in Greenland, and I do not think there is any reason to supplement the information there given by any remarks of mine.

Whereas the object of the hunting regulations is a stabilizing of the function of supply, the other group of possibilities aim at making such regulations as may tend to improve the method of supply throughout the ages. As in Iceland it might be possible to rationalize the supply so as to obtain the greatest possible amount of downs from eiders' nests without detriment to the hatching, and that to the further development of the stock. When bearing in mind the large quantities of eiders which at one time were to be found in Greenland it should not seem impossible to increase the production to such an extent that the supply might be expected to rise instead of declining, as has hitherto been the case.

As to the reindeer the carrying out of the above-mentioned regulations would probably, in the course of time, lead to a minor increase of the stock, whereas an actual rationalizing of the efforts would presumably aim at a very considerable increase of the production factor f. inst. by replacing or supplementing reindeer hunting with the breeding of half-tame herds of reindeer. Here experiences from Alaska can be used as a starting point, and according to these it would seem possible to develop a rather comprehensive reindeer breeding in Greenland. This will presumably bring about an increase both of skins and meat, which might be of importance for the food supply of an increasing population, and so might contribute towards shifting the population optimum.

The production and supply of fox skins will, within rather long intervals, hardly be strongly influenced by the price. No very comprehensive substitution of products can be imagined, seeing that out of regard to the quality of the fur the hunting of foxes takes place in the winter months, and during this period the production has no greater possibilities of substitution, if the prices should happen to fall. An increase of the production proportional to the existing stock would seem most likely, if the population could be given better opportunities for reaching the best fox districts (easier access to motor boats). A rationalization aiming at an increase of the stock may be effected by laying out the fish offal found in such abundance in South Greenland, especially in the districts where the greatest number of foxes are to be found. This question has been discussed in the course of the negotiations between the Greenland Committee of the Danish Parliament and the representatives of the Greenland Provincial Councils, and it is to be supposed that plans to this effect will be carried out in a very near future.

The elasticity of supply for sheep farming products must be supposed to depend upon the different economic possibilities in the Julianehaab district, there being presumably a rather considerable cross elasticity. In as far as relations of prices are satisfactory, it must be possible to reckon with a rising function of supply throughout the years. When the Greenlanders in the course of time learn to collect and utilize winter supplies, there are sufficient quantities of fodder for a considerably increased stock, though it cannot be supposed that sheep farming will be of any very great importance for the population outside the district mentioned.

Within the fishing industry the function of supply for cod must presumably be very easily influenced during the years, when the large quantities of this fish occur. In the years with abundant occurrences of cod there are very great possibilities of production, which in the main are only limited by the size of the population and its trade implements, such as lines, motor boats, implements for cleaning and curing fish, and the capacity of the fishing houses.

For the production of cod in the good years it may justly be maintained that the scattering of the population over many outposts and dwelling places is extremely uneconomical. A wish has also been expressed that, with a view to the economy of cod fishing, the population should be collected at the fewer fairly large dwelling places (e. g. by extending and modernizing the fishing houses of the latter). Whether this can be considered a rational proceeding depends upon a valuation both of the occurrences of cod and the prices which can be expected in the future.

With the quantities of cod occurring off Greenland in later years it can be maintained that the population optimum has as yet in no wise been reached, but it is very difficult to form any fairly accurate estimate, particularly because of the uncertainty of the future occurrences.

As to the fishing of shark the most characteristic feature is a pronounced cross elasticity in the supply, as compared with the cod fisheries. If there are large, easily accessible quantities of cod, there will be no very great inclination to tackle the far more tiring and, as a rule, much less profitable shark fishing. Only in periods, when there are no occurrences of cod, attempts will be made to turn shark fishing to account. If the cod disappears entirely from the waters of Greenland, a greater interest can be expected to be taken in shark fishing. Even if very little is known regarding the stock of sharks, it is possible to form a supposition on the strength of the experience gathered during the last century, according to which the risk of exhausting it is not great, so here the Greenland breadwinners have a reserve trade, if natural conjunctures should prove to be declining.

As regards the fishing and supply of halibut and seal the supply will perhaps fluctuate in inverse proportion to other branches of production, but in the main it will be fairly constant and independent of the prices. For halibut conditions would be more or less the same, if it were not for the rather comprehensive fishing operations carried on in Davis Strait. The time factor is here great, and it has hitherto been necessary to reckon with a decreasing supply of this valuable fish, as time goes on.

As regards the function of supply for shrimps the occurrences are, according to the information at hand, practically unlimited. The weakest link in the chain of supply is here undoubtedly the canning, and the function of supply may therefore be characterized by a reference to the number of canning factories with the appertaining sea-going material. There is already one establishment of this kind, while one more has been planned, and it will undoubtedly be possible to develop the supply by establishing a great number of such factories. The time factor in the function of supply must depend on the policy of investment adopted, but the possibilities are here considerable.

When regarding the function of supply for Greenland as a whole, it must in the main be supposed to be rather unelastic, the supply being strictly limited by the natural poverty of the country. This small elasticity of supply has made itself pronouncedly felt during the whole of the last and the first decennia of the present century. Of later years the function of supply has upon the whole become more elastic through abundant access to the production of salted fish. The supply of salted fish may be made to rise, partly through increased prices, partly and perhaps still more by providing the population of Greenland with better trade implements, such as fishing tackle, motor boats, salting houses etc. The immediate production may also be raised by a considerable investment of capital, but this proceeding can only be expected to lead to a satisfactory result, if the abundance of cod continues.

C. Elasticity of Demand.

The need felt by the population of Greenland for the products of the world market has undergone a marked change in the course of the last century. As long as the economy of Greenland was based upon the seal, the need of the products offered by the world market was very small. The Greenlanders had their daily food supply, clothing, heating, lighting and dwelling, without having recourse to the store, and therefore the population could exist as free individuals, independent of others.

If at that time the Greenlanders had anything to offer at the store (blubber), they would in return first of all buy fire arms and trade

implements (investigations in the Angmagssalik district show that the whole of the male adult population in the first years after the colonization were in possession of shot guns). Beyond these there were not many things which the Greenland families of the past were particularly anxious to acquire. If the sealer had a certain quantity of the commodities in demand at the store, he took in exchange as many of the European commodities as he could get. According as he had little or much to sell, he might get a little more or a less in exchange. A century ago the commodities bought for the remaining cash were presumably in the main coffee and sugar. Until the Greenlander had accustomed himself to the products of the store, his most necessary consumption was chiefly independent of the store. The elasticity of prices was small for trade implements as well as for necessaries, and originally very great for the other products, which elasticity must however be imagined as decreasing, when the habits of consumption became more firmly established.

The development throughout the years has brought about essential changes in the picture presented; the establishment of habits of consumption have played a considerable part, but it is still more important that most of the Greenlanders, with the gradual decline of sealing, were no longer able to provide for their absolutely necessary needs by means of this native trade. Thus, in their daily existence, they became fairly dependent upon the store for many absolutely necessary articles of consumption within the groups of food supply, clothing, heating, lighting, housing etc. The population of Greenland is now, as a matter of fact, entirely dependent upon the store, and it would be a catastrophe, if present-day Greenland only for a shorter period should have no access to foreign supplies. The demand for a large number of groups of commodities is very unelastic and characterized by their being absolute necessities.

This very great change in the elasticity of demand is in its turn connected with the fact that the basis of the economic life of Greenland has changed from sealing to cod fishing. The man who provides for himself and his family by fishing cod and producing salted fish cannot base his existence upon payment in kind, but is obliged to go *via* the store, where he must sell practically everything he produces and buy practically all he needs.

For certain districts various investigations have been undertaken, particularly as regards the food supply, with a view to ascertaining the value of commodities supplied (the proportion between the quantity of articles of food sold at the store and the total calorie requirements of the population of the district). It has been proved that the imported articles of food constitute a constantly increasing percentage of the quantity of food consumed.

Here we may stop for a moment to look at the change in the demand for food stuffs, the food supply, a century or less ago chiefly consisting of meat and partly of blubber, a food rich in calories and well suited to the climate. In consequence of the development during later years it has been necessary to a very large extent to replace the meat by the cheapest articles of food from the store, that is, the proteinous meat had to be replaced by black bread, rich in carbo-hydrates, and for the more prosperous families by white bread, which is less valuable as an article of food. For further particulars see "Summary of Statistical Information regarding Greenland".

The Greenlanders are now entirely cast upon import, and the prices of the groups of commodities in their relation to one another (and their value) must be a matter of importance. This seems to be one of the principal causes of the strong rise in the consumption of sugar, which already in the thirties of the present century exceeded that of several of the great European countries; thus at the coal mines of Kutdligssat the consumption of sugar per individual has been proved to be greater than in any country that I know of. The cause of this is undoubtedly the great calorie value per krone spent. Such a radical change in the supply of food must naturally be of great importance in other fields; I beg to call attention to the investigations of the teeth of the Greenlanders in areas where meat still plays a decisive part in the food supply, as compared with the Julianehaab settlement, where it is nearly exclusively determined by the carbohydrates of the store. As a main result it may be said that the demand, with a view to covering the absolutely necessary articles, has become much more elastic than formerly.

This change in the character of the elasticity also makes itself felt as regards clothing. In the older times seal skins were the foundation of the general apparel of the population, and the purchases at the store were more or less dictated by fashion. It was naturally more elegant to be dressed like the Europeans, and many young Greenland women have been glad to go about shivering in order to be able to wear thin European cotton stuffs. But the demand for European clothing was not in the long run exclusively a question of fashion. When sealing declined, it became more difficult to provide the necessary skins, and there also proved to be an interest in warmer pieces of apparel, which were more suited for the arctic climate. The store should not only be supplied with things to catch the eye, but also with things for use. The purchases of apparel ceased to be characterized by an element of luxury, but became a necessity. When the sealer and the fisherman with his family had got the necessary articles of food, they must begin to think of the necessary clothing, and in the course of years the demand for articles of apparel became more unelastic.

Finally, mention should be made of the elasticity of demand for such commodities as relate to housing. Here there was at first very little demand for the products of the store, but this demand has increased lately, not least as a result of the Danish influence in the direction of more hygenic housing conditions. Within a shorter period the demand is perhaps rather elastic and influenced by the prices, but this will reduce the state of repair and so increase the demand throughout a longer period. When regarded from the point of view of a longer period, the demand also in this respect will be rather unelastic, and the low degree of elasticity will be further reduced by the demand set forth by the authorities, when giving loans as to a suitable state of repair.

D. Relation between Supply and Demand.

The short description given in the preceding of the elasticities in the supply and demand of products on the part of the population of Greenland shows a markedly different structure in older as compared with more recent times.

In an older time the hunter came to the store with his surplus production, and this whether the prices at the store were high or low, because he had practically no other use for the products in question. The quantity of commodities which he demanded in return were determined by the money at his disposal. In case the relation between the commodities changing hands was unfavourable, he would in the main offer the same amount and be content with a little less of the commodities of the store. The basis of his economic existence was chiefly independent on the policy of prices adopted by the store. The population of Greenland was in an older period rather unresponsive towards changes in the relation of prices, that is, rather untouched by changes in the state of the market.

When looking at the situation of to-day the demand, as already described, is very unelastic. This also applies to the supply of the various products, the supply of cod being the most elastic.

The population of Greenland will, in case of a rise in prices, be apt to demand about the same quantity, but it will be very difficult for them to procure the necessary increased income except through cod fishing, where there is a very great element of risk (which may be characterized as a natural conjuncture). In many cases the population will not be able to buy such quantities at the store as must be considered absolutely necessary for the maintenance of life.

With the development undergone by supply and demand the Greenland community must now be characterized as responsive to conjunctures. The Greenlanders will naturally be able to bear a rising conjuncture

on the world market, in case the relation of prices develop in their favour, and it will be easy enough to make them demand their share in the development of conjunctures. But if the latter leads to an unfavourable change in the relation of prices, it will be felt as a very hard, almost unbearable blow and will naturally give rise to a feeling of bitterness against the Administration, which has let the population be hit by the fall in conjunctures.

It may undoubtedly be maintained that the Greenland community of the present day is greatly responsive to conjunctures resulting from the relation between supply and demand. The consequent fluctuations will presumably be felt all the more, as the Greenlander puts a high value on present-day blessings in comparison with those of the past and those which it is thought that the future will be able to give him (as to this later). As the total result of the investigations dealt with in this chapter it may be said that the Greenlanders will be greatly influenced by considerable changes in their relations of prices coming from without.

CHAPTER III

ANALYSIS OF THE EXPORT MARKET

Apart from the elasticity of supply and demand the basis of the trade between Greenland and the world market on the Greenland side is the corresponding elasticity within the world market. What is the interest of the world market in the articles which Greenland has to offer, and what can be its interest in supplying the demands of Greenland?

The first thing to be taken into consideration is the economically insignificant size of Greenland. Any contrast between a Greenlander and a buyer or seller from without must be in favour of the representatives of the world market. The best possibility, which in this connection can be imagined for the Greenlander, is the perfect competition where dispositions of the market, as based upon power, cannot have any influence. As the perfect competition is rare at the present time, it is of importance for the Greenlanders or the economy of the Greenland community to be more closely bound up with the economy of a larger community. For the economy of Greenland not only an immediate situation is of importance, but also the structural possibilities which may present themselves in essential fields.

The oldest known communication between the world market and Greenland took place in medieval times, when there was a settlement of Norsemen, particularly in the southernmost part of West Greenland. The old Norsemen throughout the whole of that period kept up a constant trading communication, partly with Iceland and partly with Norway. The economic basis of the Norsemen in Greenland was cattle-breeding, which as a rule was localized within the fjords, where there was most grass. In addition they carried on some hunting, and by this means they obtained a number of products which were in relatively great demand in Europe, such as skins (furs) and walrus tusks. The trading expeditions which brought the necessary supplies to Greenland apparently paid their way, so that the prices obtained for what Greenland could supply would pay partly for the journey and partly for the European products to be given in exchange.

This navigation, however, ceased towards the close of the Middle Ages, chiefly, it is to be supposed, because the expeditions in question no longer proved profitable. The reason for this was presumably a change in the relations of prices, with the easier renewal of supplies for the world market from other countries. A more intensive trade communication had presumably sprung up between western Europe and Russia, from where furs were produced in such quantities that the prices fell, and the dangerous navigation of South Greenland no longer yielded any profit. From then the Norsemen of Greenland have been isolated from the outer world and were no longer able to hold their own, partly against the climate which about that time seems to have began to grow worse, and partly against the attacks of the Eskimos.

A. Oil.

It lasted several centuries, before communication between Greenland and the northern countries was again established, and in the meantime the Norsemen had disappeared. When in 1721 Hans Egede again opened up trade communications between Norway and Greenland, it assumed a more permanent character. The new trade communication was not established for purposes of actual trade, but was intended to form an economical background for the work of the mission.

The price relations were now different, and the trade with Greenland in the 18th and 19th centuries was first and foremost based upon the considerable demand for whale oil on the European market. The need of whale oil had for a long time been considerable, but for the greater part it had been supplied by the whaling industry, which was more particularly carried out in the Arctic Ocean round Spitzbergen. When the latter declined, owing to the decrease of the stock of whales, good prices could be obtained for other oil, and thus a new economical basis for the commercial intercourse with Greenland was established. The oil was produced in Greenland, particularly from the seal blubber bought from the Greenlanders, and it was reboilt in the establishment of the "Greenland Trade" in Copenhagen and then sold at bi-annual auctions. For the Government the proceeds from the auctions were a relatively good economic basis for Greenland, as it was in those days.

Towards the end of the 19th century new products appeared on the world market, which to a large extent were able to replace whale oil, and the natural consequence of this was that the prices of oil fell. A change had taken place in the world structure of the market, so that in a lesser degree than formerly it needed the chief Greenland articles of export, and this in its turn lead to the result that the navigation

of Greenland again became unprofitable; at any rate the proceeds from the trade were no longer able to form the economic base of the general cultural tasks undertaken.

This development of market conditions was continued with very considerable fluctuations, which in the main were determined by events connected with the wars throughout the earlier half of the present century. It is true that there was an increasing demand for fats on the world market, but this demand did not increase proportionally to the supply. To a very great extent the necessary supply grew out of the greatly increasing quantity of fats from vegetable products, which owing to the climate could not be produced in Europe, but which can easily be supplied from warmer regions, there being a greatly increased demand for soya oil, ground-nut oil and copra and a rather considerable one for whale oil. This change was pronouncedly structural, and the rich oil of the tropics in connection with the European technique was able to supply rapidly increasing quantities at falling costs and prices. Without entering into the details of this development, information has been given in table IX[1]) regarding prices and quantities of two of the more important raw materials for the production of vegetable oil. It appears from the table that the production has been increasing greatly, and there is hardly any doubt that the tropics and other hot countries in the future have the possibilities of supplying far greater quantities of raw materials for the vegetable oils.

More particularly in the years between the wars the whaling industry in the Antarctic has given an added impetus to the supply of the need of fats. The whale oil produced in this way has naturally contributed to the development of the world market, where the prices in the course of some ten years fell to a third of the level about 1923.

Even though the whaling industry in the Antarctic should decline somewhat, there is no doubt that the tropics and the sub-tropics are able further to increase the production of vegetable oil, so that it cannot be expected that there will be any great demand for the Greenland fats within a reasonable future. The some thousand tons, which Greenland is able to supply, cannot have the slightest influence on the prices of the world market, but it is to be expected that the long-run conditions of the market must be relatively low prices, determined by the comparatively low costs of production.

This structural development has in the present century been interrupted by two extraordinary periods of war conjunctures. During the first World War of 1914—18, and to a lesser degree during that of 1939–45 the supply on the world market has been essentially lower than the demand. The chief cause of this are difficulties connected with the

[1]) Source: Annuaire statistique international.

Table IX. The world production and prices of copra and soya beans.

	Copra		Soya beans	
	Quantity in 1000 quintals	Prices per quintal in gold francs	Quantity, without China, in 1000 quintals	Prices per quintal in gold francs
	approximately		approximately	
1923	10,700	74	?	31
1924	11,260	72	51,300	30
1925	11,750	78	55,300	31
1926	13,020	69	60,000	28
1927	12,430	71	62,165	28
1928	15,190	69	61,135	29
1929	15,790	60	60,960	28
1930	13,650	50	69,200	21
1931	13,520	34	70,000	13
1932	13,240	30	58,700	12
1933	16,310	21	62,400	9
1934	16,170	15	50,700	10
1935	15,960	19	62,500	12
1936	16,300	23	61,800	14
1937	16,800	25	64,800	12
1938	18,570	17	71,400	12
1939	18,200	15	78,700	15

transport, and during the first World War the result was a renewed demand and a very great rise in the prices of Greenland oil, but this extraordinary movement was characterized by its presuppositions: war and blockade and cannot be supposed to be a permanent feature in the valuation of the future possibilities for the Greenland supply of fats to the world market.

In this connection it should, however, be mentioned that the Greenland fats in some cases have particularly valuable ingredients e. g. vitamines. When it becomes possible fully to utilize the latter by means of a special treatment, a special function of demand may be developed, which differs very much from the ordinary demand of fats.

B. Greenland Skins (Furs).

In addition to fat the Greenlanders have for many years offered skin (furs) to the world market. These skins are more particularly those of foxes, bears and seals, and information regarding the quantity offered and the prices obtained for them are dealt with in "Summary of Statistical Information regarding Greenland", section 29.

Of the skins sold the bear and seal skins have been of less economic importance, the former because the number is comparatively small and the supply varying. The quantity must be supposed to decrease with the increasing utilization of the areas, more particalurly in North Greenland, where the bear breeds. The number of seal skins has, it is true, been relatively large in an older period, but decreasing with the growth of the population and the decline of the sealing industry. Apart from war periods prices have been comparatively low, and it is hardly to be supposed that the seal skins in the future will be of essential importance in the economy of Greenland.

On the other hand the fox skins have been of great economic importance, particularly in the years between the wars. The supply, especially of the blue fox skins, has in proportion to the small total world production, been of some importance for the world market. The demand is greatly fluctuating, and the explanation of this is twofold. First, the demand for skins of blue and white foxes greatly depends upon the changing fashions. Secondly, it is to a very large extent conditioned by the possibilities of income for a small but particularly prosperous part of the population. In order to be able to buy blue fox skins a considerable income is required, and the demand for these skins is therefore greatly dependent upon the distribution of income. When an equation takes place, for instance through taxation, the demand for skins will—everything else being equal—decrease. An analyses of the demand for fox skins will therefore presumably lead to a greatly varying demand throughout the years, but owing to the expected equation of income, this demand must in the long run rather be expected to have a tendency to decrease.

However, the demand for the fox skins on the world market cannot be regarded as an isolated occurrence, as there are substitutes approximating so nearly to the real article that the demand for blue fox skins may further depend upon the prices of these substitutes. Here there is special reason to mention the silver foxes, in relation to which there is a considerable cross elasticity, the extent of which must be supposed to fluctuate throughout the years as the result of changes of fashion. Where the silver foxes offered are the result of hunting, they are of no great importance as substitutes owing to their high prices and small numbers. Here conditions have, however, changed materially, in that skins of silver foxes of later years are supplied from a very great number of farms f. inst. in Norway.

Under these conditions the supply of silver fox furs will be greatly dependent upon the cost of production, seeing that a variation in the demand of the market may give rise to reactions as regards prices within a limited period. As the costs of production are not particularly

high in relation to the prices obtained for the animals of capture, the prices of silver fox skins will presumably become more stable and the level lower than formerly.

Owing to the large possibilities of substitution the expected and in part already realized development of prices for silver fox skins cannot but come to be of importance. If it should prove that blue fox skins throughout a certain period would undergo a special development, owing to a special tendency in the fashions, it is to be supposed that such a development will further the farming of blue foxes, which industry however seems to be somewhat more difficult than that of silver foxes, but by no means should be considered improbable.

Even though the furs of the animals captured in some cases may yield an excess price as compared with those supplied by the fox farmers, it is to be presumed that the demand on the world market for blue and white fox skins from Greenland will be less in the future, and apart from quite extraordinary situations the level of prices must consequently be supposed to become more stable but lower than formerly.

Finally, the question may be raised as to the extent to which Greenland will be able to carry on profitable fox farming. The answer to this question first and foremost depends upon the possibilities of prices on the world market and then upon the possibility of obtaining suitable fodder. It will hardly be possible to provide meat at a reasonable cost, except in very limited quantities in connection with sheep farming. The fodder must therefore chiefly be offal from the fisheries, and according to experiences hitherto made this rather seems to have a deteriorating influence on the quantity of the skins. Everything considered, this industry is not very likely to be considerable source of revenue.

C. Fishing Products.

In later years the Greenland supply on the world market is greatly influenced by the large fisheries, and more particularly through the last twenty years or so by the rapidly increasing cod fishing. The cod is shipped from Greenland in the form of salted fish, that is half cured, the finished article of consumption being split cod.

The demand for split cod is especially pronounced in the Catholic countries, particularly because of the need felt during fasting times. The demand must be supposed to be comparatively fixed so as not to be greatly influenced by changes in prices, seeing that the split cod in the areas in question is not subject to essential competition (fasting times). An essentially increased supply will, therefore, cause falling prices, whereas a decreasing supply makes prices rise quickly. The curve of demand for the world market must therefore be characterized as unelastic.

Table X. The value of cod fishing in shillings per kg[1]).

	1913	1919	1934	1938
Denmark	0.23	0.50	0.19	0.22
England	0.25	0.92	0.27	0.26
Iceland	0.10	0.29	0.08	0.08
Norway	0.09	0.38	0.10	0.11
Sweden	0.32	0.64	0.22	0.22
Germany	0.19	0.40	0.22	0.19

This being so, the scarcity during a war will cause greatly increasing prices, which however cannot be expected to last longer than until the amount of supply again becomes normal.

This general view is supported by the information contained in table X, which shows the value of cod fishing in various countries in shilling per ton. It also shows the considerable rise of prices after the war of 1914—18 and then the fall to the former level. During the last war the prices of salted fish have again risen very considerably. It is here of particular importance to substantiate the long-run tendency found in a comparison between 1913 and 1934—38 (years which from the point of view of conjunctures are more or less the same) and which rather show a falling tendency, when bearing in mind the rise in the general level of prices.

The table further shows the considerable difference in the prices obtained for cod brought to the market fresh or salted (compare e. g. the figures for England and Iceland). In the future efforts will presumably be made in many countries to take the cod to the market in a frozen state. This will presumably bring about an increase surplus at higher prices and in consequence of this a structural fall in prices, so that the tension of prices must be expected to decrease owing to the excellent new freezing methods.

The supply is chiefly produced by the large cod fisheries off northern Norway, Iceland and New Foundland. It may vary somewhat with the quantities of fish at the fishing grounds and with weather conditions. Regarded over a somewhat longer period the quantities of split cod on the world market will, however, be determined by the number of vessels sent out every year.

With falling conjunctures this number will not vary greatly, seeing that the marginal costs are small, and the laying up of vessels is an expedient reluctantly resorted to. The fishing vessels will wear out gradually, and the fishermen, who derive no great profit from the fisheries,

[1]) Bulletin statistique des pêches maritime, 1938.

will try to find occupation elsewhere. From a long-run point of view the prices of salt fish will be determined by the average cost of sending fishing vessels to the areas (Iceland and New Foundland), which are absolutely necessary for the covering of the demand of the market. According to Danish conditions these costs will normally be small, as wages and other payments for the marginal producers will presumably be rather low.

Exceptions from such a level of prices for split cod are brought about by extraordinary situations, more particularly during and after wars. Seeing that the demand, as mentioned above, must be supposed to be unelastic, and that this will be rather less so during wars, because incomes are smaller and the salt fish a cheap article of food, very high prices must be expected but only through a limited number of years.

The Greenland supply of salt fish must, as formerly mentioned, fluctuate greatly from one year to another in consequence of the varying occurrences of fish, though this will hardly influence prices on the world market. Whereas the Greenland production is of very great importance during wars, when fishing nearer Europe is greatly hindered, the Greenland fishing is hardly necessary for the covering of the needs of the market during a period of depression; indeed, it will presumably often be cheaper to satisfy the demand by increasing the fisheries nearer the places of consumption. When presupposing that the individual production should defray its costs through the sale, this will lead to a considerable covering of the Greenland production under favourable conjunctures, while the demand in a period of depression will not be so great as to make the costs of the greater part of the Greenland fisheries higher than those of the marginal producer, who is necessary for the supply of the market. The view here set forth is undoubtedly rather hypothetical, and it is to be wished that in the future a detailed investigation would be undertaken as to who is the marginal producer of salt fish in the greatly fluctuating market situation.

In addition to cod fishing mention might be made of the fishing of Greenland halibut, halibut and salmon. The Greenland supply can here only influence the market, in so far as it is greatly isolated; thus the greater amount of salted Greenland halibut is sold in Denmark, and here only a variation in the supply is able to influence the price. The Greenland halibut is only produced in a salted form, and discussions have gone on as to the possibility of supplying it frozen to the market. The chief difficulty is that of producing it in sufficient quantities for the optimal capacity of the freezing plants.

D. Other Products.

There are other fields where the Greenland products may be of interest to the world market, and of these special mention may be made of minerals in the widest sence of the word. Here cryolite occupies a particular position, seeing that there are nowhere occurrences of natural cryolite of the same dimensions and purity as in Greenland. The price of natural cryolite will thus in the main be characterized through the competition between natural and synthetic cryolite. The natural cryolite from Ivigtut has, particularly in the last generation, been a very valuable source of income for Greenland.

Beyond cryolite Greenland offers no minerals of importance for the world market, but it must be supposed that the forcing of systematic geological investigations, which has taken place after the war, will bring to light other valuable occurrences.

It is well known that there is coal in Greenland, as also iron and lime (marble), and that a production of iron to be used on the world market should be technically possible. On the other hand, it is a different and very essential question, whether such a production is also likely to pay its way, as the costs of transport will here play a very considerable part. In a production of that kind nearly everything used beyond raw materials, not merely for the working of the mines, but also for the general maintenance of those engaged in the production, must be transported to Greenland, and in the same manner the semiproducts must be transported from Greenland to the places of comsumption. The production in Greenland will be expensive, and the price at which the finished product can be delivered on the market will be high. Therefore, mineral occurrences on Greenland cannot be imagined to compete with occurrences of a similar quality, when the latter are situated essentially nearer the market. A production may be imagined to be set afoot, either because Denmark is willing—for reasons of foreign exchange—to give an excess price (high factor of valuation) or because the occurrences in Greenland prove to be particularly rich in proportion to other occurrences. None of these conditions have, however, been fulfilled until now, but the possibilities of the future are naturally not to be foreseen and greater opportunities may unexpectedly crop up.

The adoption of entirely new trades may also be a possibility, and if so a great investment of capital is presumably necessary. If profit is aimed at in relation to the outer world, with a view to improving the economy of Greenland, attention must be paid to the great costs of transport and more particularly in the fields where the costs of transport constitute a relatively small part of the selling price of the commodity.

E. Supply.

The number of commodities to be supplied to Greenland from the world market is as a matter of fact very great, but owing to the scarcity of the population the quantity of each group is infinitely small, as compared with the great markets. The world market will here occupy a position of power in relation to Greenland, the opposite never being the case. For the consumption of Greenland it is to be hoped that the world market will not to any overwhelming extent be determined by formations of the nature of monopolies, and Greenland will as a rule at most be able to obtain prices corresponding with the perfect market; only in quite exceptional cases the suppliers may be imagined to be willing to offer commodities at dumping prices.

F. General Structural Situation.

In the preceding an attempt has been made to lay down the main principles of a market analysis for the Greenland export commodities, all details having been left out, as the description would otherwise become too comprehensive for the present purpose.

From the information given it seems to appear that the economic position of Greenland is weak in relation to the world market, perhaps apart from extraordinary war-time and post-wartime situations, where the competitors are unable to offer a normal supply. This applies in the main to principal products such as oil, skins and fish, the position differing somewhat in the different fields.

The main features of the observations given above are for that matter not special to Greenland; the technical development and the many new possibilities of production seem to point towards future progress for the tropic areas, where the possibilities with the new technique are greater than formerly. It is the other way round with the countries lying near the Pole. Here the possibilities of technique and production are less, and in years to come these countries will presumably have great difficulty in maintaining their position on the market, to say nothing of making the progress, which on all hands is considered desirable, but as it seems hard to obtain.

CHAPTER IV

FLUCTUATIONS IN NATURAL AND MARKET CONDITIONS

The economic life of Greenland must be characterized by two sets of fluctuations, both very strong and vitally important for the living conditions of the population. One set of fluctuations originate in natural conditions and are partly determined by the moment, partly the result of changes in the climate of Greenland during very long periods. The other set of fluctuations are due to the world market, and are partly conjunctural, partly structural.

A. Seasonal Fluctuations.

Animal life on and in the seas round Greenland varies very much according to the season. In the olden times the whales visited the west cost, particularly late in winter; the most important animal of capture of an earlier period, the Greenland seal, migrates twice annually along the coast, but is entirely absent at all other seasons; the bladdernose seal comes to South Greenland with the pack-ice in April—May, but is otherwise rarely met with; the birds migrate with the season; the large quantities of cod in most years only occur in maximal numbers within comparatively few months etc. Other animals which, it is true, occur throughout the year only have an economic value in certain months. This for instance applies to foxes, the summer furs of which have a much lower market value than the winter ones.

The consequence must be that there is a certain rotation in the economic life of Greenland; at certain seasons seal hunting may be dominating, and then again at others cod fishing and fox hunting. This must, however, not be taken in the sense that the possibilities of a catch may be regarded as being alike all the year round. For some months hunting may be abundant; then again it may be very poor, and these seasonal fluctuations in their turn vary somewhat from one part of

Table XI. Distribution in months of the capture of large seals in one year in the Julianehaab district 1923/24 and 1924/25.

Month	Sangmissoq	Augpilagtoq	Nanortalik	Sagdlit	Sydprøven	Sletten	Sârdloq	Julianehaab	Narssaq	Qagssimiut	In all
$^{1}/_{4}$ —$^{30}/_{4}$	20	27	54	29	76	1	48	34	12	58	359
$^{1}/_{5}$ —$^{30}/_{5}$	109	203	331	67	310	48	70	125	41	111	1.415
$^{31}/_{5}$ —$^{29}/_{6}$	83	138	187	32	181	44	49	77	42	43	876
$^{30}/_{6}$ — $^{1}/_{8}$	82	71	149	20	95	13	26	33	47	34	570
$^{2}/_{8}$ — $^{3}/_{9}$	20	11	17	5	13	1	2	2	8	7	86
$^{4}/_{9}$ — $^{6}/_{10}$	11	5	3	..	2	..	1	..	4	9	35
$^{7}/_{10}$— $^{8}/_{11}$	8	16	14	2	1	..	1	1	2	20	65
$^{9}/_{11}$—$^{11}/_{12}$	9	5	6	1	2	..	3	2	2	9	39
$^{12}/_{12}$—$^{13}/_{1}$	4	..	4	6	4	..	3	3	1	10	35
$^{14}/_{1}$ —$^{15}/_{2}$	2	2	2	4	2	..	1	1	1	2	17
$^{16}/_{2}$ —$^{31}/_{3}$	1	2	6	3	2	..	1	4	1	5	25
In all..	349	480	773	169	688	107	205	282	161	308	3.522

(From Summary of Statistical Information regarding Greenland, table 423).

Greenland to another, so that it is not possible to give a description universally applying to all the inhabited parts of Greenland.

The changes which take place from one month to another may best be illustrated in the case of sealing, as use can here be made of the so-called hunting lists, which for a number of years have been kept for the whole of Greenland. This material which is based upon information given by the Greenlanders is, it is true, not quite reliable, but as it forms the basis of certain payments (the repartition), and as it must be supposed that inaccuracies tend in the same direction from month to month, these lists can presumably be used with a fair degree of certainty for a comparison of the mutual relations of the months. The tables XI and XII give some details from the Julianehaab district.

It appears from table XI that the capture of the large seals has centred round the months of the pack-ice, viz. May and June, the bladdernose seal coming with the ice and disappearing with it. The capture of Greenland seal which according to RINK's description in an older period took place in the autumn is now without great importance.

According to "Summary of Statistical Information regarding Greenland" the capture of the small seals is more scattered, but nevertheless chiefly centres round these two months. In the remaining part of the year some capture, it is true, is going on, but of a more scattered and casual nature.

Table XII. Distribution in months of the capture of small seals in one year in the Julianehaab district 1923/24 and 1924/25.

Month	Sangmissoq	Augpilagtoq	Nanortalik	Sagdlit	Sydprøven	Sletten	Sârdloq	Julianehaab	Narssaq	Qaqssimiut	In all
$^{1}/_{4}$ —$^{30}/_{4}$	85	31	28	9	29	..	22	18	26	32	280
$^{1}/_{5}$ —$^{30}/_{5}$	66	37	74	29	99	11	52	109	82	101	660
$^{31}/_{5}$ —$^{29}/_{6}$	96	81	122	29	243	42	97	290	238	191	1.429
$^{30}/_{6}$ — $^{1}/_{8}$	129	86	133	39	220	27	74	114	197	79	1.098
$^{2}/_{8}$ — $^{3}/_{9}$	104	20	21	1	22	3	7	3	45	18	244
$^{4}/_{9}$ — $^{6}/_{10}$	15	17	6	..	..	..	2	1	32	11	84
$^{7}/_{10}$— $^{8}/_{11}$	32	45	17	6	8	..	4	2	16	13	143
$^{9}/_{11}$—$^{11}/_{12}$	31	19	15	11	11	..	6	5	13	25	136
$^{12}/_{12}$—$^{13}/_{1}$	46	7	11	14	18	..	9	5	3	21	134
$^{14}/_{1}$ —$^{15}/_{2}$	49	6	8	8	12	..	2	6	2	9	102
$^{16}/_{2}$ —$^{31}/_{3}$	42	9	18	6	7	..	3	4	..	6	95
In all...	695	358	453	152	669	83	278	557	654	506	4.405

(From Summary of Statistical Information regarding Greenland, table 424).

Of the 7927 seals captured within the period investigated in the Julianehaab district, 6048 were caught in the months of May—July, and so it must be said that three fourths of the capture took place in the fourth part of the year, whereas sealing was of no essential importance during the remaining part and has not been able to form a basis of the occupations and economic life of the population.

When passing farther north from the Julianehaab district and stopping at Disko Bugt, similar figures have been found for a couple of corresponding years, from which the statistic material is most complete. These are given in tables XIII and XIV.

From these tables it appears that also in these districts the catching has centred round comparatively few months, large seals in the early summer and small seals in the autumn, while only few seals are caught during the winther. The same variation occurs at all the dwelling places, and this is in so far easily understood, as the same causes (partly the presence of the seals and partly climatic conditions) are the same which have made themselves felt everywhere.

When finally regarding the northernmost main settlement, Upernavik, where sealing is still the dominating trade, it appears that conditions are more or less the same, as also appears from tables XV and XVI.

Table XIII. The distribution in months of the capture of large seals within one year in the Christianshaab, Jakobshavn and Ritenbenk districts 1926/27 and 1931/32.

Month	Christianshaab 1926/27 and 1931/32							Jakobshavn 1926/27 and 1931/32							Ritenbenk 1922/23 and 1933/34								
	Ikamiut	Akugdlit	The settlement	Claushavn	Nordre Huse	Eqe	Total	The settlement	Igdlumiut	Pitorqeq	Rodebay	Atâ	Arssivik	Total	The settlement	Nûgâq	Qeqertaq	Ikorfat	Sarqaq	Tartunaq	Ujarasugssuk	Ûnartoq	In all
January	..	1	..	..	4	1	6	1	1	..	1	1	..	4	4	1	..	1	7	1	3	3	20
February	..	1	..	..	3	1	5	2	1	..	1	..	..	4	..	2	..	..	1	1	..	1	5
March	..	..	..	..	..	2	2	1	..	..	1	1	..	3	..	2	..	..	1	1	..	..	4
April	4	..	..	..	5	5	14	1	1	1	1	1	..	5	..	..	..	4	2	..	..	2	8
May	7	6	1	2	12	12	40	3	3	1	11	4	2	24	11	..	1	10	24	2	2	5	55
June	5	22	9	13	55	20	124	31	27	2	53	9	7	129	11	21	18	5	76	10	10	18	169
July	12	4	8	1	8	5	38	16	8	2	20	2	5	53	23	8	8	3	45	12	9	16	124
August	29	1	4	1	9	2	46	3	1	..	7	3	1	15	3	..	..	1	15	2	7	10	38
September	7	2	1	1	7	1	19	4	4	1	6	3	1	19	8	1	1	3	32	2	10	9	66
October	..	4	2	..	9	6	21	10	8	2	10	4	5	39	14	4	3	9	38	17	11	8	104
November	..	15	5	..	25	5	50	14	24	4	35	7	5	89	17	8	4	6	34	12	10	7	98
December	..	5	2	..	10	2	19	12	5	3	4	2	1	27	11	5	3	3	12	3	2	2	41
All the year	64	61	32	18	147	62	384	98	83	16	150	37	27	411	102	52	38	45	287	63	64	81	732

(From Summary of Statistical Information regarding Greenland, table 425).

It appears from the table of number of large seals captured that this has been small in the winter months, but increasing throughout the spring and culminating in the months August—October. This fact is directly connected with the natural conditions, seeing that the seals of passage more particularly appear towards the end of the summer.

In table XVI information has been given of the capture of small seals, which particularly centres round the months of April and May, when the seals are taken while basking in the sun on the ice. During the whole of the time when the sea is covered with ice, a considerable number of small seals have been captured, and this has been continued in the summer months, whereas sealing in the autumn has been proportionally insignificant all over the district. The greatest amount of seals have been captured in the two northernmost municipalities, where about half of the sealing of the district is carried out. In this very extensive district there is some difference between the number of seals captured in the individual municipalities; thus the centring round May

Table XIV. Distribution in the months of capture of small seals in th

	Christianshaab 1926/27 and 1931/32							Jakobshavn		
	Ikamiut	Akugdlît	Settle-ment	Claus-havn	Nordre Huse	Eqe	Total	Settle-ment	Igdlu-miut	Pitorqeq
January	4	3	2	8	29	13	69	34	8	3
February	1	8	5	7	20	12	53	30	5	3
March	1	3	3	20	36	19	82	29	9	1
April	18	25	24	13	21	10	111	45	8	9
May	21	11	17	15	19	15	98	47	8	7
June	8	1	3	12	90	36	150	72	52	13
July	14	9	9	22	117	100	271	119	111	17
August	52	17	6	4	106	42	227	162	82	16
September	17	36	6	14	75	56	204	152	64	24
October	26	38	4	20	78	43	209	123	40	22
November	5	22	8	30	41	22	128	63	28	7
December	4	13	13	18	16	13	77	54	17	2
All the year...	171	186	100	183	648	381	1.679	930	432	124

(From Summary of Statistical Informatio

is most pronounced in Tasiussaq and Kraulshavn, where about a fourth of the capture of the district takes place in that month. For the more southerly districts (where it is not so dark in winter) the capture has been somewhat more evenly distributed over the period January—May; it is, however, a common feature of all municipalities that the number of small seals captured during the autumn months has been comparatively small.

The total result for the whole of the west coast of Greenland is thus that sealing can be said to take place all the year round, but in a greatly varying degree. In an older period, before the colonization, the result of this was that the superfluous quantities of meat in summer were stored for the difficult winter months, so that the food supply was more or less covered throughout the year—at any rate in normal times. When the Royal Greenland Trade commenced its operations, those who represented the monopoly, at any rate since RINK'S days, took great care that the Greenlanders should not, by their sales in summer, deprive themselves of the necessary means of subsistence in times of need. As an example may be quoted that until our own day the monopoly has been unwilling to buy blubber in East Greenland, in order not to deprive the population of what was absolutely necessary for fuel and lighting in winter.

The fact that the capture of seals was greatly dependent upon the seasons has, generally speaking, in former times been a widely used

Christianshaab, Jakobshavn and Ritenbenk districts in 1926/27 and 1931/32.

1926/27 and 1931/32				Ritenbenk 1922/23 and 1933/34								
Rode-bay	Atâ	Arssivik	Total	Settle-ment	Nûgâq	Qeqer-taq	Ikorfat	Sarqaq	Tartu-naq	Ujara-sugssuk	Ũnartoq	In all
11	5	8	69	22	7	38	10	39	7	14	22	159
8	1	10	57	8	5	22	9	27	8	15	23	117
2	4	18	63	11	2	22	12	14	6	10	15	92
30	17	37	146	24	31	47	24	119	31	13	17	306
20	11	24	117	10	18	41	21	132	15	20	10	267
95	23	30	285	22	43	52	20	186	23	28	12	386
219	51	72	589	60	90	68	47	342	45	47	84	783
258	66	98	682	42	92	91	55	299	70	94	155	898
171	104	88	603	49	76	132	40	288	60	62	68	775
82	30	49	346	50	24	46	13	120	42	32	28	355
41	10	18	167	32	13	22	8	77	18	19	22	211
14	7	7	101	23	17	43	8	65	10	12	22	200
951	329	459	3.225	353	418	624	267	1.708	335	366	478	4.549

egarding Greenland, table 426).

argument against freer trade, it being feared that the population of Greenland, with its low estimate of future benefits, would sell too much to the free traders in summer time, and thus be reduced to suffer want in winter.

As sealing thus centres round the summer months, the question naturally arises as to the income, which the population is able to provide from other occupations during the remaining months of the year.

This question is most easily answered for North Greenland, where the possibilities of subsistence are fewest in number. If first of all we regard the Upernavik district, this is an area where the population, in addition to sealing, has been limited to shark fishing, and table XVII gives a summary of shark fishing in the Upernavik district, distributed over months.

As the sharks occur along the coast all the year round, this kind of fishing might be imagined to take place during the months when there was no sealing. This, however, proves not to be the case. Shark fishing like sealing centres round the summer months, and in the autumn when there is little sealing, there is also little shark fishing. In the autumn months there is, however, in the Upernavik district some hunting of small whales (white whale and narwhale). Of the 185 small whales caught in one year 68 were thus caught in September. Neither are small whales caught in the winter months, when all other hunting is limited (for that matter they do not occur in the district at that time

Table XV. The distribution in months of the capture of large seals in one year in the Upernavik district 1922/23, 1926/27, 1931/32, and 1936/37.

Month	Söndre Upernavik	Prøven	Upernavik	Qaerssoq	Augpilagtoq	Tugssâq	Tasiussaq	Kraulshavn	In all
	No.	No.	No.	No.	No.	No.	No.	No.	No.
January	10	5	4	..	1	1	9	2	32
February	..	1	..	1	..	2	3	2	9
March	1	1	4	..	2	..	..	2	10
April	12	5	9	13	1	7	8	35	90
May	24	9	11	..	2	9	11	20	86¼
June	21	10	4	3	3	7	14	13	75
July	15	15	6	7	11	11	27	17	109
August	28	24	12	16	8	22	39	24	173
September	33	31	4	10	9	20	24	34	165
October	35	43	7	8	13	19	26	21	172
November	13	22	4	2	19	16	19	19	114
December	3	2	2	1	4	1	4	5	22
All the year...	195	168	67	61	73	115	184	194	1.057

(From Summary of Statistical Information regarding Greenland, table 428).

of the year). The chief explanation of the very considerable seasonal variation of hunting are the gales and darkness of the winter, and the population must therefore, whatever the occupation pursued in the summer season, provide food and other income for maintenance during the scanty winter months.

When going south from the Upernavik district, information is at hand regarding shark fishing at the settlements along the bay, and this information is contained in table XVIII.

From this table it appears that shark fishing in the districts in question centres still more round the summer months than at Upernavik. It is everywhere in the months of June and July that the greatest number of sharks are caught, that is, a period in which also a considerable sealing takes place. In the winter months when sealing is of subordinate importance shark fishing has also been inconsiderable. In these regions the winter months are, it is true, somewhat lighter than in the Upernavik district, but on the other hand the ice cover is frequently so unsafe that shark fishing must be regarded as impossible during the greater part of the year.

In addition to the capture of shark and seal the population of the settlements along the Disko Bugt has other economic possibilities, viz. fishing. Here mention must first and foremost be made of Greenland

Table XVI. Distribution in months of the number of small seals captured in one year in the Upernavik district in 1922/23, 1931/32, and 1936/37.

Month	Söndre Upernavik	Prøven	Upernavik	Qaerssoq	Augpilagtoq	Tugssâq	Tasiussaq	Kraulshavn	In all
	No.	No.	No.	No.	No.	No.	No.	No.	No.
January	273	267	112	24	67	133	210	200	1.286
February	236	321	75	26	59	95	171	170	1.153
March	211	304	62	11	65	85	41	72	851
April	293	468	187	88	164	229	571	534	2.536
May	469	271	169	106	186	366	750	953	3.270
June	128	85	37	115	69	123	240	557	1.354
July	76	76	29	54	58	136	263	440	1.132
August	105	88	33	75	80	195	367	511	1.454
September	85	55	13	66	52	88	184	252	793
October	72	69	17	60	53	66	111	163	611
November	61	48	26	56	65	49	89	112	506
December	54	41	24	32	29	46	93	97	416
All the year...	2.063	2.093	784	713	947	1.611	3.090	4.061	15.362

(From Summary of Statistical Information regarding Greenland, table 429).

Table XVII. Distribution in months of the shark fishing in a year in Upernavik district 1922/23, 1926/27, and 1936/37.

Month	Söndre Upernavik	Prøven	Upernavik	Qaerssoq	Augpilagtoq	Tugssâq	Tasiussaq	Kraulshavn	In all
	No.	No.	No.	No.	No.	No.	No.	No.	No.
January	..	54	24	1	7	14	121	121	342
February	23	104	21	1	10	30	44	73	306
March	23	111	20	..	4	8	43	46	255
April	28	164	34	3	5	19	93	186	532
May	84	277	9	5	15	30	85	143	648
June	55	368	31	3	6	..	18	42	523
July	180	347	103	14	44	..	5	30	723
August	281	165	59	..	93	1	12	12	623
September	133	29	1	..	4	10	2	..	179
October	35	19	..	..	1	4	..	4	63
November	..	5	..	..	7	..	24	27	63
December	..	10	..	..	3	5	36	65	119
All the year...	842	1.653	302	27	199	121	483	749	4.376

(From Summary of Statistical Information regarding Greenland, table 430).

Table XVIII. Distribution in months of shark fishing in one and at Ritenbenk in

Month	Christianshaab 1926/27 and 1931/32							Jakobshavn		
	Ikamiut	Akugdlit	Settlement	Claushavn	Nordre Huse	Eqe	Total	Settlement	Igdlumiut	Pitorqeq
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
January	34	80	102	15	2	..	233	202	16	25
February	..	14	5	2	1	1	23	29	1	11
March	..	13	2	2	4	2	23	89	26	6
April	27	32	31	..	2	..	92	186	28	36
May	30	116	184	39	3	21	393	569	164	103
June	71	393	313	336	188	36	1.337	1.470	275	177
July	181	852	309	82	13	5	1.442	841	62	44
August	153	294	123	13	9	10	602	161	34	9
September	292	230	112	47	20	17	718	38	1	7
October	278	233	90	5	126	9	741	57	23	8
November	40	176	60	6	26	13	321	252	43	12
December	23	19	2	9	3	1	57	140	30	13
All the year...	1.129	2.452	1.333	556	397	115	5.982	4.034	703	451

(From Summary of Statistical Informa-

halibut at the mouth of Jakobshavns Isfjord, and in more recent times also of cod fishing in various localities within the area in question. The Greenland halibut is a considerable source of income in the localities at the mouth of the icefjord and during a few summer months. The cod, it is true, is of later years scattered over a larger area, but as a rule it only occurs within a few months in late summer.

The main production, viz. hunting and fishing, consequently centres round relatively few summer months, whereas the possibilities of making an income during the remaining part of the year are scarce and small.

If we finally turn our attention to the Julianehaab district, the latter is situated so far south that there are a greater number of economic possibilities. Here we may mention sheep farming, which is already of some importance (Summary of Statistical Information regarding Greenland, section 9) and which might be supposed to assume still greater proportions; but this trade cannot be imagined to have had any great influence on the seasonal changes in the possibilities of existence. For one thing sheep farming is connected with the areas, where grass is most abundant, which is in the interiors of the fjords, where the possibilities of sealing and fishing are small, and further sheep farming makes the greatest demand on intensive labour during the summer months, when the hay making takes place, that is, the very months when there is most work to be done in the line of hunting and fishing. In other words

year at Christianshaab and Jakobshavn in 1926/27 and 1931/32
1922/23 and 1933/34.

1926/27 and 1931/32				Ritenbenk 1922/23 and 1933/34								
Rode-bay	Atâ	Arssivik	Total	Settle-ment	Nûgâq	Qeqer-taq	Ikorfat	Sarqaq	Tartu-naq	Ujara-sugssuk	Ũnartoq	In all
No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
47	19	..	309	11	3	10	7	8	1	5	..	45
21	..	..	62	37	22	9	3	24	..	4	19	118
55	..	..	176	15	..	..	..	19	..	5	15	54
227	18	..	495	119	..	3	6	60	4	13	9	214
283	29	3	1.151	80	..	14	1	46	..	3	2	146
751	59	23	2.755	216	5	17	5	24	3	8	2	280
776	97	39	1.859	26	24	166	6	54	33	28	31	368
373	62	15	654	17	12	56	7	16	..	22	21	151
95	66	4	211	21	3	32	9	..	..	19	6	90
—	16	1	105	2	..	6	..	..	..	7	1	16
—	2	—	310	—	..	4	1	..	..	..	..	5
—	20	9	212	1	..	7	..	7	..	..	..	15
2.629	386	96	8.299	545	69	324	45	258	41	114	106	1.502

tion regarding Greenland, table 427).

sheep farming takes the better part of a man's time and does not leave many possibilities of work during the periods in winter when there might be time to spare from other work.

Cod fishing which during the last twenty years or so has come to play a much greater part in Greenland than sealing, is an occupation which is necessarily bound up with the large occurrences of this fish. The latter have been irregular throughout the years, though not so much now, as they used to be in former times. On the whole it may be said that cod fishing begins in the early part of the summer, culminates in August—September and lasts until the month of October, and sometimes longer. In some cases cod may also be found in winter, but the cold prevents the salting, and if cod fishing is carried on at all during the winter months, it is in most years limited to the needs of the population, cod in fact contributing not immaterially to the daily food supply.

It should be mentioned that there is a not inconsiderable production of dried fish at certain localities, more particularly in the interiors of the fjord systems of Central Greenland; this (unsalted) fish, prepared in a very low temperature, is considered a nutritious article of food, because of its taste which is in favour with the whole of the population.

The hitherto mentioned occupations: sealing and fishing of shark and cod are thus pronounced summer occupations, and between them they must compete for the working power of the population (which com-

petition, as will be mentioned later on, can be guided by means of the policy of prices). Besides occasional birding the chief supplementary occupation is the hunting of foxes, which because of the close season and in order to keep up the quality of the furs can only take place in winter. Fox hunting is not carried on in all districts, and the animals are frequently met with far from inhabited places, by which means the hunting is restricted to a smaller number of hunters, who live within the hunting areas in question, and who have the implements enabling them to move far afield. On the whole it may be said that the greater part of the occupations of the population must be carried on within the same season, and that in order to reach the same yearly product the proceeds per working day must be comparatively greater than in many other countries.

With regard to the fluctuations of the economic life, as caused by natural conditions, Greenland differs from other regions situated in the extreme north, as e. g. the very northernmost parts of Norway, where the climate is not quite, but very nearly as cold as in southernmost Greenland. Here natural conditions yield a more regular economic rotation, with the large fisheries at Lofoten and elsewhere in the winter or earliest spring months, so that taking part in these fisheries may supplement farming on a small scale, which may supply occupation and a very limited income during the summer months. Because of this natural possibility of occupations supplementing each other, the inhabitants of northern Norway have far better working conditions than the Greenlanders, who at any rate for the greater part of the winter are more or less reduced to a very leisurely existence.

There is naturally nothing to prevent a country with such great seasonal fluctuations from entering into free competition, but if the population is not to be left to suffer want in winter, a very high degree of foresight (a high valuation of the future benefits) is necessary. If it can be maintained that this is not yet the case in Greenland, there is here an argument in favour of restrictions aiming at a compulsory distribution (in an older period the storing of blubber, in more modern times the drying of fish).

In a community governed according to more central principles an equalization of the possibilities of income under greatly fluctuating natural conditions should be possible, if supported by public dispositions. Conditions in Greenland are to a certain extent determined by the fact that most public works, such as building and shipping, must necessarily be done in the summer months, though stone works, for instance, have been undertaken during the winter months, perhaps with somewhat increased costs. The best known example of this is the great works in connection with the filling up of "Leverbugten" at Jakobshavn,

which took place in winter at such times when the economic possibilities were as a matter of fact very small.

B. Structural Changes in Natural Conditions.

The economic conditions at the same time of the year are not alike from one year to another, and even though the animals of capture occur in equal numbers, the hunting possibilities may vary greatly with the climate. Even though within certain periods there are great quantities of seal and cod, these are of no economic importance, if the gales are so strong that the Greenland sealer or fisherman cannot venture out, and such periods are not uncommon along the inclement coast.

A climatic factor of essential economic importance is the ice cover. At a later stage, when the ice is so solid that it is possible to drive in dog sledges to the grounds of capture, the possibilities are very small. In the years when the ice cover appears at an early date and lasts longer, the hunting possibilities are better than in those years, when the gales break the already formed ice, and also the milder weather may render hunting on the ice difficult or even impossible.

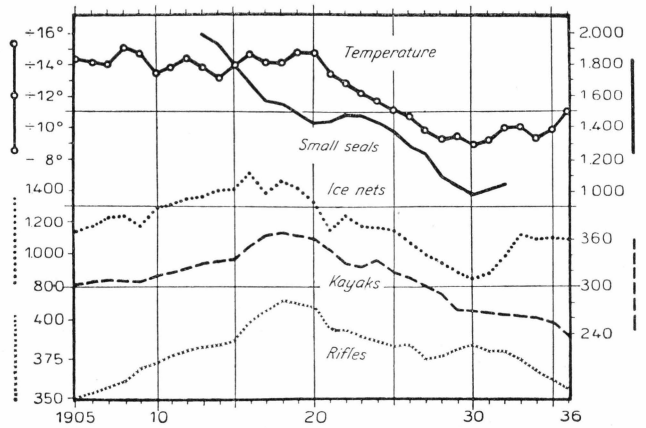
Another very important economic factor in South Greenland is the pack-ice, which in greatly varying volumes is carried along by the East Greenland current and may, on one hand, have the effect of promoting sealing, on the other that of checking the means of communication in the district.

Many of the above-mentioned variations are only important for a shorter period, but there are also changes, which may last for a considerable number of years. In this connection mention should be made of the rising temperatures within the present century, which have brought about a structural change of economic conditions. A change of this kind is known both from sealing and the various fisheries, and it appears with relative distinctness by a comparison between the number of seals caught in the Julianehaab district and the occurrence of the pack-ice (cf. diagram II in the present treatise).

As another means of illustrating the structural change diagram XIX shows the relation between the best observed winter temperatures in North Greenland (Jakobshavn), the capture of small seals and the number of implements in the Umanak district (sliding average). With the rising winter temperatures there is a decrease in the number of small seals, and at the same time a decrease in the number of ice nets, kayaks and rifles.

The relation between cause and effect is so complicated in this field that, pending further observations, it is not possible to draw reliable conclusions as to a structural change in economic conditions.

Diagram XIX. The proportion between temperatures at Jakobshavn (November—May), the capture of small seals and the number of implements in the Umanak district.



(From Summary of Statistical Information regarding Greenland, diagram XLI).

The chief structural change in the economic possibilities of Greenland is undoubtedly the variation of the occurrences of cod within the last twenty—thirty years. As late as in 1908, when Professor ADOLPH S. JENSEN was in charge of the fishing-expedition to Greenland, the occurrence of cod on the banks off the coast was slight and offered no possibility of any important fisheries. During the following years the occurrence increased greatly and caused the Greenland population to take up fishing, which had hitherto been regarded as an inferior occupation. The fishing investigations under the leadership of POUL HANSEN M.A. have, however, proved that the large occurrences of cod, during the following generation, originated from comparatively few year-classes. Why this is so, it has not been possible to prove, but it must be supposed to be due to fluctuations in the climate. It is to be supposed that Greenland is on the northern boundary of the occurrences of cod, and small decreases of temperature may lead to a considerable decline in fishing possibilities.

When looking upon these observations from a short-run point of view the result must, as formerly suggested, be an attempt to obtain the maximum immediate profit by exploiting the possibilities of cod fishing to the greatest possible extent, even at the expence of other occupations which at the present moment are less profitable. If, on the other hand, adopting an economical long-run point of view the possibilities of the immediate cod fishing must, it is true, be utilized as long

as they last, but at the same time a certain risk must be taken into account, so that the cod fisheries are not developed in too one-sided a manner in preference to the occupations which are less characterized by risks. An attempt must be made to maximize the possibilities of income through the years, and this must be done by preparing and developing the trades which might also be able to play a decisive part as to the possibilities of income for the population, in case the cod-fisheries should fail. From a long-run point of view one must, therefore, be rather more cautious as regards the dispositions promoting cod fisheries, than if the other view were adopted. The relation between the dispositions made should not only depend upon the fishing possibilities, but also upon other conditions such as e. g. the prices obtainable in the market. The bordering occupations between the different economic areas may partly take place as a regulation of the dispositions of capital, but to a still greater extent through the policy of prices adopted.

C. Fluctuations in Market-Conditions.

It has been mentioned on a former occasion that Greenland has only comparatively few commodities to offer in the world market, and that the latter will be able to do without them without palpable effects. The prices set by the demand may at any given moment be characterized as a curve parallel with the quantity axis, so that the Greenland community is unable to carry on an active policy of prices. It is quite different with the commodities which Greenland requires, for here the sellers are able to follow a very active policy of prices. The Greenland community needs a considerable amount of commodities, and these must be purchased, whether the prices offered are higher or lower.

This market situation is the same, whether the Greenland supply or demand comprises the whole of Greenland as an economic circle, or whether it is the individual Greenlander, who is the market unity; but in the latter case the situation is still more marked.

In the 19th century the economy of Greenland as regards income was dominated by the prices of oil. As a case in point may be mentioned the year 1842 for which reliable specified information is at hand[1]). The total income was 286,897 rigsdaler (a rigsdaler = 2 kroner) of which 260,003 from the sale of Greenland produce (sent to Denmark). The remainder were partly refusions. Of the 260,003 rigsdaler about 12,821 consisted of barrels etc. Of the remaining 247,182 rigsdaler—commodities sent to Denmark—196,689 or nearly 80 per cent proceeded from the oil of seals and nearly half of the remainder from seal skins. Thus there

[1]) M. o. G., Bd. 145, No. 1, pp. 395 et seq.

Table XX. Quantities sold of and average prices obtained for seal, white whale and whale oil 1923/39.

Year	Refined seal oil		White whale oil		Whale oil	
	sold	average price per 100 kg	sold	average price per 100 kg	sold	average price per 100 kg
	tons	kr.	tons	kr.	tons	kr.
1923	400.5	94.83	..	..	..	..
1924	678,3	99.67	323.7	100.00	..	..
1925	736.7	77.53	101.5	88,04	..	..
1926	437.7	55.23	25.9	56.00	209.3	58.04
1927	646.7	53.00	255.4	52.86	126.3	51.09
1928	455.2	55.22	51.5	55.00	142.3	53.06
1929	568.6	49.60	124.4	50.00	198.9	49.43
1930	519.1	36.51	..	..	..	..
1931	45.2	36.00	64.0	35.75	..	..
1932	787.6	28.04	5.6	36.00	69.9	19.77
1933	238.7	34.14	183.1	35.00	16.9	19.50
1934	652.8	35.25	101.9	34.98	..	..
1935	951.3	40.40	82.6	47.63	96.0	48.32
1936	293.3	51.52	..	..	297.8	49.76
1937	625.6	55.87	63.9	56.99	..	..
1938	393.6	50.43	60.2	43.11	39.7	44.07
1939	682.2	60.20	65.1	63.07	54.3	73.71

(From Summary of Statistical Information regarding Greenland, table 376).

is no doubt that the economy of Greenland depended upon the seal products, and of these the oil had by far the greatest importance.

As already mentioned, the prices of oil were comparatively high towards the middle of the 19th century, and the demand was so relatively stable that there were no great conjunctural fluctuations. About that time, however, a structural change took place which, everything considered, brought about a decrease of the demand. As long as the supply was not materially changed, the result of this would be that the Royal Greenland Trade had difficulty in selling, and prices fell. As the oil supplied by the Greenland market was of a good quality, the prices remained relatively unchanged in proportion to those paid for oil from other parts of the world.

The structural change which took place could, however, not but be felt as a serious blow against the total economy of Greenland, and the surplus which had existed for more than a generation was now for a long period changed into a deficit.

Table XXI. Quantities sold of and average prices obtained for shark- and cod-liver oil 1923/39.

Year	Shark-liver oil		Cod-liver oil		Medical cod oil	
	sold	average price per 100 kg	sold	average price per 100 kg	sold	average price per 100 kg
	tons	kr.	tons	kr.	tons	kr.
1923	101.3	84.78	..	..	..	..
1924	357.1	78.65	32.3	65.00	..	..
1925	217.9	64.74	25.1	55.00	..	..
1926	597.6	46.44	..	..	..	..
1927	511.1	47.45	64.9	30.98	..	..
1928	492.7	50.04	75.6	39.75	..	..
1929	338.3	50.70	53.4	35.25	..	..
1930	214.5	47.30	64.0	35.50	..	..
1931	249.2	39.23	0.8	16.75	..	..
1932	335.4	35.13	..	..	..	..
1933	385.5	35.41	75.0	19.04	..	..
1934	386.4	37.02	328.5	19.01	..	..
1935	406.0	41.81	0.4	15.00	5.2	53.80
1936	307.4	54.90	207.1	27.47	6.5	70.00
1937	308.6	55.32	44.0	24.00	9.0	75.16
1938	302.6	55.17	49.1	30.50	4.2	55.00
1939	250.9	61.47	48.1	70.50	3.2	105.00

(From Summary of Statistical Information regarding Greenland, table 377).

In the 20th century the economy of Greenland was no longer materially dependent upon a single article of export, as it had been in the 19th, and in order to understand the picture presented by the market it is necessary to mention some of the most important developments of prices.

In the years between the two World Wars the unrefined oil, as a market commodity, was replaced by the refined oil produced in the factory on the premises of the Greenland Administration, and tables XX and XXI contain a summary of the quantities of oil sold and the prices obtained for them.

The tables show a fairly parallel development of prices for the different Greenland oil products. As contrasted with this the development of prices for oil products does not seem to have varied greatly in the preceding century; it may be said that the changes of prices throughout the period mentioned in the tables show a marked falling tendency. After the first World War there were high prices and then a sharp fall

in prices. During the second World War and the immediately ensueing years very high prices were again paid for oil products, but as emphasized in a preceding chapter it is necessary to be prepared for a sharp fall in the prices of the Greenland products, with the renewed easier access to the production of oil in the tropics.

A common feature of the prices of all the Greenland oil products within the period dealt with in "Summary of Statistical Information regarding Greenland" is a fall to about a third in less than ten years, in other words, the Greenland oils are now extremely responsive to conjunctures. An important factor in this development is that it has been necessary to salt blubber and liver in order to make them keep during the passage home. It is possible that by making medicinal oils and vitamineous preparations it will be possible in the future to arrive at a less susceptible product, but the production of the special preparations in Greenland is expensive, because the quantities at the various localities are comparatively small, and so cannot as easy profit by the technical development, which takes place in other, more southerly regions. The oil products of Greenland will in the future run the risk of not being very well able to compete with oils from warmer and richer regions, at any rate except in the extraordinary situations during and immediately after wars. It must at least be possible to maintain that the oil products of Greenland at the present time have become more responsive to conjunctures.

When turning our attention to the development of prices of skins (furs), table XXII gives some facts as to the results of auctions 1901—1939. It is evident that the quality and value of the skins vary greatly, and this applies both to bear and fox skins. Owing to the great quantities there is nevertheless hardly any very great difference between the average skins from one year to another, so that the variations are chiefly due to the fluctuations of the market. Considered a little more closely the development of prices for the skins of blue foxes, which are by far the most important in the economy of Greenland, the prices during the first World War were found to be somewhat above 50 kroner. Then there was a very great rise in prices, which may partly be explained by the dictates of fashion and partly by a very considerable abundance of money among the upper classes of the world market. The rise to as much as ten times the former prices could naturally not be maintained, and during the economic crisis of the nineteen-thirties there was a fall in prices of up to 100 kroner per skin, which level when considering the development of prices is not far removed from the prices obtained before the first World War. In the immediately ensueing years there were considerable fluctuations of prices, probably in connection with fashions and the luxury character of this commodity. Upon the whole it must be said that the prices of blue foxes have been very much subject

Table XXII. Number of skins (furs) sold at the auctions and the average prices obtained 1901—39.

Year	Sold at auctions			Average price per skin		
	blue foxes	white foxes	polar bears	blue foxes	white foxes	polar bears
	No.	No.	No.	kr.	kr.	kr.
1901	1.633	1.221	112	36	10	180
1907	1.907	1.212	196	57	24	144
1908	1.619	1.095	93	66	26	124
1909	1.885	1.188	239	60	24	130
1910	1.991	1.334	165	46	36	185
1911	2.160	1.488	131	44	26	166
1912	1.375	1.010	112	54	25	174
1913	1.404	990	123	83	34	193
1914	1.670	1.175	180	96	42	166
1915	1.846	1.333	0	81	39	0
1916	1.497	1.179	273	127	63	241
1917	1.878	1.475	132	..	..	..
1918	1.821	1.333	114	406	209	417
1919	1.821	1.232	189	..	..	..
1920	2.937	2.192	165	275	194	513
1921	2.103	1.611	258	384	132	235
1922	1.761	1.232	118	290	118	219
1923	1.706	1.274	186	310	140	134
1924	1.421	1.730	115	577	226	444
1925	1.449	1.374	183	178	132	254
1926	1.440	1.205	147	142	86	137
1927	2.037	1.424	153	198	103	171
1928	1.507	1.589	146	271	117	163
1929	2.275	1.605	145	300	127	134
1930	2.278	1.612	133	216	90	105
1931	4.189	2.635	169	93	55	105
1932	4.156	3.204	107	95	77	84
1933	2.618	1.993	92	124	85	92
1934	4.741	2.995	109	168	90	88
1935	3.938	2.312	46	85	51	168
1936	2.548	2.048	77	112	63	248
1937	2.772	1.625	97	169	89	186
1938	2.699	1.354	127	220	67	231
1939	3.425	2.396	125	118	37	118

(From Summary of Statistical Information regarding Greenland, table 380).

to conjunctures. When considering the development of prices for the substitute articles (silver foxes) it is, as already mentioned, hardly possible to expect that the great fluctuations in an upward direction will continue in the future, which consideration is supported by the relatively low prices obtained in America during the second World War.

The skins of white foxes are generally exported in smaller quantities than those of blue foxes, and their prices have always been somewhat lower. Fluctuations have in the main followed the prices of blue fox skins, with high conjunctures after the first World War and a consequent very considerable fall in prices.

The development of prices for bear skins shows that there must have been a somewhat greater demand for these skins before the first World War than during the depression of the nineteen-thirties. This is possibly connected with the fact that there are fewer large dwellings, for which the bear skins are most suited. In the main it must be maintained that also the prices of these skins are very responsive to conjunctures.

When passing to the prices of fish we might look more closely at table XXIII, which shows the development for the most important fishing products from Greenland. From this it appears at once that it is in the main only the salt fish, which has been of importance in the economy of the country. The other fishing products, it is true, show some change in quantity from one year to another, but none of them of a structural character, except in the case of the halibut which, as formerly mentioned, was nearly exhausted in the nineteen-thirties.

For the prices of salted Greenland halibut there is a fluctuating movement, almost corresponding with the conjunctures, but here quite special conditions have made themselves felt. The market has been limited to Denmark, for which reason it is to be supposed that there must be some connection between the quantities offered for sale and the prices obtained. It appears that the maximum quantity of about 4000 barrels was sold in 1930, and in the same year the price obtained was decidedly the lowest on record. The smallest quantity occured in 1936, when one of the highest price levels was obtained (the variation in the figures is presumably to some degree due to the varying quantities of winter fish, which yield essentially lower prices than summer fish).

When looking at the salted fish, which is now a chief export product from Greenland, there is a pronouncedly structural development as regards quantity, which development is parallel with the increasing occurrences of cod along the coasts of South Greenland. It is possible that when the Greenland salted fish first appeared on the world market, there was some difficulty in making it known, but now it is firmly established, and owing to its good quality and the careful treatment

Table XXIII. Quantities sold and prices obtained for salted halibut, Greenland halibut and salmon.

Year	Salted cod fish		Salted halibut		Salted Greenland halibut		Salted salmon	
	sold	average price per 100 kg	sold	average price per 100 kg	sold	average price per barrel à 100 kg	sold	average price per barrel à 100 kg
	tons	kr.	barrels	kr.	barrels	kr.	barrels	kr.
1923	145	39.24	707	80.15	2.378	105.29	91	126.49
1924	218	58.89	789	79.51	2,590	115.03	411	150.27
1925	201	38.68	632	46.22	1,758	126.50	194	122.27
1926	627	24.31	1,324	15.63	1,894	103.84	237	111.79
1927	1,060	32.11	943	31.98	2,084	83.09	144	114.08
1928	1,225	46.43	610	55.63	2,604	94.03	299	123.58
1929	1,764	41.91	247	44.91	2,411	90.96	279	126.66
1930	1,947	25.08	40	54.34	3,996	61.56	175	74.46
1931	3,507	17.49	45	98.09	1,174	83.52	629	57.31
1932	2,474	26.06	69	106.19	1,267	89.16	770	72.65
1933	2,880	30.22	6	118.20	1,185	108.29	653	69.97
1934	2,782	33.74	9	103.07	854	111.79	608	84.19
1935	2,236	29.00	8	77.42	1,051	112.25	706	127.65
1936	2.525	30.28	6	107.16	832	115.45	632	143.81
1937	2,072	34.72	13	33.56	856	109.10	521	130.97
1938	1,699	35.43	16	46.00	1,103	97.52	347	133.25
1939	2,114	36.64	5	50.00	1,363	97.86	502	185.55

(From Summary of Statistical Information regarding Greenland, table 379).

it has been subjected to, the prices paid for it are in many cases higher than those paid for salted fish from other countries.

It appears from the table that from 1924 to 1931 there was a fall in the prices of up to a third. This means that the salted fish, as already suggested in a former chapter, is very sensitive to conjunctures as a result of special conditions relating to the elasticity of the curves of supply and demand on the market. In the years from 1933 to 1939 the prices of salted fish seem to have been comparatively fixed, being apparently determined by the costs of the fishing and the transport; there seems to be some reason to suppose that this level will be of a relatively lasting nature, as the development of the prices changed totally at the outbreak of the war. It seems likely that the special war conjunctures will not last long, and that the prices of salted fish will go back to the level mentioned above (though with due respect to changes in the purchasing power of money).

In this connection it might perhaps be expedient to call attention to one fact, which has hardly until now had any influence in determining

Table XXIV. Average prices of seal skins sold in Denmark 1923—39.

Year	Greenland seal	Bladdernose	Spotted seal	Bearded seal	Young Greenland seal	Ringed seal	Skins of inferior quality	Total proceeds of sale
	kr.	kr.	kr.	kr.	kr.	kr.	kr.	kr.
1923	9.65	14.83	10.00	..	7.54	2.73	2.05	127.180
1924	..	12.00	..	..	10.69	4.79	2.25	63,262
1925	10.70	15.98	..	..	8.99	4.20	..	56,612
1926	9.24	10.35	7.60	..	6.04	4.21	1.54	79,436
1927	14.57	12.84	..	..	12.49	11.00	2.26	56,942
1928	..	18.29	..	..	13.15	10.81	4.03	58,970
1929	..	17.50	..	..	12.69	11.10	4.00	36,882
1930	10.00	13.24	11.20	..	9.60	7.78	1.44	12,762
1931	..	11.45	..	..	9.43	2.62	1.02	51,885
1932	..	11.07	..	15.00	10.87	3.46	1.25	26,880
1933	..	11.91	..	..	16.13	3.23	2.00	34,005
1934	23.00	12.67	..	13.33	23.83	4.56	2.80	104,173
1935	..	13.10	..	12.00	12.89	4.80	3.00	192,913
1936	12.07	13.52	..	14.74	13.02	5.40	3.00	168,374
1937	16.00	16.52	10.00	17.60	16.80	10.54	5.00	183,868
1938	14.00	14.00	..	..	14.33	7.36	4.03	169,025
1939	18.00	18.00	..	18.85	19.17	7.61	4.09	146,194

(From Summary of Statistical Information regarding Greenland, table 387).

the prices, but which may possibly have it in the future. The fact is that the production of salted fish may be imagined to obtain a certain importance from the point of view of occupation and foreign exchange in the large consuming countries. If, in order to promote their own fisheries the latter make arrangements to protect their market, the prices will fall for an exporting country like Greenland, which is entirely dependent upon the development of the world market, and which will have difficulty in promoting a demand which may form the basis of an exchange of commodities.

In various countries a tendency may perhaps be expected towards lightning freezing of fish. This will presumably be in favour of the fishing grounds, which are nearer the market, and will lead to an approximation of the prices of fresh fish and salt fish, with the result that the level of salt fish prices will be somewhat higher than in the nineteen-thirties. Everything considered, it must be possible to conclude from the information given that also the prices of salted fish are sensitive to conjunctures.

Of other Greenland products for export may further be mentioned seal skins and sheep farming produce. Information as to the development

Table XXV. Sale of sheep farming products and average prices of the latter 1923—39.

Year	Meat of sheep and lambs		Skins of sheep and lambs		Wool of sheep and lambs		Other sheep-products total	Total proceeds of sale
	sold in Denmark	average price per 100 kg	sold in Denmark	average price per 100 kg	sold in Denmark	average price per 100 kg		
	kg	kr.	kg	kr.	kg	kr.	kr.	kr.
1923	2.745	116.00	768	1.30	1,812	2.24	..	11,528
1924	4,998	99.12	636	1.96	1,843	3.82	..	18,363
1925	..	..	..	..	21	2.00	..	42
1926	9,305	61.67	1,309	0.95	4,481	1.86	256	20,561
1927	26,163	54.22	1,312	1.60	1,921	2.62	357	30,016
1928	6,494	63.93	..	..	862	3.07	..	6,796
1929	14,974	71.54	2,598	1.21	7,249	2.59	490	42,173
1930	18,402	77.20	2	0.70	283	1.64	55	14,732
1931	29,752	40.00	4,415	0.47	9,060	1.21	..	31,045
1932	32,272	49.66	1,640	0.51	4,868	1.12	381	25,146
1933	15,309	51.45	3,449	0.68	4,336	1.39	100	22,977
1934	14,446	68.04	1,777	0.96	2,707	2.08	711	22,767
1935	20,880	82.12	2,515	1.16	5,633	1.97	151	39,486
1936	9,805	71.71	3,236	1.57	4,279	2.61	859	38,341
1937	51,244	72.90	3,421	1.08	5,140	3.63	4,614	74,858
1938	4,622	102,20	167	0.75	5,872	2.30	1,273	19,922
1939	19,840	123.00	2,626	1.09	6,867	4.85	4,132	73,055

(From Summary of Statistical Information regarding Greenland, table 388).

of the prices has been given in tables XXIV and XXV, and as by far the greater part of the articles produced are the skins of ringed seal, there will be cause to subject the development of these prices to a somewhat more detailed inspection.

As appears from these tables there is a relatively regular conjunctural movement with maxima in 1929 and 1937 and a minimum in 1931. It is particularly worthy of notice that the prices in the two maximum years are four times those of the minimum year. So we see that we are here dealing with a commodity, which is greatly influenced by conjunctures.

Also for the sheep farming products we find the same strongly conjunctural prices, those of the maximum being three times those of the minimum.

Cryolite occupies a special position within the development of prices described above, the production and sale taking place through the concessioned joint stock company the "Øresund", which holds a strong position in the market of the natural cryolite. The costs of production

of the synthetic commodity are so considerable that the natural cryolite has been a valuable source of income for the Government (the Greenland Administration); thus until the beginning of the second World War it was sufficient to cover the deficit arising out of the cultural work done by the Danish Government in Greenland.

When looking at the development of prices for the commodities imported to Greenland and sold there, it is impossible in this statement to consider in detail the development of prices for the great number of kinds and qualities, and so the reader is referred to the general descriptions of price movements for articles of consumption. A criterion of the Greenland development may, however, be found in the prices demanded in the country, the latter being fixed with uniform additions based upon the purchase prices here. A suitable starting point for a comparison between the years is a price index based upon the consumption in Greenland. For one period the price indexes are given in the following table.

Table XXVI. Greenland price index. The average prices of the Greenland import commodities.

1899	1904	1919	1924	1925	1926	1927	1928	1929
78	82	100	120	120	127	112	103	102
1930	1931	1932	1933	1934	1935	1936	1937	1938
100	92	81	83	85	87	89	91	104

(From Summary of Statistical Information regarding Greenland, table 307).

When comparing the table with the facts given above, it appears that there is an even very considerable difference between the prices for goods bought by the Greenlanders and for those sold by them. This it seems is largely caused by the fact that the purchases in the main comprise finished products, such as are more or less directly used by the Greenlanders, whereas the commodities sold are more pronouncedly of the character of raw materials, which have followed the very violent fluctuations of prices in the world market.

The consequence must be that the revenues of Greenland are much more fluctuating than its expences. When the conjunctural movement reaches its maximum, relatively high rises of prices have been obtained for the goods to be sold, with small rises for the goods to be bought, and the reverse during a period of depression. Our investigations have proved that the economic life of Greenland, when becoming part of the world trade, will be still more responsive to conjunctures, than has been the case in most other countries. Add to this that Greenland is unable

to produce most of the absolutely necessary present-day commodities and, therefore, becomes still more succeptible to the fluctuations of the market, which have been unavoidable, at any rate up to the present.

D. Total Fluctuations.

Considering the fluctuations caused by natural conditions and the market as a whole, it will appear from the preceding that the Greenland community is subject to extremely great variations, both from one month to another, from one year to another and from one decennium to another.

If such fluctuations were allowed to exercise a direct influence upon the individual producers, the latter would, as compared with the average Greenlander, for a few years have a very large income, in others a very small one or perhaps none at all. This would be economically justifiable, if the individual Greenland family had sufficient reserves to be able to balance things, and if it realized that the high prices were determined by conjunctures, so that very considerable reserves would have to be put by from a high to a low conjunctural period.

If there is no such understanding of what may happen in the future, two possibilities must be taken into consideration. When constantly keeping up a free contact with the outer world the Greenland family, as all others in a community built up according to democratic principles, should manage its own affairs, and if it cannot do so, it must become dependent upon the poor relief or be ruined (possibly emigrate).

In both cases it will be difficult to get things started once more, as the population will frequently have declined so much that it will be difficult for it to show the necessary initiative.

When adopting the ordinary economical consideration that the marginal income must be greater than the marginal costs for the private individual trading with Greenland, the result of this may easily be that in one year it would not pay to send up a vessel to this or that district, possibly not to great parts of Greenland. It would however be impossible for the population in question suddenly to return to an economy depending upon natural produce, and in that case there would be nothing left but to send up an emergency vessel, irrespective of costs.

If, however, one is of the opinion that the population would not be able to bear such great fluctuations, both natural and owing to the market, a suitable expedient might be to insert a kind of buffer between the market and the population, that is, a regulator checking the pronounced oscillations in both directions from what must be estimated the normal movement.

If such an economical buffer is introduced, it may possibly be sufficient to eliminate the most pronounced oscillations, or else to eliminate all the oscillations, in so far as the average is known.

An arrangement of this kind with the purpose of counteracting the oscillations can be made for a shorter or longer period, or it can be extended so as to make the Greenlanders more or less independent of the fluctuations caused by natural conditions, the community thus obtaining a rise of income corresponding with the increased productivity.

Through a buffer of this kind it is possible not only to undertake an equalization based upon the average of the conjunctures, but also upon a depression or an assumption of high conjunctures, in both cases in such a manner that the regulating party receives the income or pays the possible deficit.

The proposed equalization presupposes an isolation from the outer world, such as does as a matter of fact already exist. The equalization will be expressed in the state balance sheet of Denmark; in so far as an average is aimed at, years with a surplus according to the accounts must be succeeded by a deficit. When wanting to stabilize in a period of depression every year yields a surplus, the latter also fluctuating strongly with conjunctures; when trying to stabilize on the strength of high conjunctures the result is, on the other hand, a deficit, which is also fluctuating. The economic level may be fixed more or less arbitrarily, when the capital at hand is sufficiently large, and the owner is willing to cover the deficit.

Two systems which are in principle the opposite of one another may thus be adopted as the basis of the economic life of Greenland, viz. free competition or regulation. There have been a number of advocates for each of the two systems, and in the following an account will therefore be rendered of the underlying points of view, which in the course of time have been advanced on both hands, more particularly in the various commissions appointed, not least in the present century.

This historical exposition which will comprise the two following chapters will, in its turn, be followed by an explanation of the principles underlying the regulated economy of Greenland and also a description of the method of the further elaborating of these general motives, according to economic-geographical and historical assumptions, with a more detailed demonstration of what is in the interests of the Greenlanders, the exposition ending with a demonstration of an incipient change in some of the presuppositions of the system and a sketch of the changes of system, which may be supposed to take place.

CHAPTER V

THE DEMAND FOR COMPETITION

During the years following the Napoleonic Wars the Copenhagen market laboured under difficult conditions; various markets had been lost, and the most enterprising of the wholesale dealers naturally looked about them for better working fields and possibilities. During this period attention was directed towards Greenland. In the years from about 1830 the surplus of the Royal Greenland Trade had been fairly considerable. This was more particularly due to the high prices of oil, and several wholesale dealers were of the opinion that, if a considerable degree of free trade were introduced, it would benefit not only themselves, but also Copenhagen and Greenland. Acting upon these fundamental views and with the usual arguments in favour of free trade a petition to this effect was addressed to the King on July 23rd, 1834, followed by a petition from four Copenhagen firms, with the object of leasing the three northern settlements of South Greenland for a period of ten years[1]).

The directors of the Royal Greenland Trade were not agreed as to the measures to be adopted. The director GRAAH was of the opinion that free trade — to which leasing might form a transition — would be to the benefit both of Greenland and to part of the Danish merchant class. According to him the monopoly trade was a burden for the Greenlanders, and especially the fixed price of 2 rigsdaler per barrel of blubber, which they received, was far too low, inasmuch as it only made $^1/_{10}$—$^1/_{15}$ of the auction price in Copenhagen. The consequence of the great difference existing between purchase and sale prices was a surplus in favour of the Trade, but meant starvation and misery for the Greenlanders. This, it was maintained, "bred torpor and lack of enterprise, which was perhaps in part the cause of the decrease of the population as well as of the fact that the Greenlanders, in spite of having had missions and schools for a hundred years, still find themselves on the bottom rung of the ladder as regards enlightenment." The majority of

[1]) M. o. G., Bd. 145, No. 1, pp. 253 et seq.

the directors (Wexelsen, Motzfeldt and Gede) admitted that monopoly trade was as a rule detrimental, but on the other hand they maintained that Greenland was an exception, because in addition to the actual trade there was a civilisatory task to be performed there. Furthermore, the majority of the directors considered it right to call attention to the fact that the leasing project only aimed at the most profitable of the settlements, and this at a time when, because of favourable conjunctures, the trade was able to yield a surplus. The three directors stated as their "firm" conviction that, if the petition were granted, the consequences would be most detrimental, both for the Royal Greenland Trade, which would be ruined, and for the Greenlanders, whose morality would fare badly without the beneficient guardianship, which only aimed at their welfare and not at the greatest possible profit."

A. The Commission of 1835.

The directors thus disagreeing among themselves, the higher authority, the Treasury, did not dare to take up an independent position, and in March 1835 a Commission was appointed, consisting of officials from the Royal Greenland Trade and the Treasury, together with special Greenland experts within scientific, commercial and mission circles. The free trade view was particularly represented by the wholesale dealers Sass and Hansen, who occupied a fairly strong position during the early negotiations, but gradually proved unable to convince the other members, and so their views were expressed in a minority report accompanying the general report of the Commission of 1840. In the latter the members declared themselves to be agreed that the interests of the Greenlanders should be considered to the greatest possible extent, which in their opinion had not been done by the Royal Greenland Trade, inasmuch as they had paid the Greenlanders far too little for their produce, while their administration was far more expensive than would be necessary for a private enterprise. According to the views of the minority a freer trade would, therefore, be to the advantage of the Greenlanders, who not only might expect higher payment for their produce, but also through competition would obtain a greater selection of commodities and a closer contact with the outer world.

The interests of the Greenlanders could, however, not be the only consideration of the minority. A country must have the opportunity of profiting by the possession of a colony, and such a profit was far more easily obtained through free trade than through Government trade, seeing that the free trade would undoubtedly increase the extent of the turnover.

The minority willingly admitted that unfortunate elements might be introduced into Greenland with private trade; but it could not see that the Government trade was in any way a guarantee against the wickedness of human nature. On the contrary, it would be better for the Greenlanders, if the trade were controlled by independent government officials instead of the employees of the Royal Greenland Trade.

In answer to the anxiety expressed from other quarters that, if the capture of sea animals were greatly increased, the stock would be diminished, the minority maintained that a single country could not, by its own dispositions, safeguard the stock of sea animals. Besides, if an increase of the population were to be desired, this would also apply to a corresponding increase of the number of animals captured, and how would it be possible to find a suitable medium between the increase of the population on one hand and the preservation of the stock on the other?

The minority were willing to admit that several difficulties would attach to the introduction of free trade; consequently, they were ready to collaborate in a transition by gentle stages, and they were of the opinion that the best proceeding for the time being would be to lease a few settlements. A transition measure of this kind would be an excellent means towards developing the population, so that it might be better equipped for the introduction of free trade in the proper sense of the word. The two wholesale dealers therefore ended by setting forth a proposal for leasing the Fiskenæsset district in South Greenland, and explaining in details the conditions on which such a concession might be arranged[1]).

However, the wishes for the introduction of a freer trade in Greenland led to no immediate results, as the Treasury and the King could not see their way to agree to their proposals. But the points of view here set forth proved their vitality by cropping up and making themselves felt time after time during the following century.

B. The Commission of 1851.

When by the passing of the constitution of 1849 the liberal principles had won their great victory in Denmark, it was only natural that Parliament should begin to discuss the problems of a free trade for the Faraoes and Greenland. This led to the abolishment of the monopoly trade on the Faroes and the recognition that this problem, as relating to Greenland, should be discussed in a new commission, the Budget Committee maintaining that "the population of Greenland

[1]) M. o. G., Bd. 145, No. 1, pp. 274—75.

still finds itself on such a low stage of mental development that it will hardly be to its own benefit, if in a very near future it were made to enter into free communication with the civilized nations."

In the Commission appointed according to the Royal Resolution of March 2nd, 1851, the demand for liberty was more particularly represented by H. P. HANSEN, bankdirector, wholesale merchant and member of the Second Chamber. He maintained with great emphasis that the Government could not with profit carry on commercial enterprises, and over against the arguments set forth by Parliament that the continuation of the monopoly was in the interests of the Greenlanders he further declared: "It is, however, to be regretted that the measures undertaken for about a hundred years and the economic sacrifices made have not carried them further along the road of civilization, than that it is still thought expedient to keep up this isolation, and it is perhaps a problem, whether it is not this very exclusion from intercourse with the civilized nations, which prevents the Greenlanders from having become and in the future probably from ever becoming a self-dependent people." He further maintained that it would be of very little importance to compare them with other primitive nations, as the climate of Greenland holds out no temptation for immigrators, who would in all probability only be able to hope for favourable results if collaborating with the natives, and he then continued: "Therefore, I am of the opinion that the over-considerate treatment constantly accorded to Greenland is somewhat exaggerated, and I see no risk in abandoning this system and in extending the intercourse to a larger extent, than has hitherto been the case, or than can be attained by the method now followed, for it is evident that the trade, whatever the means adopted, will never flourish under the supervision of the Government, as it might be expected to do when granted greater freedom. For it is a matter of course that such an administration, however ably and honourably conducted, will not be able to act with the freedom which is a necessary condition for utilizing the advantages offered, and still less to engage in enterprises, the outcome of which cannot be calculated beforehand, and which only the enterprising men of affairs dare to undertake, such a risk being forbidden by the control and the forms required by a State institution; nor will it be possible to avoid the considerable expenses which are always the result of such a control"[1]).

H. P. HANSEN was so firmly opposed to the State monopoly that, even if it were to be kept up, he wished it to pass into the hands of private people. His reason for this was that it would, as a matter of fact, also be in the interests of the Greenlanders. The private monopoly

[1]) Samlinger og Betænkninger og Forslag udgivet af H. RINK, 1856, pp. 49—51.

would have the same possibility as the State monopoly of exploiting the Greenlanders through the policy adopted, but the private trade would be more interested than the government in an increasing turnover, which in its turn would also benefit the Greenlanders, and thus the transition from a State to a private monopoly would not only be to the advantage of private Copenhagen merchants, but also to that of everybody concerned.

The majority of the Commission could, however, not subscribe to the views set forth by H. P. HANSEN, but contented themselves with a number of reforms within the existing State monopoly. Such reforms would, however, in H. P. HANSEN's opinion lead to no result, and he consequently considered the work of the Commission to have been practically in vain. He therefore made a proposal to the effect that the trade monopoly should be abolished already from the end of 1853, and that for a period of ten years the settlements should be leased singly to private individuals. The leasing should take place by means of an auction, and the leasees should be permitted to use Greenlanders, Danes or strangers for all the work to be done in the country. Further, the leasees should guarantee that the necessary commodities were to be sent every year to the main settlements. The prices they should be allowed to appoint themselves, though with the understanding that all fixed rates should be abolished. On their return the vessels of the Royal Greenland Trade should be put up to auction, and their Copenhagen premises let. All officials and employees in the service of the company should be dismissed with half-pay or a pension, while on the other hand the mission schools and medical service should remain under the Government. In short, a liberal social order should also be introduced into Greenland, only still more consistent than the one existing at that time in Denmark[1]).

The proposal of H. P. HANSEN undoubtedly showed a profound lack of knowledge of the economic-geographical conditions of the Greenland community, and so in spite of its clarity and logic it did not find favour in the eyes of those most conversant with conditions in Greenland, though it must be supposed to have aroused a good deal of interest within the liberally minded circles of those days.

C. The Commission of 1863.

In the eighteen-fifties Parliament was far from being satisfied with the administration of the concerns of Greenland, as practised by the Royal Greenland Trade. A demand was expressed for a simpler, cheaper

[1]) M. o. G., Bd. 55, No. 2, p. 95.

and more efficient administration, and voices were heard in favour of a restriction of the trade monopoly. In the report on the Budget of 1862—63 it was proposed, for economic reasons, that the monopoly trade should be abolished, and it was thought that even though the trade in the future should yield a surplus, this was to be given up out of respect to the native population, as the free trade ought to be able to pay better prices for the Greenland products and, at the same time, to yield a suitable profit to the purchasers. The committee could not dismiss the fear so universally expressed that the Greenlanders should get into contact with all and sundry, but at the same time this reason was not thought sufficient to keep them in the state of mental pupilage, in which they lived under the monopoly, the detrimental consequences of which clearly appeared from the contents of a report from South Greenland (1858—59), which showed great poverty and even starvation among the population.

In consequence of this critisism a new Commission was appointed (February 21st, 1863) for the discussion of Greenland affairs and more particularly the monopoly trade. In the instructions to this Commission special attention was called to the fact that a change was necessary, and it was suggested that an essential part of the trade might be left to the private initiative of the employees of the Royal Greenland Trade, with the assistance of the mixed population, which measure might be supposed to contribute to the development of a native class of traders. When the employees of the Royal Greenland Trade, besides their duties in the service of the Government, were permitted to engage in private business, it would be justifiable to reduce their salaries, which in its turn would mean an adequate economy on the part of the administration.

However, the Commission could not see its way to agree to the ministerial views. Provided that the Government reserved for itself the monopoly on the chief Greenland product, the blubber, but gave free access to trading with the other products, the public trade revenues would be reduced by about 50.000 rigsdaler according to an average calculation for the years 1858—61 while, if the seal skins only were reserved, the revenue would be reduced by about 7.500 rigsdaler. If the Government were to have the same revenues from Greenland, the salaries of the employees in Greenland, which were estimated at 112.000 rigsdaler, would have to be reduced very considerably. As the additional income, which the employees of the Royal Greenland Trade would obtain by such a measure, was very varying in the various districts, the reduction of salaries, which placed the employees in the same position before and after it had been carried into effect, would be very unequal, and the system of salaries, which in that case must be adopted, would be very complicated and difficult to handle.

The Commission acknowledged that free trade ought to be the aim towards which efforts were to be directed, and therefore made the following proposal for the introduction of a stage of transition: Within a period of trial extending over 5—10 years an attempt should be made to open up the trade along that part of the coast, where the population and the production were declining, that is, the stretch from 61 to 67 lat. N. comprising the settlements from Frederikshaab to Holsteinsborg, but at the same time retaining the establishments of the Royal Greenland Trade. The free trade regulations should only comprise the vessels, which were entered outwards from and inwards to Danish harbours; a duty was to be paid on the products exported from Greenland, which duty should constitute 16 per cent of the commercial value of the Greenland products, sold outside Greenland. In order to protect the Greenlanders it was proposed that special regulations should be introduced for limiting the import of alcohol, and it was also proposed that all ships' crews coming into the country should be bound to submit to medical inspection. In order to help the Greenlanders in the other districts an increase of the prices paid for their products was proposed.

The expenses for administration, medical and health service, churches and schools were to be defrayed from the amount raised by the sale of the products. In case the experiment failed and came to naught, the possibility was kept open for the checking of the free trade, and the Royal Greenland Trade should resume its former activities[1]).

A short time after this report had been made, a book was published dealing with the miserable conditions under which the Greenlanders lived, and also containing a proposal of a new transition form to a freer trade. The author[2]) proposed that the administration of Greenland should be entrusted to an independent director, while the commercial part in his opinion should be left to a merchant in Copenhagen, who was to be appointed by the highest official, at first with a fixed salary, later on with percentages sufficiently high to cover the salaries of all employees in Copenhagen and Greenland, and also the upkeep of the trading establishments.

The report of the Commission and BLUHME's well-written book caused a lively discussion in circles interested in Greenland, and strong forces were undoubtedly at work in order to introduce freer trade conditions. However, the result was then as formerly that responsible circles were unable to effect any radical change, and in 1870 H. J. RINK, the ablest defender of the monopoly trade, was appointed director of the Royal Greenland Trade. From that time and for a number of years

[1]) Cf. BOBÉ in M. o. G., Bd. 55, Nr. 2. p. 98.

[2]) E. BLUHME: Fra et Ophold i Grønland. 1867.

onwards the demands set forth as to freer trade conditions in Greenland declined in force.

D. The Commission of 1906.

The criticism directed against the monopoly and the demand for freer access to trade with a view to promoting a speedier development in Greenland proved its vitality by cropping up again and again. In the early years of the 20th century conditions in Greenland were once more made the subject of a lively public discussion, and in this connection the monopoly trade was again severely criticized. The fundamental idea was now less the wish to introduce free trade into Greenland than a demand that the Royal Greenland Trade should adopt the same economical views as were applied to the freer trade elsewhere. Criticism was not so much directed against the existence of a trade monopoly as against the principles used, which the critics looked upon as unreasonable. In other words, it was both against the organisation of the Royal Greenland Trade and its policy of prices that criticism was directed.

For the purpose of investigating these problems the Ministry of the Interior in 1907 appointed a commission, chiefly consisting of private business men. It was established as the basis of the work of this commission that the trade with the settlements should be carried on as a State monopoly, and that the investigations of the commission should more particularly comprise the following points.

1. Changes relating to the purchase of commodities to and sale of commodities from Greenland, including the management of the commodities at the treatment of the Royal Greenland Trade.
2. Navigation conditions.
3. The fixing of rates.
4. The keeping of accounts.

As to the future aim of the Greenland trade the following proposals were made:

The income and expenditure of the Trade must be made to balance so that the working expenses are covered, and the Government should be exempted from grants to the Trade and be paid interest on the capital invested, but in such a manner that no profit beyond this interest is aimed at. Any further gain or economic measures should be for the benefit of the Greenlanders by reducing the additional prices paid for commodities sent up, and by raising the prices received for their native products; inversely, the prices must be regulated in the opposite direction, if all expenses cannot be paid for with the prices fixed at any given time.

When thus the surplus of deficit of the Royal Greenland Trade is assessed by the prices fixed in Greenland, the population is made to bear all costs, being in return also given the full profit of the trade. The principal task of the administration will accordingly be to procure for the Greenlanders the highest possible payment for their products and to supply them with the commodities sent up at the lowest possible prices.

As the outcome of the economic situation may vary from one year to another according to the varying profit of hunting and fishing in Greenland, and according to the fluctuating prices to be paid for the products, a yearly regulation may lead to very severely felt movements. It is therefore proposed to keep on the safe side in the calculation of prices, but to put by the possible surplus as a price-regulating fund to be used f. inst. every third year for the undertaking of a general regulation of prices with a view to maintain the economic balance.

The relation of the Treasury to the economy of Greenland would according to this proposal be the following: it would not have to pay any deficit on the trade, and though it would receive interest from the capital invested in the Royal Greenland Trade (at that time $2^2/_3$ million kroner), it would have no further profit on the trade. As the expenses of the trade include grants to municipal funds and interest of the outstanding debts of the latter, the State would only answer to the expenses for administration, churches (schools), medical service and similar tasks falling outside the scope of the Royal Greenland Trade, but it was to be expected that these expenses would be covered by revenues received by the State from Greenland, irrespective of trading operations, viz. the royalties from the cryolite mines and other mining (excepting coal).

The Commission was of the opinion that Greenland should be regarded as an economic unity (economic circle) in an ordinary community based upon competition. Only when it was absolutely necessary, the Commission touched upon the interior conditions of the country, but all the more on the dispositions extending beyond the economic circle. If according to this view the welfare of the Greenlanders was the aim to be pursued, it should be done by investigating and rationalizing the business methods of the Royal Greenland Trade, particularly through a reduction of expenses, which did not influence the Greenlanders. It was the surplus, not for the State but for the population, which was to be made as great as possible.

One of the greatest items of expenditure was then, as it was before and still is the navigation. For this were used the S/S "Hans Egede" (453 N. R. T.) which made four voyages, the three barks: "Nordlyset" (249 N. R. T.), "Ceres" (285 N. R. T.), "Thorvaldsen" (261 N. R. T.) and the wooden steamer "Godthaab" (162 N. R. T.) the principal task

of which was the navigation of East Greenland. The barks and the "Godthaab" only made one voyage every year, as the latter vessels, beyond the navigation of the coast in summer, were used for coasting together with the wooden steamer "Fox" (110 N. R. T.) which wintered in Greenland. Besides, the Royal Greenland Trade owned five brigs, which were no longer used for the navigation of Greenland, but during later years were replaced by chartered Norwegian wooden steamers. The total navigation expenses had, in the years 1901—05, averaged 218.000 kroner, or about 38 kroner per ton.

The naval experts of the Commission considered the navigation as far too expensive and estimated that it should be possible for the Royal Greenland Trade to carry on the navigation of Greenland by means of their own vessels at about 20 kroner per ton. Consequently, the Commission proposed the purchasing of a new steamer with a carrying capacity of up to 800 tons. If this vessel and "Hans Egede" were made to undertake four or possibly five trips in the year, it was thought that the costs of navigation, even with a somewhat increased amount of transport, could be reduced to 125.000 kroner.

As regards the activities in Greenland the Commission was of the opinion that considerable amounts could be saved by uniting the twelve smaller settlements into four greater ones, from which all trading posts should receive their supplies. This would, in the opinion of the Commission, mean a considerable simplification of the administration. The number of Danish traders and assistant traders could be reduced at once, and presumably still more so when, as was to be aimed at, more Greenlanders were employed by the Royal Greenland Trade. The loading and unloading of vessels could be expedited considerably by the building of bridges and the providing of the necessary crews. It was proposed that the manufacturing of seal oil should be undertaken in one place, while the number of barrels should be reduced by an extensive use of blubber and oil tanks at the settlements. In spite of a proposed increasing of the salaries and the removal of part of the operations to Greenland, the Commission was of the opinion that by the various rationalizing measures the expenses of the Greenland Trade could be reduced from about 304.000 to about 220.000 kroner.

Finally, a number of proposals were made as to the rationalizing of the Copenhagen department of the Royal Greenland Trade.

With a view to the present investigation particular interest attaches to the policy of prices proposed by the Commission. As to this the majority expressed the following opinion: "When by monopolizing the trade the economic life of the population is taken in hand, it is naturally of the greatest importance that the principles followed should be the right ones, and these principles in the main find their expression in the

rates adopted when buying from and selling to the population. When higher prices are paid for one Greenland product than for another, the production of the latter is furthered, and the population encouraged to consume the badly paid article; in the same manner it is an encroachment upon the economic life of the population, when the costs of trade are covered by letting them fall chiefly upon the Greenland products, so that unnaturally low prices are paid for them, while in return the prices paid for the imported commodities are not as high, as would be necessary to cover the trading costs without a trade monopoly."

Then follows criticism of the policy of prices used by the Royal Greenland Trade, and in continuation of the views set forth by the Commission of 1863 it is said: "This proceeding on the part of the Royal Greenland Trade, viz. to sell the commodities imported at a loss, but to compute an unreasonably large profit on the commodities exported must be regarded as entirely wrong. In this manner the producers are made to pay all the costs and to make sacrifices to provide articles of consumption below their real value for all the inhabitants of Greenland. This is to be deprecated from a commercial point of view and must have an unfortunate influence on the population of Greenland by weakening their inclination to produce and to save. It means in fact an arbitrary removal of the foundation upon which the economic development rests everywhere else, viz., that the producer is given the profit of his work, while the consumer must pay the costs. . . . When in Greenland principles are adopted in direct opposition to those, which in other countries have been the basis of economic progress, this checks the development of the Greenland population, and more particularly excludes every possibility of their being educated to free trade. The opposition of the majority to this proceeding, therefore, rests not merely on commercial considerations, but on the strong interest in the welfare of the Greenlanders, which has been roused in the members of the Commission while working with conditions in Greenland."

In short, the Commission proposed that the prices paid in Greenland for imported commodities should be determined by the purchase price + costs, and those of the exported products by the prices obtained for them ÷ the costs arising out of the transport etc.

The report of the 1906 Commission, on one hand, follows similar lines as and, on the other, differs from the liberal views expressed in the eighteen-fifties. The similarity is shown by the emphasis laid on and the belief in the liberal views and, more particularly, in the free formation of prices. The difference consists in the fact that the 1863 Commission and people generally about the middle of the 19th century regarded the individual Greenlander, whereas the Commission of 1906

looked upon Greenland as an economic circle or unity which had to be made the starting points.

This change of attitude may presumably be regarded as the outcome of a more humane way of thinking. The general view, both on the part of the liberals and of those in favour of the monopoly, was now that the object to be aimed at must be the welfare of the Greenlanders, and they only disagreed as to the means.

In order to carry the proposed rationalizing measures into effect the Commission considered it necessary to separate trade and administration, and to subject the trade with the appertaining navigation to a purely mercantile management. Those were the same wishes, which had been set forth from entirely different quarters out of regard to the population of Greenland, and an act to this effect was passed on May 27th, 1908. Before this act could come into force, more detailed regulations had to be worked out as to the separation of the functions of trade and administration in Greenland. Negotiations went on for some time, but it proved impossible to come to an agreement on a separation, which paid reasonable attention both to the administrative and the mercantile task in hand, and the Act of 1908 never came into force, as far as concerns the separation of trade and administration.

In order to have a clear view of conditions in Greenland the Danish Parliament in 1911 proposed to send out a commissioner, who should make proposals as to a future arrangement, in which all wishes and contingencies had been considered, but the proposal could not be carried through the first chamber.

After a number of negotiations with the officials of the Royal Greenland Trade the Minister of the Interior at that time, Mr. JENSEN-SØNDERUP in 1912 took a step in the opposite direction by proposing a joint administration, whereby all the affairs of Greenland should be subjected to a central direction. In the discussion preceding the Act of 1908 emphasis was laid on the necessity of subordinating the trade to the administration, and this was carried out in principle, the commercial manager being subordinated to the director of the Administration, so that the interests of the Greenlanders might be decisive, when or wherever doubts should arise.

D. The Commission of 1920.

Thus the liberal views regarding the economy of Greenland had again been thrown into the shade by the course of events, but not so much so that they were not to make themselves felt once more. In the commission appointed in 1920 for discussion of the affairs of Greenland, one of its members (M. P. PORSILD) made himself a spokesman of the opposition to the monopoly, and that in its most extreme form.

He regarded the continued maintenance of the monopoly trade as the principal obstacle to the cultural and economical development of Greenland and the greatest danger to its national solidarity with Denmark, as in his opinion it had been to that of Iceland and the Faroes. He therefore proposed that the time for its abolishment should already now be determined, for instance to some ten to fifteen years ahead, and that the organs of administration should be made to feel this responsibility by making all efforts at reforms tend directly towards this aim. In the transition period he proposed that Danish citizens should be given the opportunity of obtaining concessions on such trade enterprises in Greenland, as the native population would be entirely or in part unable to exploit by their own efforts.

To a certain extent six of the other members of the Commission accepted the point of view of Porsild, thus forming a minority which especially comprised the ecclesiastical members of the Commission. This group maintained that it would be inexpedient and dangerous at the present time to abolish the prevailing trade restrictions, chiefly because the necessary steps had not been taken to prepare the Greenlanders for this state of affairs, but at the same time they expressed, with the strongest possible emphasis, the wish that it should be made the chief task of the administration, deliberately and according to a definite plan, to prepare the Greenlanders for the introduction of a freer trade, which would surely become necessary. As a step in this direction they proposed —as had already been done in the report of the Commission of 1906— that the prices prevailing in Greenland, both for the products bought and for the important commodities sold, as far as possible, should be those of the world market, with deduction and addition in proportion to the accrueing costs. At the same time they maintained that certain social considerations should be observed, for instance that the Greenlanders should be able to acquire their implements at lower prices. They further realized that this so-called natural balance could not be effected at once, but would have to be carried into effect gradually and with due respect to everybody concerned, all the time emphasizing that it should be done deliberately and according to a definite plan, so that it would be possible within a suitable period to introduce prices, which would be the natural result of a freer trade intercourse.

Thus the liberal views still made themselves felt in the discussions regarding the economic life of Greenland. However, the position taken up by this minority did not exercise any influence on that of Parliament, and the bill regarding the administration of Greenland, which was passed on April 18th, 1925, was in all essentials based upon the opinion expressed by the majority of the Commission. Still, in the years between the two World Wars this problem has time after time been made the subject

of discussion, also in the papers, and the attacks on the monopoly trade have been many and more or less violent, especially after the appearance of the great occurrences of cod along the coasts, and the opinion has been expressed on various hands that the latter might be better utilized under freer trade conditions. A society[1]) was formed the aim of which was, by means of meetings and the publishing of pamphlets, to rouse the interest in a newer, freer and better Greenland, and though it did not have any great following in the period before the second World War, it helped to keep the discussion and the interest alive. As far as I know, no views were, however, set forth which are of importance for the present work.

E. After the Second World War.

In the course of the negotiations which took place in the years 1939 and 46 between representatives of the provincial councils in Greenland and the Parliament Committee on Greenland affairs the question of the abolition of the monopoly and the introduction of a freer trade intercourse were, it is true, touched upon, but it was not made the subject of actual discussion, as both the Greenland members and the representatives of Parliament had the common wish of continueing the present form of administration for the time being.

Nevertheless the demand for freer intercourse, with the implied dissatisfaction of the present form of administration has not been silenced; on the contrary, since the end of the war it has been expressed with increasing strength and violence. This is in itself not difficult to understand, seeing that during the whole of that period the native population and the Danish officials in Greenland have been left to their own devices, and have negotiated directly and at their own responsibility with America. A return to the old conditions would mean a slower proceeding, when affairs must be discussed, first with the Administration of Greenland and afterwards with representatives of the Ministery of Finance and the Budget Committee of Parliament, before a decision could be arrived at. Furthermore, many Greenlanders have through the wireless become much more intimately acquainted with conditions elsewhere, and it cannot be denied that when making comparisons, for instance of prices, such comparisons would, especially under war conjunctures, in many respects be in favour of a freer market.

Even though the liberal views regarding the economy of Greenland only in exceptional cases have coloured the attitude taken, they have

[1]) "Det ny Grønland" (ɔ: the new Greenland) founded in the summer of 1927 under the motto: "Free access to Greenland for Danish citizens, for Danish enterprise and fisheries, the abolition of the monopoly and the system of the closed country".

time after time shown their vitality, also at the present day. Not least in "Grønlandsposten"[1]) criticism has been directed against the monopoly and the administration, as factors preventing development and free initiative. Justly or not, the monopolistic administration has been accused of delaying the progress and withholding the fruits of the technical development which might create a new era for Greenland and the Greenlanders. And based upon these considerations strong wishes have been set forth for grants which should help to modernize a number of fields.

The critical point of view and the inimical attitude towards the monopoly is quite clearly expressed by OLE VINDING[2]) who says among other things: "VIBE is perhaps the writer who realizes this problem most clearly, when he says that what Greenland needs are not more officials, but enterprising private individuals, artisans and technicians, who by their working methods can teach the present-day Greenlander the only thing that is vitally necessary for him, viz.: technical ability. The Greenlanders agree with this view; they know that they can learn much from competition, they also know the costs of this and that many of their own people will perhaps perish in the experiment, but will they not do so in any case sooner or later? And is it not rather so that the Greenlanders, without any fault of their own, live on the minimum characterizing those that have gone down? By competition from without only one thing may happen: the able Greenlander will at last have a real opportunity to attain to the place, where he belongs. As it is now, it is as already suggested those naturally weak, who to-day determine everything under the over-humanitarian policy of bureaucracy. By their defencelessness and pitiful state they keep back the development and give the Danish officials a welcome "proof" of the lower stage of development of the Greenlanders."

VINDING and VIBE are, it is well-known, not the only ones, who have subjected the economic system of Greenland to a very severe criticism and a demand for drastic changes. In the main the considerations are the same, which we recognize from many earlier attacks upon the present administration; a new feature is perhaps the strong emphasis laid upon the importance of national feeling also in the field of economy. The chief difference between the older and the more recent criticism of the policy followed must be said to consist in the manner in which the criticism has been responded to in Greenland and in Denmark respectively. In Greenland there has been a greatly increasing wish for drastic reforms, and this also seems to be the case in Denmark, even though such reforms should result in very considerable additional expenses, the wish of the Danish public being

[1]) "Grønlandsposten" is a paper written in Danish and published in Greenland during the war under the editorship of CHR. VIBE M. A.

[2]) Grønland, 1945, p. 131.

by this means to strengthen the ties between the populations of Denmark and Greenland.

For me the criticism expressed, with the demand for the accomplishment of something quite new, has called forth a desire to consider thoroughly "the economic theory of the system." But before I take up this task it seems natural to discuss the principal points of view which, in the course of time, have been advanced by the advocates of the system.

CHAPTER VI

JUSTIFICATION OF THE MONOPOLY TRADE

It will carry us too far in the present investigation to enter into the arguments set forth in favour of the monopoly, at the time when economic conditions were characterized by mercantilism; in this context the reader is referred to "The History of Greenland" by Louis Bobé, and partly also to my own account of the General Trading Company and its importance to Greenland. Therefore, I have in this place confined myself to mention the views, which through the last century have been advanced against the principles underlying the liberal criticism dealt with in the preceding chapter.

A. The Commission of 1835.

In the Commission which, as mentioned above, was appointed in 1835, there was at first rather a leaning towards the introduction of free trade, and a committee was formed consisting of the most liberally minded members, with a view to setting forth proposals as to the manner in which the freer trade intercourse could best be carried out. In this committee's report to the general Commission it was emphasized that free trading must be the final aim, but that it was not thought expedient to propose the immediate and complete release of the trade, as the cultural state and mode of living of the Greenlanders could not be regarded as sufficiently developed for such a measure. The most important thing must, therefore, be that the Government should take serious steps to instil a higher civilization into Greenland, by means of improved instruction and by changes in the management of the trade. This would, however, entail considerable expenses, and these could only be expected to be covered by the keeping up of the trade and the resulting surplus to the Exchequer. The sub-commission or committee was therefore of the opinion that, pending further developments, the State monopoly should remain in force. Nevertheless it was thought necessary to break away from the method hitherto followed, and this

it was thought could best be done by leasing some of the settlements to private individuals. The settlements leased ought, however, not to be the best, so as not to reduce the surplus of the trade more than absolutely necessary.

In the following discussion the advocates of the monopoly stressed their views so effectively that several of the members of the Commission were converted to the belief that the actual monopoly should be kept up for the time being. The weightiest opinion expressed on the part of the advocates of the monopoly was that of L. N. HVIDT, who in the summer of 1837 further developed his views in writing.

As an introduction HVIDT raised the problem as to what was the central object of Denmark in the possession of Greenland, which might either be the civilization and progress of the Greenlanders or the promoting of trade. HVIDT maintained that the principal object, viz. the spreading of Christianity, had always been at the bottom of the efforts of the Danish Government, and he was of the opinion that it must also in the future be the principal object—though in a manner more answering to the purpose than had hitherto been done—to raise the Greenlanders from the state of mental pupilage in which they had hitherto lived. "Not until this is achieved, will they be able to profit by the advantages offered by a freer trade communication, and in my opinion the trade of the mother country with Greenland must be quite subordinate to this purpose. If this is not the intention of the Government, and if efforts are only directed towards attaining trade profit for the mother country, there is hardly any reason to have a special care for the present inhabitants of Greenland, and it will beyond doubt be better to leave them entirely to their own devices, which will in all probability result in the speedy extinction of the race, and to try to people Greenland with European settlers, which measure however seems to me to be extremely unjust[1])."

As against the opinions expressed by the wholesale merchants HANSEN and SASS who insisted that monopoly trade was always detrimental, HVIDT maintained that it was here a question, not of a private but of a state monopoly, and that the State was willing to give up the monopoly, as soon as the welfare of Greenland and other purposes of State made it necessary. An argument against free trade was in the present case the low stage of the development of the Greenlanders, which with a freer trade intercourse would induce them to prefer useless things to the necessities of life. "They would as a rule neither be able to read and write or reckon, and as they have no idea of money, they would constantly be cheated by those they traded with, and there

[1]) M. o. G., Bd. 145, Nr. 1, pp. 267—68.

was hardly any means to right them, seeing that the proof as to the injustice done to them, which the State was bound to require, would rarely be forthcoming." Private trade would probably take the same direction as trade with the savages in Africa, and like the latter it would not exercise any influence on the civilization of the population."

To these more general considerations on trade with uncivilized people must further, in the case of Greenland, be added the difficulties arising, partly out of the great distances between Denmark and Greenland, and partly out of the distances between the small settlements. It was hardly to be supposed that more people would be interested in such a trade than that they might come to an agreement with the purpose of fleecing the Greenlanders.

After having dealt with the effect of a general free trade HVIDT writes of the second alternative, viz. leasing: "However, I consider a general leasing of the trade—be it to a trading company or to a number of private merchants— as still more detrimental to Greenland than the measure hitherto adopted, seeing that all competition would be dropped in spite of its being the only guarantee that neither the one nor the other of the contracting parties should be able to occupy the position of being the only one to profit by it." For the same reason that HVIDT dissuaded a complete leasing he also considered it inadvisable to lease some of the settlements singly. If a Greenland monopoly was to be kept up, which seemed unavoidable, this ought to remain in the hands of the State "inasmuch as the latter could not be supposed to let its actions be determined by selfish motives, as might be the case with private individuals..."

HVIDT then passes to the problem, whether there might not be a middle course between monopoly and free trade, and he mentions the privileges accorded to PAHLEN and KALL a few years previously[1]). A measure of that kind might seem a tempting one, but HVIDT doubts the validity of such a consideration. It could hardly be avoided that a private firm would be obliged to pay its hired Greenlanders in commodities, as they had no idea of money. In that way private individuals would easily seize upon the most important part of the trade, which would in its turn greatly detract from the surplus of the Royal Greenland Trade, so that there would be less money for carrying out measures for the further progress of the population of Greenland.

In order to promote the general development of the Greenlanders HVIDT proposed that the Commission should report to the effect that, according to a Royal Resolution, it was to be established as a fundamental principle of the trade that the surplus should not be taken into

[1]) M. o. G., Bd. 145, Nr. 1, pp. 232—49.

the Exchequer, but should be used exclusively for appropriate improvements of the conditions of the Greenlanders, though possibly in such a manner that one third or one fourth were put by as a reserve fund. "Nothing can be more just or reasonable, seeing that this amount is by no means the proceeds of a natural trade relation between Greenland and Denmark, but is due to the entirely arbitrary rates fixed by the directors of the Royal Greenland Trade, which rates the Greenlanders must submit to, whether they like it or not, and it must be regarded as blood money, when not used either for the benefit of Greenland, or if this measure lasts longer than that the Greenlanders have entered upon such a state of majority as to be able to attend to their own interests."[1])

It would hardly be advisable to let the directors of the Royal Greenland Trade dispose freely of such a surplus, as they would naturally let themselves be guided by economic considerations, and it would be to the benefit of all concerned, if the principle regarding the use of the surplus for the welfare of the Greenlanders were established by a Royal Resolution, as it might otherwise be feared that the financial authorities should appropriate a possible surplus and afterwards be unwilling to give it up.

It would carry us too far to enter into the details of the statements of the other members of the Commission, and I shall therefore pass directly to the views of the majority as expressed in the final report.

This final report first gives a summary of the history of the Royal Greenland Trade, emphasizing that there have been periods with a deficit as well as periods with a surplus. As in its instructions the Commission had been instructed to pronounce on a freer trade with Greenland, it was emphasized that there were four possibilities for a transition to such a state of freedom, viz:

1) that all Danish subjects should be granted the right to trade in Greenland.

2) that access to some of the settlements should be opened in such a manner that private individuals, against a duty, were permitted to settle there and to compete with the Royal Greenland Trade, the latter keeping the other settlements in the same manner as hitherto.

3) that licence should be granted for the transport of certain ships' loads to Greenland in exchange for the products of the inhabitants, though without permission to found permanent establishments ashore.

4) finally, that some settlements should be leased to private in-

[1]) p. 269.

dividuals with the sole right to trade there, all the other settlements being still reserved for the Royal Greenland Trade.

In their discussions the members of the Commission had not regarded it as their task to attach special importance to the interests of the Exchequer. In our opinion it would be at variance with justice to regard the profit presumably obtained through the diligence of the Greenlanders as a resource of the State. The principal aim had, therefore, been the consideration for the Greenlanders, though with the greatest possible regard to the interests of the Danish private merchants.

The complete opening up of the trade with admittance for all Danish subjects was dismissed, because it would undoubtedly lead to the arrival in Greenland of many rough and immoral persons, and this in its turn would be very injurious to the Greenlanders, first and foremost by the increased access to alcohol and by the spreading of venereal diseases. Owing to the great difference between the two countries it would be utterly impossible to draw conclusions from the beneficial effects of the releasing of the trade in Iceland. Even if a Danish supervision were established, the drawbacks could not be done away with, and the Exchequer would be burdened with considerable uncovered expenses. If free trade were introduced for all Danish subjects, it was further to be feared that similar privileges must be given to individuals of other nations, and thus the importance of the free trade for the Danish mercantile class would become illusory, or at any rate without any real importance.

Regarding the other possibility the Commission expressed as its opinion that, though it might yield a favourable result within a shorter period, it would nevertheless have to advice against it, as being apt to give rise to rivalry between the competing parties and a not insignificant contraband, in which the employees of the Royal Greenland Trade would have a good opportunity of disabusing their position. Besides it would be necessary to appoint Government officials, independent of the Trade, in the places where such competition was permitted, which measure would be extremely expensive when viewed in proportion to the resources of Greenland.

The majority of the Commission considered the project of permitting private traders to call at Greenland harbours with their vessels, without having permanent establishments there, as the least expedient of all the possibilities proposed. Private trade would thus not in any case be able to contribute to setting new trades afoot and so to increase production. On the contrary, such a permission would rather reduce the produce of the Greenlanders, as they would be inclined to spend a great part of the favourable hunting period in places, where the private ships might be expected to call. Add to this that the Greenlanders could not

be sure of disposing of their products, but would become dependent upon fluctuations in the market and other fortuitous circumstances. In the period when the Greenlanders might be in need of European support (that is in winter), they would undoubtedly not find any.

Finally, there was the leasing, the fourth and most important possibility. It would be possible to introduce and then to repeal this measure without any drastic changes, and if it proved a success, to pass on to free trade. When the majority of the Commission nevertheless felt bound to advice against this venture, it was because it would lead to very great confusion. The greatest asset in every district was the number of the Greenlanders and their ability; as the population could easily move about, it would flock to places, where it thought that the greatest profit was to be had, and such a crowding would be a catastrophe in the case of the failure of hunting. It might also be imagined that the Greenlanders would take their produce from the place of production to a more remote trading post, which would reduce the amount produced. Even if it were possible entirely to define a leased district, the Greenlanders would gain nothing by the leasing except passing from one monopolist to another, and this would not bring them one step further.

On the strength of these deliberations the majority of the Commission arrived at the result that they must most strongly dissuade any deviation from the tutelary trade system followed with regard to Greenland. This was further emphasized by the anxiety felt by the Commission that a freer trade on Greenland would lead to excessive hunting of the stock of seals, with the unfortunate long-run results known from the whaling at Spitzbergen and the slaughtering of seals at South Georgia, the constant anxiety being that the Greenlanders would gradually be deprived of the basis of their existence.

These general views of the trade system in its entirety were accompanied by a criticism of details and a number of proposals for reforms of the object of promoting the development in Greenland, but the details of those are presumably outside the scope of the present work, for which reason the reader is referred to other literature on the subject (e. g. M.o.G. Bd. 145 Nr. 1).

The report of the Commission was carefully investigated in the Treasury which then declared even more in favour of the monopoly than the minority of the Commission; the King sided with the Treasury, and no change was made in the principles of the administration. The Commission which had been appointed for the purpose of preparing the transition to free trade on Greenland thus led to the opposite result.

The discussions and deliberations of the Commission have been dealt with in comparative detail, partly because they were so thorough

and to the point, and partly because the ideas here set forth to a large extent make the foundation of the succeeding discussion, and because it must be borne in mind that the background of the work of the Commission were the general contemporary view, the point of which was that freer trade everywhere would lead to progress and prosperity.

It may perhaps be permitted to call particular attention to the fact that L. N. Hvidt, being a merchant himself, went against the interests of his class and his period in acting upon the conviction that as regards Greenland quite special conditions made themselves felt.

B. Rink's Views.

In the above-mentioned Commission of 1851 the principles of the Greenland trade were made the subject of discussion, and the weightiest argument in defence of the existing system was that of Dr. Rink. His views have been printed in a special report emphasizing the conditions which might justify the maintenance of a trade monopoly in Greenland, even though the free competition would elsewhere be considered the best form of community. As the treatise of Rink is the basis of many following discussions, it will here be given in detail[1]).

Rink's starting point was the possibilities of subsistence in Greenland. He emphasized the impossibility of growing grain and maintained that potatoes could not ripen sufficiently to be edible. The only agriculture possible would then be cattle-breeding, and grass which was a condition of this could be grown in certain localities right up to the northernmost part of Greenland. Thus there was a possibility of keeping cows and sheep, and so Rink raised the question to what extent this possibility could be made profitable. He reported that in the Julianehaab district, where the richest of the old Norse settlements had been situated, the European employees kept a number of cows, goats and sheep, and that these throve splendidly. The difficulty attached to cattle-breeding was to provide fodder for the period, when the animals were to be stabled, and as to this he says: "As long as the Europeans are so few and distributed in such a manner that every owner of cattle has at his disposal 20—50 Greenlanders, among whom he may find day labourers for a very low payment, and as long as it is only a question of providing milk and meat for the household, this is naturally no real difficulty. The natives, particularly in South Greenland, are extremely willing to undertake voyages and transports in umiaks for a very small payment; the women rowers are paid 12—14 skilling (1 skilling = 2 Øre)

[1]) H. Rink: Om Monopolhandelen paa Grønland, København 1852.

a day and a little dry bread, the men somewhat more—in short the whole of this cattle-breeding is carried on by a population chiefly consisting of Greenlanders, who live and subsist by means of sealing"[1]).

RINK further maintains that not only are the wages very low, but the means of transport are very cheap, which is of some importance, seeing that the transport is to take place over long distances. The decisive factor is here that the occurrences of grass are so sparse that it will be impossible for Europeans to make agriculture yield fairly satisfactory results, if solely carried on by European workers.

After having mentioned whaling and sealing as trades where the opening up of Greenland would not yield new possibilities of subsistence for Europeans, RINK proceeds to cod fishing. He first mentions the fisheries on the banks, as to which he says[2]): "But the experiments hitherto made have shown that on an average they have by no means paid their way, seeing that first and foremost the fish have been too few and have appeared too late in the year; and further the changeable weather in summer and the strong gales have made it difficult for the vessels to hold on to the narrow bank. Of far greater importance for our subject is coast fishery[3]). As to the occurrences there it is said[4]): "With the exception of the rather rare cases, when the cod occurs in the southerly fjords, more particularly the Fiskenæs Fjord, during a short period in the spring, when there is no ice, it can only be counted on to occur in fairly great quantities after mid-summer, sometimes not until August and September, and then not on permanent banks; these are upon the whole rare in the fjords of Greenland which are distinguished from those of Iceland by being very often more than a hundred fathoms deep. On the other hand it occurs in shoals, and may thus on certain days be met with in almost fabulous quantities in places, where it is subsequently absent for years to come."

Throughout the years the Greenlanders have not taken any great interest in this kind of fishing, whereas a few of the employees of the Royal Greenland Trade have derived profit from starting such fisheries outside the monopoly. The cause of this is, according to RINK, the extremely cheap labour which was available among the population of Greenland, and which was not even to be paid during the greater part of the year, when there was no fish. RINK then mentions the experiences made with European fisheries and the concession given to PAHLEN and KALL, as to the results of which for the Greenlanders he says[5]): "On the

[1]) p. 5.
[2]) p. 26.
[3]) p. 26.
[4]) pp. 27—28.
[5]) p. 33.

contrary, by the resulting unnatural crowding of the population, the competition and the higher payment, as well as the use of labour not harmonizing with the resources of the country, exactly the opposite effect has been brought about, viz. starvation and misery. Furthermore, it is shown by the experiences made through the fishing experiments carried on by the Royal Greenland Trade that cod fishing is subject to change, to such an extent that only in certain years it has been possible to pay for enterprises carried on by Europeans, whereas in other years they must be regarded as failures owing to the unfavourable natural conditions."

After having discussed all the possibilities of subsistence RINK takes up the question, whether a combination of them would not be possible and so yield a basis of existence for European settlers. This, however, he maintains to be impossible, partly because the localities which lend themselves to sheep farming and fishing are situated very far from those suitable for fishing, and finally because the principal work connected with sheep farming and fishing falls within the same, rather short summer period. As a main result of his investigations on the activity of Europeans in Greenland, RINK arrives at the result that such enterprises can only be started as experiments[1]). "Experiments of this kind will in any case only be possible with the immediate countenance and protection of the Government, and so they will not materially alter the considerations, which we are dealing with, and which must thus rest upon the principle that the population of Greenland is the only productive force in the country, and that every European must require the presence of a certain number of natives, by whom he is more or less directly supported."

Then RINK goes on to mention the native population and[2]) the effect, which the connection with Europeans has until now had upon them, and how far any greater freedom or any change whatsoever in this connection can be expected to be for the benefit of the population. From this point of view he describes the yearly economic cycle of the Greenlanders and shows that the trade connection hitherto effected with the Europeans has been of very little importance for the population of Greenland, and he maintains that it will not be an advantage for the Greenlanders to have the monopoly trade replaced by casual traders, who perhaps might derive an immediate profit for themselves by buying what the population in a coming winter could not do without, which in the long run would be to the detriment of the inhabitants. He mentions as the chief result of his investigations[3]): "Thus we arrive at the result that competition, which is the only incentive of all trade and industry, in this case would prove the opposite. However strange this might seem

[1]) p. 47.
[2]) p. 48.
[3]) p. 56.

to many people, I am however persuaded that the monopoly system is the only means to attain to the greatest total production, the only manner in which it is possible piecemeal to collect all the products, which in the course of the years and in all the remote corners of that great area are obtained by the hunting of the Greenlanders. But to this is added another consideration, which is the outcome of the low cultural state of the inhabitants, and which in my opinion must lead to the result that an opening up of the Greenland trade to free competition will amount to abolishing all Government control in the country, in other words, to giving up Greenland as a Danish dependency." This latter point of view is then discussed in detail, and emphasis is laid upon the difficulties attaching to and the costliness of an effective administration in the immense area and with the scattered population.

Finally RINK compares the economic conditions in Greenland with corresponding freer conditions in other countries, where geographical conditions are fairly similar. Such countries had, as RINK demonstrates, very little connection with European trade, and the forms of trade, which in that case are established, could not be said to be more advantageous for the population than the Greenland monopoly trade.

RINK also discusses the economic result of the monopoly trade and shows the very great fluctuations. Under high conjunctures it might perhaps be possible to start a private trade, but what would be the situation in a period of depression, when it would not pay for private enterprises to carry on the navigation of Greenland (certain experiences to that effect might be gathered from the Norse settlements in medieval times). All these different investigations and views strengthened RINK in his conviction that the State monopoly trade was the most suitable form of administration for the Greenland community.

When RINK's contribution to the discussion became of such great importance, the reason must be the emphasis which he put upon the connection between the form of trade and the economic-geographical structure of the country. At any rate many people have learnt from RINK that it did not answer the purpose to make direct comparisons between economic conditions in Denmark and Greenland, the difference in conditions of life, climate, economic possibilities and the mental attitude of the population being far too great to do so. Nevertheless it cannot be avoided that many who have critisized the monopoly have wanted to draw parallels, but this kind of criticism and a direct comparison with Danish conditions have not since the days of RINK been able to make themselves felt in responsible quarters.

The importance to be attached to the economic-geographical manner of thinking perhaps appears most clearly from the fact that, when about the beginning of the 20th century, very lively discussions regarding

Greenland were taking place, and a severe criticism of the administration was passed in Parliament, it was not so much the monopoly itself as the form under which it was exercised, which was made the subject of discussion and criticism. As mentioned in the preceding chapter, the task before the Commission of 1906 was not to discuss the monopoly, but its most suitable form. It was at that time realized in responsible quarters that the economic-geographical conditions, which Parliament could not change, should lead to the administration of Greenland by means of a monopoly, and that it was the form of the latter which it was possible to discuss. The risk attaching to free competition for a people placed by nature in such a difficult position as the Greenlanders had no possibilities of coping with drawbacks, which were so great and of such a nature that it would be indefensible on the part of the Government to impose them upon the population.

C. The Commission of 1920 and the Act of 1925.

Though it is generally understood and recognized that the economic-geographical conditions of Greenland make it desirable to keep up the monopoly trade, at any rate for a considerable number of years to come, a discussion has naturally been going on as to the subject of this monopoly trade. Already in the Commission of 1835 it was maintained that the object of the economic work in Greenland ought not to be profit-seeking, but the consideration of the welfare of the entire population. This point of view, it is true, did not gain the day at once, as the Exchequer were unwilling to waive the desirability of a Green'and surplus, but this attitude has gradually been abandoned.

Everybody is now agreed that the object of the monopoly trade of Greenland is to meet the needs of the population in the fullest possible way. In the general discussion this is expressed by the emphasis laid upon the fact that the trade of Greenland is an administrative trade; in practice it is no longer the »merchant« but the »manager« of the settlements, who directs the trade. This change in the principle of trade is not a sudden growth, but has developed gradually. It would carry us too far to enter into the details of this development, but the definition of the view underlying it at the beginning of the nineteen-twenties, in connection with the Act of April 18th, 1925 (sections 21 and 3), should be made subject to more careful investigation.

Already in the report of the committee appointed on December 1st, 1920 for the discussion of Greenland affairs (Copenhagen 1921) it is said[1]: "As distinguished from most State monopolies the Royal Greenland Trade, not least in the last fifty years or more, has not been carried

[1]) p. 17.

on as a source of revenue for the State, but has, on the contrary, been of an entirely administrative nature. It has been possible for it to see to the Greenlanders being first and foremost provided with real necessities, and in the purchase of native products a principal consideration was that the Greenlanders did not in too high a degree deprive themselves of indispensable products. But a private enterprise cannot be expected to be carried on according to the same principles; for it the greatest possible profit within the shortest possible time will be the chief object."

This fundamental consideration was more clearly expressed in the bill introduced by the Minister of the Interior. Here it was stated: "The manager undertakes the carrying on of the trade of his district, pursuant to detailed instructions from the Ministry of the Interior under the supervision of the chief administrator ("Landsfoged")." In this form it did not give a sufficiently clear definition of the main line to be followed in the economic policy of Greenland, and in passing through Parliament it was altered to: "All trading activity on Greenland should aim at furthering the economic conditions of the population and is reserved for the Danish State under the direction of the Ministry of the Interior. However, there must be access to a free trading intercourse between the Greenlanders themselves." The spokesman of the committee expressed the following opinion: "The committee cannot but call attention to the desirability of letting all trading activity in Greenland gradually become a cooperative trade for the entire population, and it hopes that the Royal Greenland Trade will be as favourably disposed as possible to the free trading intercourse between the Greenlanders themselves, which free trading intercourse for that matter is also permitted under existing conditions"[1]).

In other words, the object is that the trade is to be carried on as an administrative trade for the benefit of the population of Greenland. The effecting of this fundamental political view will be discussed in the following chapters, both theoretically and together with a rather detailed account of the views adopted by the Administration of Greenland in a number of "trade" dispositions.

The second regulation, contained in section 3 of the Act of 1925, refers more directly to the economic line followed in the policy adopted, viz. "deficits are defrayed by the Exchequer, being appropriated into a special account of the yearly balance sheet for the administration of Greenland. In so far as there is any deficit from earlier years on this special account, the surplus is used for the writing off of the latter, and the amount is then appropriated by the Exchequer. If there is no

[1]) Folketings Tidende, 1924/25, Sp. 6089. Cf. M. o. G., Bd. 134, Nr. 2, p. 42 (footnote).

such use for the surplus, half of it is paid out directly to the population of Greenland, to be distributed according to certain rules, which are fixed by the Ministry of the Interior after negotiations with the provincial councils. The other half is then appropriated by the Exchequer and is credited to the above-mentioned account to be used for covering possible later deficits. In case the amounts entered as surplus into the special account should be as high as the capital, which according to the special balance sheet has been invested into the administration of Greenland, the Budget Committee of Parliament is to decide the use to be made of this surplus."

The object of these regulations has been twofold: On one hand the idea has been to regard the population of Greenland as an independent economic circle, where revenues and expenses in the long run should balance so that the population derived the full benefit from its work, viz. partly to create a possibility of an equalization between economically good and bad years (equalization of conjunctures). The latter which has been of very great importance will be treated in detail in the following statement.

The most doubtful part of the clause is how to look at the surplus (deficit). It may here be a question of the entire profit from Greenland (Greenland as an economic circle) or from the trades in which the Greenlanders partake (the population as an economic circle). The motives expressed in the Act are not concerned with this, inasmuch as it says — — "the profit of the economic possibilities of the country do directly benefit its population, at any rate as regards trades which the population helps to utilize." This is in so far of great importance, as there are various transition forms between Greenland and "Danish" trades. Further it is said — — "partly because a considerable surplus is hardly to be expected by the unaided economic activity of the natives, but only by the introduction of measures, which in the main are owing to Danish initiative, and which must be supported by Danish capital and Danish work. This already now makes itself felt, in that a considerable part of the revenues of Greenland proceeds from the cryolite mines at Ivigtut, in which work the Greenlanders have not taken any part, and the utilization of which could not be materially helped by the population.

Shortly after the passing of the Act the question in so far became important, as the State received a large extraordinary payment from the cryolite company (agreement of March 29th, 1926); the latter was originally specified according to section 7 of the Budget as part of the ordinary revenues of the Danish State, and when the Administration of Greenland protested against this, the amount was transferred to a special „Greenland Fund", which was not appropriated by the Exchequer, but

to which according to section 18 of the Budget the deficit on Greenland was transferred. This fund has in some years been positive, in others negative, but there has since then been no doubt that all the State revenues from the cryolite mine ought to benefit Greenland. When in 1940 the cryolite company, the "Øresund" was founded by the State, together with the two private companies directly interested in the production of cryolite, and the State reveived half of the share capital, this point of view was further emphasized by the transference, from the Treasury to the special „Greenland Fund", of the taxes paid by the "Øresund" for that part of the share capital, which was ascribed to the Administration of Greenland, this being done by a special yearly amendment to the Budget.

Apart from the ordinary and extraordinary revenues of the cryolite mine the economic outcome of Greenland in the year following upon the passing of the Act of 1925 has been a deficit, which till the outbreak of the second World War averaged about three millions of kroner annually. This deficit was partly due to the low prices for Greenland products on the world market (cf. above), and partly to the fact that the Greenlanders in an increasing degree bought the imported commodities, for which the prices demanded could not cover expenses.

This was one of the central problems in a lecture given in the "Greenland Society" on March 16th, 1927 by C. N. HAUGE, at one time Minister for Greenland[1]). Here he dealt with the usual arguments used in the discussions of the Greenland monopoly and touched upon the deficit, which in 1925/26 (not including the receipts from the cryolite) amounted to 2.490.919 kroner, as to which he says: "Thus it is evident that it is quite impossible for the poor fishermen of Greenland to pay for the administration of their country through an indirect, colossal and unjust taxation. They do not contribute anything whatsoever to the defraying of expenses, neither are they, or should for that matter be able to do so, if there were a possibility of freeing them from this burden.

On the other hand, attention is unavoidably attracted to the colossal deficit, which would arise year after year, unless the cryolite were there to draw from. When I began in earnest to occupy myself with the administration of Greenland, I soon realized that here lurked a serious danger for the continued possession of that country on the part of Denmark. I know our history of colonization and take it is a proof that, if we should be obliged year after year to cover a deficit of more than two millions of kroner on the budget of Greenland, we would in a couple of years take as great an interest in the discussions as to whether we would not serve the cause of Greenlanders best by handing over their most important economic areas to foreigners — —"

[1]) C. N. HAUGE, Administrationen of Grønland, Copenhagen 1927.

After that HAUGE treated a number of reforms which he considered desirable, i. a. extended schooling, and he concluded: "On the other hand, it would not be of any use for the Greenlanders generally, if they got into closer touch with the ordinary capitalistic commercial moral. At best one or a few individual Greenlanders would derive economic profit from it. The population at large would only become an object of exploitation, and instead of entertaining hopes of being able to make the whole of the Greenland population fairly prosperous we would live to see the struggle for existence in the high northern country becoming more acute for the benefit of a few individuals."

The sections of the Act of 1925, deepened as they were by the opinions expressed by Mr. HAUGE, have been the guiding principle of the administration during the years until the outbreak of the last war. They have—and this must be considered the economically central point—been the foundation of the policy of prices followed by the Administration of Greenland, the details of which policy will be discussed in subsequent part of this account.

D. The Situation after the Second World War.

The fundamental political attitude towards Greenland has, after the end of the war, been made subject to renewed discussions by the political authorities. These discussions have first and foremost taken place in the course of the negotiations between the parliamentary Greenland Committe and the Greenland Delegation. In the report of June 12th, 1946 it is stated[1]): "The Greenland Delegation expressed unanimously that the present trade monopoly, as established by the Act regarding the Administration of Greenland, is to be kept up for the time being. Further, it is considered desirable to keep up the necessary and hitherto existing regulations for the trade monopoly and the navigation and closing of the country, inasmuch as the Greenlanders are not supposed to have attained a mental and material development, which would justify the opening up of the country within the nearest future." At the same time it was recommended that certain facilities should be introduced, partly by permitting Danes to settle in Greenland, when they were born there or through long service had become attached to the country, and partly by recommending the permission of a temporary tourist traffic.

The committee set forth a number of proposals for economic enterprises, public health and various cultural tasks. It was realized that the establishing and carrying out of these measures would imply considerable expenses, which in any case would lead to an essential change for the

[1]) p. 18.

worse in the balance sheet of Greenland. The committee called attention to the fact that the measures proposed should be kept within fully justifiable boundaries. It further recommended a raising of salaries and an improvement of the living standard of the Greenlanders, while at the same time admitting that the latter must in the long run be determined by the geographical and economic possibilities of the country, and that what should be aimed at must be that Greenland, as far as possible, should be able to be economically self-subsisting.

The idea underlying the report of the committee was undoubtedly that Greenland and Denmark should, in a much higher degree than had hitherto been the case, be regarded as a complete economic unity, and that it must therefore be considered likely that the possibilities of income were transferred from the more prosperous Danish to the poorer Greenlandic sector. This has also found expression in the Budget of 1947/48, where the balance sheet of Greenland shows a deficit of about five million kroner, and this development will presumably continue during the coming years. Thus there has been a fundamental change in relation to the time before 1940, when the principle was that Greenland, as far as possible, should be economically independent.

This change of attitude it will be easy to keep up in a period like the present, where high State revenues and full employment can be counted on, but it must be borne in mind that the problems may assume a different aspect during a possible period of depression, when a decision has to be made as to whether the economy of Greenland is to follow the depression, or whether it will be possible at that time to keep it outside the future economic difficulties of Denmark, that is, to regard Greenland as a special economic circle, which receives a greater or smaller grant from Denmark.

When this problem becomes an active one, an impartial account of the political principles employed in the Danish policy regarding Greenland will be desirable. Such an investigation has not been made up to the present, and the undertaking of it will be one of the tasks of future generations.

Already on the strength of the account given in these pages it will, however, be possible to maintain that the policy adopted regarding Greenland, as compared with the historical economic development, shows two characteristic features. First and foremost the importance of the economic-geographical conditions have been very strongly emphasized. It may be maintained that the economy of Greenland and the system followed regarding it must be looked upon as a direct result of natural conditions, and this is correct up to a certain point, but not quite. On Labrador the economic-geographical conditions are more or less the same, though developed in quite a different way. The other

characteristic of the policy followed regarding Greenland is the strong emphasis put upon what in economic theory may be termed the social valuations i. e. that it is human welfare and not profit, which is the chief consideration. When looking from an economic point of view upon the Administration of Greenland over a period of years the question to be answered would in a way be whether it had been able to pay its way, but such a view has never been fully and consistently applied. Already at the time of HANS EGEDE the trade was a means and not an end, and this line has with variations been followed ever since.

CHAPTER VII.

THE MARGINAL PRODUCER

A. The Individual Industry or Trade.

In the general theory of economics it is emphasized that a producer should continue his production in one field, until the marginal production equals the marginal costs. If I stands for the production and O for the costs, dI must thus be equal to dO, when d expresses the increase.

If, as is the case in Greenland, we are dealing with a number of different fields of production (dI, dI_2 dI_3), an economic balance can only be obtained by the proportion of the marginal production being the same as that of the marginal costs:

$$\frac{dI_1}{dO_1} = \frac{dI_2}{dO_2} = \text{- - - - - - - - - - - - - - } \frac{dIq}{dOq}$$

which expresses that the relation between marginal production and marginal costs must be equally great in all economic fields. It is this theoretical consideration which underlies the demands, both of the Commission of 1906 and of the minority report of 1921, and it has been an implicit assumption of this consideration that the same conditions would hold good in and outside Greenland, which thus becomes a link in the world market.

In the present investigation it will therefore be natural to consider, whether the theory can be used under all conditions, or whether a reservation ought to be made, which must then be expressed by the more or less acknowledged basis of the theory.

The assumption of the theory must then be the constant presence of a producer (or economic circle), who is able to take the necessary steps and so to determine his marginal production and costs according to the existing situation of the market. Under these conditions the quantity produced will fluctuate with the demand of the market, that is with the prices.

In the economical conditions maintained above it will also be natural to assume that the junction of the marginal costs is unchanged within a certain period. If the costs change materially for a producer or economic

circle, a new set of problems will arise, seeing that values may possibly be referred from one period to another.

This may be exemplified to a case from Greenland, viz. the hunting of reindeer. For the individual Greenlander this hunting was originally undertaken from the point of view of marginal production = marginal costs within a very short period. As long as there were reindeer in abundance, the Greenlanders, after having become possessed of fire arms, shot all the animals coming within their range. If they had no use for the meat, or if they were unable to transport it to the wintering place, they only took the most coveted products, such as the tongue and the skins. This hunting method was undoubtedly correct according to a short-run marginal consideration, but it answered no sensible purpose, when viewed in relation to the future, and the Administration of Greenland therefore passed to another economic view, which may for instance be expressed as follows:

Not only is there a marginal value at the individual period, but also a number of marginal values varying throughout the years; in this case these values would increase greatly, because the stock cannot bear such intensive hunting. The task would now be, by means of regulating measures, to attain a balance, not only between the marginal values at the individual times, but between the marginal values within a given period, the idea being to raise the economic profit to the highest possible level throughout the years.

When trying to make such a time regulation, it would be natural not to attach the same weight to the future values as to the present ones, and in the discussions regarding the regulation of prices and production this should be done by means of reduction with a rate of interest fixed according to political considerations.

To turn once more to the reindeer this means that the object is not to attain a maximal shooting within the individual period, but a maximization throughout the years, which result in the present case will be attained through a policy trying to protect the stock. The first possibility to be imagined may be that the stock at the present moment is estimated as optimal; in that case the normal aim of the economic policy will be that the shooting is estimated as equal to the yearly increase. This may be done by rationing the number of reindeer calculated to be killed every year, but as it would be difficult to carry out such a measure in Greenland, the same result may be attained by fixing a period of protection, the length of which is made to correspond with the estimated number of killings. Even though these regulations for the protection of the reindeer may in certain cases be evaded, those which are carried out will undoubtedly be of importance for the preservation of the small existing stock.

In the case in point another possibility may be imagined, viz. that the stock is less than could be wished, for instance because too many animals have been killed within a given period. In that case a future maximization is obtained by further limiting the present hunting with a view to increasing that of the future. An animal killed will at the present time as a rule be more valuable than the corresponding one killed at some future period, and the optimal economic policy with a view to the rate of interest is obtained through a period of protection, fixed by referring the various possibilities of profit through the "rate of interest" to the starting point.

The extended maximization idea dealt with in this place may be further extended in other ways. The economically important stock of animals supplied by nature need not be the one which yields a maximal income throughout a longer period. The stock can be extended by means of special measures, so that the increased profit makes up for the increased expenses. Also in this case a marginal consideration may be adopted. As an example may be mentioned the laying out of fodder for foxes, by which the stock of wild animals may be increased, this in its turn leading to an increase of the number of valuable skins in the future. In such cases it will hardly be the individual hunter who adopts a marginal consideration; as a rule it must be an economic circle, either the main settlement or the whole of Greenland. The latter would be the natural proceeding under the present form of administration, as the income, which would be a decisive factor in the calculation, cannot be the price obtainable by the individual producer under the monopoly, but the price obtainable by the total economic circle of Greenland, which in the present case will be the price on the world market.

As another example may be mentioned the measures taken to facilitate the breeding conditions of eiders in such places, where there is easy access to collect the downs. From a practical point of view the example must be the corresponding dispositions made on Iceland and elsewhere, and the marginal consideration may be the one adopted by the economic circle or by the individual producer. The difference between the price obtained in Greenland and the price paid on the world market may occasion special measures to help producers intending to make the dispositions mentioned.

Finally, it is possible in different ways to introduce varying conditions regarding the costs. When for instance calculating the costs equal to the income, which the producer (the hunter, the fisherman) could secure by making another use of his time, the costs of reindeer hunting becomes greater, seeing that it takes place at a time, when great cod-fisheries give the Greenlander the possibility of obtaining another and

larger income than at the time, when the cod disappear from the coast. These measures it should be possible to introduce into the system, in such a manner that extended protection measures were adopted for the period, when cod occurred in large quantities, so that the population had greater possibilities for hunting reindeer, when the cod disappeared.

B. Production as a Whole.

It appears from the preceding that there may be a divergence between the short-run marginal consideration of the individual producer (hunter, fisherman) and the long-run views of the total economic circle. Various attempts may be made to surmount this contrast (cf. the protection of the reindeer), as a rule through the policy of prices adopted and more particularly by the fixing of the price relation applying to the mutual relation of the different products.

If the price of one product is raised, and that of another is lowered, the incomes of most of the Greenland producers are changed, not equally but in such a manner as to create a lack of balance. A renewed balance is attained for the individual producer by limiting one production and extending another. When adopting a short-run consideration such a disposition must be conditioned by a change in the prices of the world market, the only economic motive for it. When adopting a long-run consideration the subject of such a development must be to influence the stock of these two groups of animals and so also the possibilities of future incomes. The quantity of the one species may be very much influenced by the amount caught (halibut and polar bear), whereas the other one is hardly ever influenced by outward circumstances, and so a disposition regarding prices, which is uneconomical from a short-run point of view, may eventually prove profitable. The income of the individual Greenlander and the total result for the economic circle may, by a disposition of this kind, change less in a downward direction than the profit to be obtained by the same disposition. Viewed in relation to time the disposition in question will frequently prove economically justifiable.

If thus the price fixed for foxes in Greenland is put lower than conditioned by the prices of the world market, while at the same time the price fixed for another product (the price paid to the Greenlanders for cod or salt fish) is higher, a certain momentary balance may be achieved, but by means of such a price policy it has been possible to prevent a ruthless exploitation of the stock of foxes in Greenland, which according to a long-time consideration is undesirable, because the total income throughout a longer period becomes smaller.

C. The Income of the Individual Greenlander.

One of the things to be subjected to a more detailed analysis is the income which the economic circle should attempt to maximize, as viewed in relation to the individual breadwinner. First it is defined as the sum of the income of the individual breadwinners, that is

$$I = i_1 + i_2 + i_3 \text{ - - - - - - - - - - - - - - - - } i_n$$

the supposition being that there are n individuals in the community in question. The individuals may now be classed in groups of an identical economic value, and in the case of such an analysis no special problem arises in relation to the economic theory underlying other communities. But there is also another point of view, according to which every individual income is given a special valuation-coefficient, and the above equation then assumes the following form:

$$VI = i_1 v_a + i_2 v_b + l_3 v_c + \text{ - - - - - - - - - - -}$$

When first subjecting the V-valuation on the left of the sign of equation to a closer inspection it means that the total income of the Greenlanders is valuated differently ($V \gtrless 1$) from the incomes of the other citizens of the State.

In case V is regarded as a proper fraction, it means in other words that the Greenland industries and the Greenlanders' possibilities of making an income are regarded from the point of view of the older colonial policy, viz. that the colony should prove an income for the mother country, as has frequently been the case in the history of the world. If V is regarded as an improper fraction, it means that Greenland is looked upon as a poor part of the realm, and therefore should be subsidized by the remaining part of the population, the amount of this subsidy in the given case being determined by the magnitude of the fraction. The factor of valuation to the left will later on be subjected to a more concrete discussion according to the varying points of view at the different periods.

For the time being V to the left of the sign of equation will be put equal to "one," so that Greenland neither subsidizes nor is being subsidized by other parts of the realm, and as appears from the historical description given above this view has for a long time been the central one of the Danish Greenland policy.

In this manner our present problem is considerably restricted, as it is only necessary to regard the individual Greenlanders in their mutual relation (the V's to the right of the sign of equation). If nature or the conjunctures have given one Greenlander or group of Greenlanders par-

ticularly good possibilities of income (f. inst. through fox hunting) and the other individual or group particularly small ones, some of the V's may be regarded as a proper and others as an improper fraction, the argument being an ordinary social-political one. The individual V's may be fixed in such a way that the total equation is nevertheless made to agree.

When next the question is raised as to how a valuation coefficient of this kind can be introduced into the daily administration, the answer must be that this is done by means of the policy of prices adopted. If the position of one region for a certain period is particularly difficult, its possibilities of income may be maintained by the prices in Greenland itself (i. e. between the monopoly and the Greenlanders) being fixed in such a manner, as is not in itself justified by the prices paid for the commodities on the world market, whereas the regions more favoured by nature or conjunctures receive a correspondingly lower amount for their products. In this manner a general social-political desire for an equation of income between regions of Greenland and groups of Greenlanders will be fulfilled. However, this proceeding does not bring about assessment between the individual Greenlanders at any given dwelling place, as their incomes will differ according to the ability and energy of each breadwinner, and this difference may, as already mentioned, be very pronounced.

D. Changes in the Valuation-Coefficients.

When regarding the same problems within a given period and keeping the same valuation-coefficients the Greenland prices will change in proportion to those of the world market. But there is nothing in the nature of things to prevent a change in the valuation-coefficients and the aiming at fairly constant possibilities of income, for instance, by the fixing of different valuation-coefficients.

When trying to fix the maximum of income within a given period it is necessary to deal in detail with the policy of prices followed within the period, which must be supposed to be a period with fluctuating prices on the world market (for instance conjunctural periods). If the valuation-coefficients change inversely to the fluctuations of the market, it only means that the prices must be kept constant on the level determined by the average of the conjunctural period. When the latter is not known beforehand, the individual prices expected must be fixed according to an estimate, possibly, if one wants to be very cautious, with an increase covering the risk. The fixing of the valuation-coefficients may further at any given time be made subject to revision and renewed valuation.

It will possibly be practical to let the valuation-coefficients fluctuate in proportion to the conjunctures, but with a smaller order of quantity, in which case subdued waves are movements obtained for the Greenlanders.

A policy of this kind will be characterized by the fundamental social-political point of view, but there will be several difficulties in carrying it out. When weight is attached to the valuation factor to the left of the equation sign being equal to "one" (viz. that Greenland is to be economically self-contained), it is necessary to reckon with a considerable factor of risk, at any rate in an unstable world economy.

Furthermore, it is valuable for the Greenlanders to get into touch with a market with fluctuating prices, and therefore there are certain considerations in favour of letting the Greenland prices follow the market, although in a greatly subdued form. On the one hand, one may get extraordinary war conjunctures, where the demands for an upward tendency will be very pronounced, particularly during these first years after the conclusion of peace, and it would then be possible to let the Greenland prices follow the upward tendency in a graduating scale. Under the given conditions, this manner of thinking would on the other hand lead to a depression on the world market also being felt in Greenland, although in a subdued form. The central condition of a valuation factor of "one" to the left must be that the differences in both directions must be equally great. Here it will be of importance that the people directly or indirectly interested in rising and falling prices are made to understand that the participation of the conjunctures might imply a certain risk also for themselves.

Where the population cannot be supposed to be able to follow the actual fluctuations of the world market, but on the other hand is greatly interested in the development of prices, an economic system of this kind with moderate fluctuations would be of great importance. The Greenlanders would have a more direct opportunity to follow the conjunctural fluctuations, and so they would learn to take an added interest in the economic events of the world market.

E. The Whole of Greenland as a Marginal Producer.

After this it might be natural to return to the maximizing equation in its very simplest form: $dI = dO$ and to discuss the consequences of this common equation in an extraordinary situation, to the effect that the conjunctural development of the world market might lead to such periodical prices that for some years it would be unprofitable to navigate and supply one or more settlements, for instance, in East Greenland,

which development it would under freer conditions presumably often be possible to observe.

When the object is the economic maximization, the result of the formerly mentioned short-run consideration will be that no navigation will take place under such conditions. As formerly mentioned, this was what happened towards the end of the medieval period, when all navigation of the Norse settlements ceased.

In terms of economic theory this means that Greenland, as a producer, comes to lie outside the borderline defined by the marginal production. Under such conditions the world market has no use whatsoever for Greenland; indeed, it may even be more profitable for it to have no trade communication and economic intercourse, as long as such a situation lasts. The consequence of this, transferred to present-day conditions, will be that the population of Greenland must fend for itself by means of the products of the country or starve, or it must be transported to other regions, for instance to Denmark, in which case Greenland loses its position on the world market.

But if the time factor is taken into consideration, and if it is expected that the price relations will change within a reasonable period, the expectations of the future may be discounted backwards. If in that case it is possible to calculate on a surplus, the navigation will go on, even at a loss, in the hope of a corresponding future surplus.

The desirability of a constant navigation of Greenland need not, for that matter, lead to the abandoning of the marginal consideration, but the latter must be interpreted in such a manner as to comprise the navigation of Greenland also in periods of deficit.

In order more fully to realize what is the case in point, it will be natural to look somewhat more closely at the commonly used division into fixed and variable costs as applying to the present situation. Many people will be apt to use the marginal consideration in such a manner that the greater part of the costs of the Greenland community may be regarded as variable, and it is correct that the individual articles of food bought at the store must be regarded under a variable point of view in their relation to one another. When there is a choice as to whether to eat black or white bread, it is natural to adopt the usual consideration. A change in the marginal income will naturally lead to a change in the purchases made of the two commodities at the store, there being no absolute necessity for buying the white bread. The same view might be carried further and used, not only for articles of food in relation to one another, but also for clothing and a number of other articles.

Over against this opinion it may perhaps be more realistic, especially when discussing the economic conditions of Greenland, to adopt another point of view. Under all conditions a producer or a population requires

a certain amount of articles of food, a certain quantity of clothing etc. in order to be able to exist. When the demand for articles of food is viewed as a whole, it must be maintained that a population must have a certain amount of calories to prevent them from feeling hunger, and another somewhat smaller one in order to enable them to subsist at all. A corresponding estimate may be made as regards clothing, at any rate under climatic conditions such as they are in Greenland.

It might perhaps be maintained that the population in question or some of the individuals need not go on existing, but in one way or another must necessarily become extinct. This view might naturally also be adopted in relation to Greenland, but in the following no attention whatsoever will be paid to it, as having no connection with real life or with the Danish manner of thinking and Danish policy.

When this view is once for all left out of consideration, and the necessity acknowledged of a certain quantity of calories in the food supply and a certain amount of serviceable clothing, this means that the population must be supplied with the barest necessities in all respects, in other words, that this is a fixed cost. For this reason the navigation of Greenland must be continued, and it is quite unthinkable to abandon the regular communication for reasons of economy.

It is a generally accepted view that in the long run fixed costs, which cannot be covered, will cease, and that the production will be transferred to other fields by investments of new capital, where an investment calculation will show a possibility for obtaining profit.

As far as Greenland is concerned, special theoretical problems make themselves felt, because we are here dealing with fixed costs, which there is a prospect of covering, even though an ordinary calculation for the investing of capital might tempt the authorities to give up the costs in question. This manner of looking at the problems is, it is true, the same everywhere, but as a rule it plays no practical part, whereas in the case of Greenland it leads to a special course of development in the economy and policy adopted, which development will be described in the following chapters.

CHAPTER VIII

FIXED AND VARIABLE COSTS

According to the views set forth in the preceding chapter we will, in the following, regard as fixed costs the maintenance of a minimum of existence for the population of Greenland, this minimum implying in the first place a certain quantity of calories, which not only covers the bare existence, that is, not only a quantity of calories such as people have been obliged to rest content with during the years of the war, but such as is sufficient to keep the population from feeling hunger. Secondly, the category of fixed costs includes the maintenance of a certain elementary state of health, a necessary condition of which is to provide the population with the necessary clothing, with tolerable dwellings and the necessary fuel and lightning as well as with a certain access to medical treatment, medicine, hospital treatment etc. Thirdly, the fixed costs may include the necessary conditions for the working capability of the population, such as a certain amount of schooling and the keeping up of the administration necessary for the further development of the population and the necessary navigation.

The ideas underlying these fixed costs are naturally of a somewhat political character, as necessitating a certain estimate of human values. These ideas and valuations are in themselves not economic theory, and one might just as well start from the assumption that the maintenance of the population of Greenland was not of a permanent, but of a variable character, so that the communication between Greenland and the rest of the world should only be kept up for so long and to the extent, which was to the benefit of both. Such a view has been adopted in former times, and it is also related to considerations which are not unknown elsewhere. Both views are founded on valuation, and it cannot be maintained that one is more scientific than the other. When the following discussion is based upon the premise that the constant maintenance of the population is a fixed cost, it is because it is the consequences of this premise, which I intend to elaborate in the following discussion as being the basis of the Danish policy in Greenland. The actual consequences of this premise will also be touched upon, though I do not

think there is any reason to add materially to what has been stated elsewhere as regards this fundamental point of view.

A. Covering of the Need of Calories.

When the covering of a certain need of calories on the part of the population is made a fixed cost – and this becomes rather a central point in the following statement – it will be natural first to mention a view very much related to it, which was set forth by RINK about a century ago[1]).

RINK gives an exhaustive calculation of the food supply of the population at that period and arrives at the result that particularly in South Greenland the following quantities were consumed:

Reindeer meat	500,000	pounds à $^1/_2$ kg
Birds' meat	100,000	—
Seal meat with blubber	3,500,000	—
Blubber eaten with dried fish and vegetables	240,000	—
Whale meat with blubber	100,000	—
Meat etc. total	4,440,000	pounds à $^1/_2$ kg
Angmagsset, fresh	1,500,000	pounds à $^1/_2$ kg
Cod	800,000	—
Sea-trout, Nepisset halibut and the part of the sharks used	500,000	—
The fish to be had both summer and winter in ordinary years	1,200,000	—
	4,000,000	pounds à $^1/_2$ kg

Add to this more than 200,000 eggs of sea birds, more than 1,000 barrels of berries, a large amount of seaweed and mussels, and finally quans and a good deal of "not very nourishing vegetables."

Furthermore, RINK writes: "On the other hand the kinds of provisions introduced from Europe through the agency of the Greenland Trade make no difference in the amount of food-stuffs, for when deducting what is eaten by the Europeans and the native employees of the Royal Greenland Trade and their families, whose chief food also consists of meat and fish, only some 100,000 pounds of bread and flour

[1]) Cf. in particular RINK: Grønland geografisk og statistisk beskrevet, second volume: Det Søndre Inspektorat, Copenhagen, pp. 251—52. The figure given for the angmagsset caught in South Greenland is presumably due to a misprint on p. 252, and is presumably 1.5 million pounds cfr. p. 228. If this be so, the addition is correct, and this is the base of RINK's conclusion and so also of my statement.

and 100 barrels of grits and peas are divided among the remaining population, the greater part in its turn being consumed by those living at the settlements and having private incomes there, whereas the more prosperous or productive classes only buy small quantities of it, mostly during the good hunting period, when they have money to spare, in all ca. 10 pounds of bread per individual annually. Moreover, this has only been the case in later years, when these articles are being sent up in increasing quantities, for a few years ago they were practically unknown; and this also applies to the small quantitiy of cods mentioned above as being dried and sold in the country itself at the expense of the Royal Greenland Trade, that is, about one tenth of the total cod fisheries. For besides what is used for public support in times of need, the greater part also of this commodity is consumed by the employees of the Trade and those who make a little profit through them, in other words, such as have little to buy for in the period of greater scarcity. The Greenlanders as a rule do not buy any of these commodities.

"When supposing that also the natives who receive part of their food from the Royal Greenland Trade must nevertheless have their full share of the 748 pounds of meat with blubber and the 645 pounds of fish per individual annually, the quantity of food stuffs mentioned above amounts to as much as 2 pounds of fat meat and 2 pounds of fish daily throughout the year, besides berries, quans, seaweed, mussels and eggs. This quantity is, however, a minimum and is in reality undoubtedly greater, particularly as regards the fish, the production of which it is difficult to estimate in the course of the winter. But as these food stuffs are not produced in equal quantities throughout the year, and as very little care was shown in the preserving of them, also the consumption is very unevenly distributed. From May to November there is nowhere, not even in bad years, any lack of them; on the contrary it must be supposed that according to European ideas boundless prodigality and lack of order prevail. Nevertheless a not inconsiderable quantity is collected in the course of the summer and from November preserved beneath the snow, in a fresh state."

It appears from Rink's statement that the basis for the nourishment of the population at the middle of the 19th century chiefly rested on the local Greenland production, and that the actual food stuffs, viz. meat and fish, were generally satisfactory. Owing to natural conditions there might be shorter or longer periods, when hunting and fishing were impossible, and at any rate in certain districts the Greenlanders passed through very severe hunger periods, some even starving to death.

In the present century the covering of the calorie requirements of the population depends much more upon the store, and the food stuffs which were originally protineous, have now largely changed to carbo-

hydrates. The purchases at the store, which formerly might to a certain extent be characterized as luxuries have now become necessities and an essential part of them permanent.

In this field three special investigations have been undertaken, viz. from the Julianehaab district, the settlements along the Disko Bugt and East Greenland, and a brief summary of the main results of these investigations will be given here. The starting point is an estimate of the calorie need in Greenland, according to which the daily requirement has been put at 3500 calories for adult men, 2800 calories for adult women and 1750 for children of either sex between 2 and 15 years; for children of less than 2 years (chiefly nourished by the mother's milk) no figures have been given. The above figures may perhaps be criticized as being too high (the Norwegian physician ARNE HØYGAARD in his investigations in East Greenland reckons as a matter of fact with lower figures), but it must be borne in mind that the calorie requirements are naturally higher in Greenland than in most other places, partly because of the cold, and partly because of the strenuous outdoor work; it is also necessary to raise the absolute requirements because of the irregularity of hunting and fishing, which at times is tantamount to superfluity, at other times to want.

Based upon the hunting lists and the valuation of the average quantity of meat yielded by the animals, which valuation has been undertaken by men conversant with local conditions, as well as an estimate of fishing for consumption and the computation of birding, based upon the collecting of feathers, a calculation has been made for the Julianehaab district[1]) of the consumption of meat and blubber products in relation to the calorie requirements, and the result of these calculations are given in the following table (XXVII).

This table clearly shows that there has been a very great decrease in the quantity of meat within the period, and more particularly during its last twenty years. There are, however, considerable changes from one year to another in consequence of fluctuations in the hunting conditions. The last column of the table shows the relation between the calorie value of the quantity of meat and the calorie requirements of the population, these figures clearly showing the change which has taken place. In 1901—02 it would thus have been possible for the population to cover its calorie requirements with meat (and blubber), that is, only if no meat had been lost, whereas during the later years of the period it was only possible to cover 20—30 per cent.

In addition to the supply of meat the natural produce in the district chiefly consisted of fish besides smaller quantities of milk and berries.

---

[1]) M. o. G., Bd. 131, Nr. 7.

Table XXVII. Meat and blubber products in the Julianehaab district in relation to the calorie requirements 1899/1900—1938/39.

(From M. o. G., Bd. 131, Nr. 7, table 12).

Year	Seal meat	Seal blubber	Whale meat	Birds' meat	Other meat	In all: meat and blubber	Total calorie value	Total calorie requirements	Percentage
	kg	kg	kg	kg	kg	kg	mill.	mill.	
1899/1900	646,266	48,515	10,480	38,953	4,200	748,414	1,706	2,356	72.4
1900/01 ..	724,370	46,254	10,776	54,369	4,350	840,119	1,870	2,422	77.2
1901/02 ..	872,655	86,583	10,940	64,998	4,050	1039,226	2,465	2,460	100.2
1902/03 ..	758,940	82,520	11,156	55,716	6,150	914,482	2,198	2,509	87.6
1903/04 ..	863,064	57,626	11,284	48,692	2,850	983,516	2,217	2,537	87.3
1904/05 ..	809,438	54,400	11,492	56,482	7,800	939,612	2,106	2,584	81.5
1909/10 ..	627,418	54,115	11,836	46,682	6,750	746,801	1,724	2,661	64.7
1914/15 ..	822,198	65,798	12,424	104,511	6,750	1011,681	2,283	2,794	81.7
1919/20 ..	623,957	63,834	12,888	70,302	5,400	776,381	1,820	2,898	62.8
1924/25 ..	408,910	50,958	81,000	76,166	4,950	621,984	1,376	3,075	44.7
1929/30 ..	189,735	29,447	216,000	75,669	2,450	513,301	918	3,224	28.4
1934/35 ..	180,000	21,593	189,000	69,577	3,550	463,720	809	3,465	23.3
1935/36 ..	184,689	31,621	243,000	55,094	3,850	518,254	922	3,383	27.2
1936/37 ..	98,000	11,677	81,000	54,721	3,700	249,098	446	3,328	13.4
1937/38 ..	300,000	34,577	0	81,491	4,000	420,068	970	3,389	28.6
1938/39 ..	350,000	38,076	0	141,559	5,650	535,285	1,186	3,431	34.5

The following table (XXVIII) gives the results of the investigation undertaken.

Yielding in the main the same picture of the covering of the calorie requirements of the population by means of the food-stuffs produced in Greenland. During the earlier years of the period investigated the production of natural food stuffs was about 30 per cent higher than the requirement. This must be understood in the way that there has been a very large surplus of calories in the meat production during certain periods in the spring. Part of this meat has been dried for winter consumption, whereas a very large part of it was not utilized, but was permitted to decay. On the other hand during the later years of the period practically all seal meat and birds' meat was used.

A description of the wastefulness formerly involved in the production of meat is given by R. MÜLLER[1]), from which the following is taken: "When arriving at one of these islands of bladdernose seals, at the time when the hunting is good, one finds the rocks quite red with blood and so slippery with oil that it is hardly possible to gain a foothold on them. The one large bladdernose seal lies beside the other,

[1]) R. MÜLLER: Jagten og Vildtet i Sydgrønland, Kbh., 1906, pp. 231—32.

Table XXVIII. Natural products supplied by the Julianehaab district 1899/1900—1938/39 in relation to the calorie requirements.

(From M. o. G., Bd. 131, Nr. 7, table 13).

Year	Number of Greenlanders	Total meat production	Fish in fresh uncured form		Milk	Berries	Calories in all	Calorie requirement	Percentage
			fat	meagre					
		kg	kg	kg	kg	kg	mill.	mill.	
1899/1900	2,620	748,414	400,000	386,000	10,000	31,964	2,813	2,356	119.4
1900/01 ..	2,694	840,119	400,000	408,200	10,000	32,866	2,994	2,422	123.6
1901/02 ..	2,735	1039,226	400,000	420,500	10,000	33,367	3,598	2,460	146.2
1902/03 ..	2,789	914,482	400,000	436,700	10,000	34,225	3,344	2,509	133.9
1903/04 ..	2,821	983,516	400,000	446,300	10,000	34,416	3,370	2,537	132.8
1904/05 ..	2,873	939,612	400,000	461,900	10,000	35,050	3,271	2,584	126.4
1909/10 ..	2,959	746,801	400,000	487,700	10,000	36,100	2,909	2,661	109,3
1914/15 ..	3,106	1011,681	400,000	531,800	10,000	37,893	3,501	2,794	125.3
1919/20 ..	3,222	776,381	400,000	566,600	10,000	39,308	3,065	2,898	105,7
1924/25 ..	3,419	621,984	400,000	635,700	10,000	41,711	2,666	3,075	86.7
1929/30 ..	3,584	513,301	400,000	675,200	10,000	43,724	2,246	3,224	69.6
1934/35 ..	3,853	463,720	400,000	755,900	10,000	47,006	2,199	3,465	63.4
1935/36 ..	3,761	518,254	400,000	728,300	10,000	45,884	2,291	3,383	67.7
1936/37 ..	3,701	249,098	400,000	710,300	10,000	45,152	1,801	3,328	54.1
1937/38 ..	3,768	420,068	400,000	730,400	10,000	45,969	2,340	3,389	69.0
1938/39 ..	3,814	535,285	400,000	744,200	10,000	46,531	2,567	3,431	74.8

partly cut up, partly quite untouched, whereas huge quantities of blubber and meat are seen scattered on the rocks . . . The masses of meat produced are immense, and it would seem that if all of it were dried, the Greenlanders could not by any means suffer want in winter; but this is unfortunately not the case, the Greenlanders and especially the women being too much children of the moment . . . . Instead of drying all the meat they could for winter provisions, they are often content with drying the smaller part of it and then let the remainder lie rotting, and this in spite of the fact that the very last winter they have perhaps been starving for want of provisions; it happens that they do not even cut up the seals in time, so that both skins and meat are left to rot in the blazing sun — —"

This undoubtedly even nowadays applies to fishing, seeing that very considerable quantities of quite good fish are ruined in the best fishing months of the year. If the Greenlanders have been able to get meat, they do not hesitate to let fish rot; thus it may be proved that in certain years considerable quantities of meat were placed at the disposition of the population as the result of the whaling organized by the Administration. When this was the case, the Greenlanders only paid little attention to the fish available, and it has upon the whole been

difficult to make them prepare it so that it could be kept for winter provisions during less abundant periods.

From the table it can be deduced that the production of natural articles of food made it possible for the population to cover at least 90 per cent of its calorie requirements. It is possible to prove a continued decay throughout the period, so that at the end of it the covering of the requirements by means of Greenland produce is not much more than 50 per cent. If it is further taken into consideration that the calorie quantities mentioned in the table were rather irregularly distributed over the various months of the year, it is a natural conclusion that there may have been rather long periods, during which the native production has been as low as about a third of the calorie requirements.

It must further be borne in mind that there are essential differences between the individual parts of the main settlement; thus, the economic position of the southern district has been much lower than that of the other localities of the main settlement. This is chiefly due to the fact that the inhabitants of the district in question— being inferior to those of other parts — have been less energetic, that is less apt to collect winter provisions in the good hunting and fishing season, in which context it may be mentioned that during the war there has been a general removal of the population from a couple of outposts in the southern district to other districts. There is further a considerable difference between the main settlement, where there are many employees and day labourers, i. a. at the various institutions of the Royal Greenland Trade, with a corresponding relatively small number of fishermen and hunters, and also between conditions at outposts and dwelling places, where the majority are obliged to be breadwinners. Thus it is to be supposed that for the population of the main settlements less than 50 per cent of the calorie requirements are covered by self-obtained Greenland products.

As to those requirements, which are not covered by al Greenland products from the district, the inhabitants are reduced to cash incomes in order to be able to provide their needs by purchases at the store of the main settlement and at the outposts. In case such possibilities of income do not naturally occur, the authorities, as mentioned in the preceding chapter, will be interested in supplying these in a manner, which corresponds with the liberal views mentioned above and at the same time is the least expensive.

From the investigations undertaken it may presumably be concluded that the stores where it is possible to buy the necessary quantities of calories are at the present time an absolutely necessary condition for the maintenance of the population of the district, and further that they have the means needed to make these purchases. And if the former holds

good of the inhabitants already in existence, it does still more so in the case of the increased population of the future. At any rate they cannot find means for the maintenance of life except in the articles of food to be bought at the store, and the expenses to these must for the Greenland community in the Julianehaab district be regarded as an essentially fixed cost.

To sum up: The population of the Julianehaab district are completely dependent upon the articles of food to be bought at the store and on prices which are fixed in such a manner that the population are able to buy them with the possibilities of income at their disposal, i. e., that there is a certain relation, determined by the conditions of production, between the prices of the commodities bought from the natives and those sold to them. There is in this connection no question of any substitution between the different articles of food. The decisive factor must be that there are at all times sufficient quantities of the cheapest articles of food for the covering of the calorie requirements.

It is naturally not possible to draw conclusions for the whole of Greenland from conditions in the Julianehaab district, and so we turn our attention to the investigations made regarding the three settlements along the Disko Bugt (Christianshaab, Jakobshavn and Ritenbenk 1899—1938)[1]). The conditions prevailing in these districts differ from the corresponding ones in South Greenland, in that there are here great numbers of dog teams to drive across the ice in winter, and as periods of superfluity alternate with periods of want, it is easily understood that in the former the dogs have been given great quantities of the seal meat. To this must be added that the hunting largely takes place in the spring, and so part of the meat laid by for times of need will decay in the course of the warmer period. The quantity of meat not used for human consumption has, however, greatly decreased, according to the estimate of experts 90 per cent at the present time, as compared with 70 per cent in the years before 1920. As the following tables are to a rather considerable extent based upon an estimate, they must be cautiously valued.

Take for instance table XXIX, which shows the production of meat and the calorie requirements in the period 1911/12—1934/35, where the difference between the districts is very great. While sealing in the Ritenbenk district was rather satisfactory, it was much less so in the Jakobshavn and Christianshaab districts; Jakobshavn, on the other hand, has had considerable Greenland halibut fisheries, whereas Christianshaab has been less favourably situated than the other two districts. The differences between the main settlement, outposts and dwelling places of

[1]) M. o. G., 1934, Nr. 3.

Table XXIX. The production of meat and the calorie requirements in the Christianshaab, Jakobshavn and Ritenbenk districts 1911/12—1934/35.

Year	Christianshaab			Jakobshavn			Ritenbenk		
	total calorie requirement	utilized production	covering percentage	total calorie requirement	utilized production	covering percentage	total calorie requirement	utilized production	covering percentage
	mill. cal.	mill. cal.		mill. cal.	mill. cal.		mill. cal.	mill. cal.	
1911/12	460	209	45.4	517	200	38.7	501	271	54.1
1912/13	473	146	30.9	517	172	33.3	503	291	57.9
1913/14	476	201	42.2	530	160	30.2	533	265	49.7
1914/15	457	213	46.6	521	179	34.4	521	259	49.7
1915/16	444	170	38.3	527	185	35.1	539	254	47.1
1916/17	444	159	35.8	538	191	35.5	544	270	49.6
1917/18	451	151	33.5	556	160	28.8	561	132	23.5
1918/19	459	200	43,6	579	191	33.0	524	149	28.4
1919/20	454	217	47.8	544	230	42.3	525	267	50.9
1920/21	455	216	47.5	551	243	44.1	510	248	48.6
1921/22	447	179	40.0	549	207	37.7	485	256	52.8
1922/23	487	200	41.1	521	221	42.4	493	328	66.5
1923/24	495	189	38.2	539	199	36.9	523	384	73.4
1924/25	475	203	42.7	544	217	39.9	557	344	61.8
1925/26	475	186	39.2	567	224	39.5	482	353	73.2
1926/27	522	132	25.3	571	212	37.1	454	249	54.8
1927/28	535	137	25.6	598	163	27.2	466	245	52.6
1928/29	550	147	26.7	623	183	29.4	443	250	56.4
1929/30	559	130	23.3	636	156	24.5	452	139	30.6
1930/31	567	186	32.8	694	178	25.6	418	237	56.7
1931/32	572	165	28.8	711	239	33.6	444	323	72.7
1932/33	563	146	25.9	686	252	36.7	436	316	72.5
1933/34	558	201	36.0	708	213	30.1	467	324	69.4
1934/35	586	248	42.3	739	250	33.8	463	218	47.1

(From M. o. G., Bd. 134, Nr. 3, table 43).

the individual districts are greater than those between the three districts themselves, as is shown in detail in table XXX, from which it appears that the quantity of meat at the main settlements of Christianshaab and Jakobshavn constituted about 10 per cent of the requirements, whereas the covering percentages have been essentially greater at outposts and dwelling places.

Furthermore, the covering percentage calculated on the strength of the hunting varies greatly from one month to another, and table XXXI shows the covering percentage calculated for seal meat in the individual months of the year. The material used for Christianshaab and Jakobshavn is an average of the years 1926/27 and 1931/32, whereas

Table XXX. Covering percentage with seal meat at main settlement Ritenbenk

(From M. o. G., Bd.

Year	Christianshaab					
	settlement			outposts		
	calorie requirement	meat production	covering percentage	calorie requirement	meat production	covering percentage
Yearly	mill. cal.	mill. cal.		mill. cal.	mill. cal.	
1915/16—1919/20	82	14	17.1	363	184	50.7
1920/21—1924/25	103	12	11.7	366	163	44.5
1925/26—1929/30	125	8	6.4	402	116	28.9
1930/31—1934/35	124	6	4.8	441	164	37.2

the material used for Ritenbenk is that of the years 1922/23 and 1933/34. (These years have been chosen, because they were fairly normal and the material was most complete).

It appears from the table that the covering percentage of the requirements varies exceedingly. In the months of July, August and September the percentage of seal meat at the Jakobshavn and Riten-

Table XXXI. Percentage of covering of requirements with seal meat at main Ritenbenk districts, distributed

(From M. o. G., Bd.

Month	Christianshaab					
	settlement			outposts		
	calorie requirement	meat production	covering percentage	calorie requirement	meat production	covering percentage
	mill. cal.	mill. cal.		mill. cal.	mill. cal.	
January	11	0.1	0.9	35	4	11.4
February	10	0.3	3.0	32	3	9.4
March	11	0.2	1.8	35	5	14.3
April	11	1.3	11.8	34	6	17.6
May	11	1.1	10.0	35	8	22.9
June	11	1.1	10.0	34	20	58.8
July	11	1.3	11.8	35	18	51.4
August	11	0.7	6.4	35	17	48.6
September	11	0.4	3.6	34	13	38.2
October	11	0.4	3.6	35	13	37.1
November	11	0.9	8.2	34	11	32.4
December	11	0.9	8.2	35	5	14.3

and outposts (dwelling places) in the Christianshaab, Jakobshavn and districts.

134, Nr. 3, table 44).

Jakobshavn						Ritenbenk					
settlement			outposts			settlement			outposts		
calorie requirement	meat production	covering percentage	calorie requirement	meat production	covering percentage	calorie requirement	meat production	covering percentage	calorie requirement	meat production	covering percentage
mill. cal.	mill. cal.		mill. cal.	mill. cal.		mill. cal.	mill. cal.		mill. cal.	mill. cal.	
259	33	12.7	276	191	69.2	124	29	23.4	413	223	54.0
288	33	11.5	245	199	81.2	123	18	14.6	385	402	104.4
361	38	10.5	224	136	60.7	112	30	26.8	476	324	68.1
456	71	15.6	235	160	68.1	98	29	29.6	553	448	81.0

benk outposts exceeds 150. Part of the surplus production has, as formerly mentioned, been wasted or used for feeding the dogs; some of it, it is true, has been put by for the winter months, but it is likely to suppose that during the three good hunting months meat has been consumed in quantities, which are highly excessive according to European standards. It is also to be supposed that, according to old traditions,

settlement and outposts (dwelling places) in the Christianshaab, Jakobshavn and over the individual months.

134, Nr. 34, table 45).

Jakobshavn						Ritenbenk					
settlement			outposts			settlement			outposts		
calorie requirement	meat production	covering percentage	calorie require ment	meat production	covering percentage	calorie requirement	meat production	covering percentage	calorie requirement	meat production	covering percentage
mill. cal.	mill. cal.		mill. cal.	mill. cal.		mill. cal.	mill. cal.		mill. cal.	mill. cal.	
34	2	5.9	19	2	10.5	9	2	22.2	29	9	31.0
31	2	6.5	17	2	11.8	8	..	..	26	6	23.1
34	2	5.9	19	2	10.5	9	1	11.1	29	5	17.2
33	3	9.1	18	6	33.3	9	1	11.1	28	17	60.7
34	3	8.8	19	6	31.6	9	2	22.2	29	19	65.5
33	7	21.2	18	21	116.7	9	2	22.2	28	36	128.6
34	8	23.5	19	30	157.9	9	6	66.7	29	51	175.9
34	10	29.4	19	30	157.9	9	3	33.3	29	51	175.9
33	9	27.3	18	27	150.0	9	4	44.4	28	46	164.3
34	8	23.5	19	15	78.9	9	4	44.4	29	26	89.7
33	9	27.3	18	13	72.2	9	3	33.3	28	18	64.3
34	4	11.8	19	4	21.1	9	2	22.2	29	13	44.8

the ablest of the hunters during these months lavishly distributed meat to all the other members of the dwelling places. The marginal value of the meat production has always been very low, more particularly in view of the native population's low valuation of future goods as compared with those of to-day.

When, on the other hand, we regard the poorest hunting months, and more particularly January, February and March, the covering percentage only amounts to about 10 at the Jakobshavn outposts, whereas the corresponding figure is 30 at the Ritenbenk outposts. Within these periods it is to be supposed that the able hunters, who have dared to carry out their strenuous pursuit, have first and foremost provided themselves and their families with the necessary meat, whereas the poorer members of the community have suffered considerable want. And if this is the case at the just mentioned prosperous outposts, it is naturally no less so at the outposts of the Christianshaab district and at the main settlement of Jakobshavn. Here the production, even in good months, has hardly more than just covered the immediate requirements (possibly including great feasts on a few good days), so that there has only been proportionally little left for the poor winter months. The lack of meat has made itself more strongly felt at Jakobshavn, and still more so at the Christianshaab main settlement. Here not even the most efficient hunters were able to gain a surplus in the best months, and the whole of the remaining part of the population have in the main been reduced to fishing, a little hunting of sea- and land-birds, and more particularly the cheapest commodities supplied by the stores.

It clearly appears from the table that there must have been a pronounced lack of meat, especially at the main settlements; further, the poorer part of the population, during these months, have not had great incomes in other fields, and thus a social problem has arisen, the results of which are now more far-reaching than in the primitive Eskimo community. The poorer members, who were formerly helped by their more prosperous countrymen, are now obliged to apply for help to the municipal institutions, and as these are able to render assistance, the more efficient part of the population is not so inclined to help with natural products, the old bond of community, necessitated by natural conditions, being thus more and more slackened.

Even though the fisheries, particularly at the main settlement of Jakobshavn and the outposts of Claushavn in the Christianshaab district, have played a very important part within the period investigated, and even though there has been a good deal of bird-hunting throughout the district, while now and then a whale has been carried to the main settlement from the whaling stations of the Administration, the fun-

damental conclusions to be drawn from the information collected as to a not insignificant part of North Greenland are the same as those drawn from the material collected in the Julianehaab district, viz. that the rapidly increasing population, and more particularly the poorer part of it, must have recourse to the store for the articles of food, which are necessary for the very maintenance of life. If one wishes to keep up the population, so that there is also room for a considerable increase, the store becomes of decisive importance from the point of view of nutrition. In other words, the existence of the West Greenland population is entirely dependent upon possibilities of cash income and price relations. If an economic buffer had not been inserted between the Greenlanders and the world market so as to intercept the fluctuations, the population would have been dependent for their very existence, not only upon variations in natural conditions, but also, as demonstrated above, upon the violent movements of the world market.

If finally we turn our attention to the investigation undertaken of the basis of existence of the East Greenlanders[1]), it appears at once that conditions here have differed somewhat from those of West Greenland. When the Danish colonization began in 1894, the East Greenlanders were declining and, as it seems, dying out. Periods without hunting had time after time led to starvation, and the number of births hardly equalled that of deaths.

The best starting point for understanding the development within the last fifty years is, therefore, a summary of the increase of the population as given in the following table:

Table XXXII. The population of East Greenland 1896—1938.

Year	Men	Women	In all
1896	161	211	372
1901	209	227	436
1905	233	268	501
1911	274	302	576
1916	298	317	615
1921	325	358	683
1926	374	397	771
1931	445	473	918
1936	476	525	1,001
1938	520	551	1,071

From M. o. G. Bd. 134 Nr. 2, table 15

When 1896 has been chosen as the starting point, it is because the decrease from the first census, taken during Gustav Holm's visit

[1]) M. o. G., Bd. 134, Nr. 2.

in 1884, to the beginning of the colonization plays no part in this context. Whether the one or the other year is chosen as a starting point, there can be no doubt that the population has increased greatly. At the beginning of the period of colonization the population had no other basis of subsistence than sealing, the possibilities of obtaining an income in any other way in East Greenland being very small.

The increasing population and the introduction of fire arms in connection with the hunting of large seal from European sealing vessels along the outer edge of the ice of East Greenland must be supposed to have diminished the stock of seals considerably, so that the hunting has surely been made more difficult for the East Greenland hunters. No accurate figures are at hand as to sealing in East Greenland, but it has been possible to form an estimate, partly based upon the amount of seal skins sold at the store, partly upon calculations undertaken by experts as to the decreasing consumption of skins on the part of the population throughout the period. This summary of production and consumption has been calculated per individual and is given in the following table:

Table XXXIII. The East Greenlanders' production for consumption in 1897—1938, calculated per individual.

5-year period	Number of individuals	Seal products ÷ waste and sold				Skins	
		kg meat		kg blubber			
		In all	per individual	In all	per individual	In all	per individual
1897/98—1899/1900.....	307	160,000	521	88,000	287	2,900	9.4
1900/01—1904/05.....	434	160,000	369	80,000	184	2,900	6.7
1905/06—1909/10.....	535	160,000	299	80,000	150	2,900	5.4
1910/11—1914/15.....	592	130,000	220	80,000	135	2,100	3.6
1915/16—1919/20.....	634	140,000	221	70,000	110	2,100	3.3
1920/21—1924/25.....	706	120,000	170	60,000	85	1,600	2.3
1925/26—1929/30.....	809	179,000	221	91,000	112	2,100	2.6
1930/31—1934/35.....	956	186,000	196	96,000	100	1,600	1.7
1935/36—1938/39.....	1,041	193,000	185	99,000	95	1,900	1.8

(From M. o. G., Bd. 134, Nr. 2, table 47).

From this table it appears that the production of seal meat and blubber has increased somewhat as measured in absolute figures, at the same time that the production calculated in relation to the rapidly increasing population has decreased. Whereas before the beginning of the 20th century the inhabitants of East Greenland—though with great difficulty—were able to maintain themselves as a self-supplying people, the rise which has taken place in their numbers is unthinkable

without an established and still closer contact with the outer world (Denmark, the world market). This may be proved in various ways, cf. the above-mentioned investigation of conditions in East Greenland, and it will, therefore, be sufficient by way of an example to elucidate conditions, as far as farinaceous products are concerned. The figures are given in the following table as compared with the corresponding development in West Greenland.

Table XXXIV. The yearly consumption of farinaceous products calculated per individual in various parts of Greenland 1899—1939.

5-year period	East Greenland: per individual	West Greenland: per individual		
		Upernavik	North Greenland	South Greenland
	kg	kg	kg	kg
1899/00—1904/05	2.24	23.78	29.17	23.05
1905/06—1909/10	4.29	26.43	34.22	30.91
1910/11—1914/15	5.11	29.56	37.31	35.11
1915/16—1919/20	9.50	29.12	38.86	37.45
1920/21—1924/25	12.37	37.41	50.53	46.16
1925/26—1929/30	15.41	37.15	56.13	56.14
1930/31—1934/35	26.20	47.51	65.56	69.40
1935/36—1938/39	34.30	49.25	64.33	67.84

(From M. o. G., Bd. 134, Nr. 2, table 50).

These figures clearly show that, like the West Greenlanders, the East Greenlanders have in the course of time become more and more dependent upon the store and the commodities received through the latter from the world market.

In order to counteract a more rapidly increasing dependency upon commodities imported from without, the Greenland Administration has been greatly interested in making the population of East Greenland take up hunting in areas, where it is estimated that there are sufficient possibilities. As such mention must, in the first place, be made of Scoresbysund. Here there are possibilities both for sealing and fox hunting, and those of the inhabitants of Angmagssalik, who were moved up there, have greatly flourished in the twenty years since this settlement was established. The Scoresbysund settlement is one of the several attempts made to induce the East Greenlanders to move outside the narrow confines of the already colonized area, and it is thought that there are quite good possibilities of existence along the southern part of the east coast.

All in all, it may be concluded from the information given above as to conditions in the different parts of Greenland that an essential

part of the cheap articles of food to be bought at the stores must be regarded as a fixed expense for the Greenland community in its entirety, an expense which is necessary for the subsistence of the population.

B. The Necessary Clothing.

The next question must then be, whether the considerations maintained in the preceding as being of decisive importance for the nutrition of the population may also be said to apply to their clothing.

That this cannot have been the case in an older period is beyond a doubt. The production of food and clothing was so to say inseparable. The Greenlander who caught the necessary number of seals for the food supply of the population had, by that means, also the necessary number of skins for clothing. A really important problem only arose about a century ago, when the population were able, via the store, to exchange sealskins for the greatly coveted article of luxury and stimulation, coffee. Coffee was pronouncedly a means of momentary enjoyment, whereas the value of the sealskins as a rule was a pronouncedly future good. With the valuation of the relation between present-day and future benefits, which particularly in an older period was characteristic of the Greenland it is easily understood that they sold the greater part of their skins at the store, so that clothing, with an essentially unchanged sealing in the 19th century, became poorer and poorer. This development has been dealt with rather fully by authors like BLUHME and NANSEN, and I have nothing material to add to their descriptions; only, it should be mentioned that these descriptions are a little more sombre, than would be reasonable if applied to the whole of the Greenland society at that time.

As to the development in the 20th century, which will be recorded in the following, it must be borne in mind that the hunting lists contain information of the seals caught, in the same manner as the accounts specify the number of skins sold at the store. Of the remainder some are used for the covering of kayaks and umiaks, and when calculating what has been used for this purpose the starting point is taken in the figures given by RINK as to the number of skins used for the individual occupations. On the strength of this information a computation has been made of the number of skins, which every year have been at the disposal of each individual, and the result for the Christianshaab district is given in table XXXV.

The table shows a decrease amounting to between half and a third, that is, the population is obliged to have recourse to the store in order to cover the most pressing needs of clothing. Beyond what is stated in the table it might be emphasized that the proper basis of a comparison

Table XXXV. The concumption of skins at Christianshaab 1903/04—1934/35.

Years	Kayaks à 3 skins		Umiaks à 18 skins		Hunters à 5¼ skins		Sledges à ¼ skins		In all	Consumed	Difference	Diff. per individual
	skins	in all	skins	in all	skins	in all	skins	in all				
Average:												
1903/04—1904/05....	116	348	17	306	108	567	66	17	1,238	3,534	2,296	4.7
1905/06—1909/10....	121	363	17	306	100	525	67	17	1,211	3,098	1,887	3.8
1910/11—1914/15....	123	369	18	324	104	546	73	18	1,257	3,409	2,152	4.2
1915/16—1919/20....	148	444	18	324	95	499	73	18	1,285	2,952	1,667	3.3
1920/21—1924/25....	137	401	20	360	103	541	85	21	1,323	2,600	1,277	2.4
1925/26—1929/30....	123	369	20	360	103	541	111	28	1,298	2,082	784	1.3
1930/31—1934/35....	118	354	14	252	108	567	108	27	1,200	2,410	1,210	1.9

(From M. o. G., Bd. 134, Nr. 3, table 47).

between different periods must be that implements, for which sealskins were used, were to be had in the same proportion per individual in the later as in the earlier period. In that case the number of kayaks at the end of the period would not be 118, but 152. The figures are given in the following table, which shows that there would have been a further decrease in the relative number of sealskins at the disposal of each individual.

Table XXXVI. The relative consumption of sealskins at Christianshaab 1903/04—1934/35.

Year	Kayaks à 3 skins		Umiaks à 18 skins		Hunters à 5¼ skins		Sledges à ¼ skins		In all	Consumed	Difference	Diff. per individual
	number	skins	number	skins	number	skins	number	skins				
Average:												
1903/04—1904/05....	116	348	17	306	108	567	66	17	1,238	3,534	2,296	4.7
1905/06—1909/10....	118	354	17	306	109	572	67	17	1,249	3,098	1,849	3.8
1910/11—1914/15....	123	369	18	324	114	599	70	18	1,310	3,409	2,099	4.1
1915/16—1919/20....	120	360	18	324	111	583	68	17	1,284	2,952	1,668	3.3
1920/21—1924/25....	126	378	18	324	117	614	72	18	1,334	2,600	1,266	2.4
1925/26—1929/30....	141	423	21	378	131	688	80	20	1,509	2,082	573	1.0
1930/31—1934/35....	152	456	22	396	141	740	86	22	1,614	2,410	796	1.3

(From M. o. G., Bd. 134, Nr. 3, table 49).

Corresponding calculations from the other settlements of the west coast, where the decrease of sealing is often greater than in the Chri-

Table XXXVII. The yearly consumption of some drapery goods

Year	Shirting, white			Stout, bleached and unbleached		
	Chb.	Jkh.	Rtb.	Chb.	Jkh.	Rtb.
	m	m	m	m	m	m
1899/1900	578	558	446	2,051	2,591	2,203
1900/01	409	443	424	2,180	2,565	2,173
1901/02	290	469	369	2,275	2,827	2,307
1902/03	401	680	460	2,438	2,350	2,287
1903/04	474	701	492	2,198	2,676	2,587
1904/05	525	780	524	1,446	2,256	2,858
1905/06	343	831	569	2,186	2,306	2,358
1906/07	333	589	370	2,019	2,477	1,873
1907/08	783	1,276	849	1,915	2,325	1,958
1908/09	859	1,208	1,078	1,630	1,931	1,753
1909/10	726	1,074	778	1,777	2,382	1,995
1910/11	681	1,459	558	2,527	1,957	2,176
1911/12	1,250	1,595	1,322	1,536	2,535	1,972
1912/13	1,161	1,161	1,288	1,872	2,494	1,871
1913/14	569	1,762	1,174	2,171	2,182	2,126
1914/15	1,473	1,800	1,456	1,789	2,136	1,932
1915/16	1,179	1,503	1,434	1,739	2,570	1,679
1916/17	854	1,657	1,399	1,863	3,022	1,801
1917/18	1,359	1,882	1,388	1,794	2,711	2,602
1918/19	1,365	2,506	1,940	2,629	3,724	2,441

(From M. o. G., Bd.

stianshaab district, would show a still greater decrease in the quantity of sealskins available for the clothing of the population. As distinguished from what was the case regarding seal meat, export of sealskins might, however, take place from one area to another.

In order to show the transition to dependence upon the store table XXXVII first summarizes the consumption of some of the most important drapery goods at the three settlements along the Disko Bugt 1899—1919.

From this table it appears that there is a gradual increase in the nature of the commodities, which from being an extra additional requirement are fast becoming an article of primary necessity. Instead of being something which people buy, when they can afford it, a steadily increasing number of goods become something which it is necessary to acquire in order to subsist. In the following tables (XXXVIII and XXXIX) the consumption of drapery goods per individual is recorded for the Christianshaab and Jakobshavn districts respectively.

Of the two districts that of Christianshaab was known as one of the poorest in West Greenland, whereas Jakobshavn is among the more

1899—1919 in the Christianshaab, Jakobshavn and Ritenbenk districts.

Stout, printed			Cotton cloth, figured and grey			Printed calico		
Chb.	Jkh.	Rtb.	Chb.	Jkh.	Rtb.	Chb.	Jkh.	Rtb.
m	m	m	m	m	m	m	m	m
695	759	608	1,098	888	1,133	205	477	218
1,196	671	459	843	921	1,283	258	514	356
866	924	676	798	1,144	1,113	278	627	175
539	690	571	1,122	1,236	1,086	228	657	257
581	771	531	962	1,237	1,871	219	694	346
541	891	469	1,260	1,542	1,468	300	555	322
880	674	686	987	1,633	1,485	200	892	276
741	1,126	541	1,211	986	1,265	334	871	390
688	961	358	1,354	1,916	2,116	526	628	466
773	717	535	1,371	1,724	1,436	273	872	704
534	735	499	1,513	2,002	1,624	484	978	544
581	615	485	1,474	1,827	1,521	578	721	556
585	694	374	1,841	2,312	1,876	468	1,228	661
591	552	650	860	2,423	1,813	514	1,259	699
409	706	371	2,065	1,780	1,555	906	724	678
499	448	241	1,654	2,375	1,794	438	1,512	864
708	444	415	1,680	2,446	1,841	779	1,675	1,022
216	641	483	1,600	2,569	1,993	735	599	360
323	379	345	1,555	2,884	2,152	527	1,222	761
643	682	619	2,021	3,557	2,736	695	1,559	1,119

134, Nr. 3, table 71).

prosperous. This may also be gathered from the table, but still it is worthy of notice that the development is parallel in the two districts. In both areas there is a marked difference, which may be characterized by figured cotton goods now playing a far greater part than in former times. The principal line of development may be described in the following manner: whereas about the beginning of the 20th century the main article of clothing and the purchase of figured material was something extraordinary and partaking of luxury, the said cotton article has now become an absolutely necessary part of the apparel of the Greenlanders. This means, in the present context, that as a result of a development in West Greenland an even very great part of the clothing must be reckoned as a fixed expense for the population. In the investigation here mentioned it is of less interest to attempt an estimate as to whether, in view of the temperature and climatic conditions of the district, the transition from sealskin to cotton goods may justly be termed progress.

The development in East Greenland is similar to the changes which have been described above as to some of the settlements of West Green-

Table XXXVIII. Consumption of drapery goods per individual and year in the Jakobshavn district 1919—1938.

Year	Shirting, white	Stout, bleached and unbleached	Stout, printed	Cotton good, figured and grey	Calico	Sewing thread	Cotton (for knitting)	Woollen jerseys (Faroes)	Woollen jerseys (Jutland)	Stockings	Wool (for knitting)
	m	m	m	m	m	real.	ball.	no.	no.	pair	kg
1919/20	1.72	5.59	1.44	4.16	1.40	0.23	1.59	0.18	0.14	0.31	0.03
1920/21	3.19	6.25	0.27	4.64	2.55	1.67	2.75	0.05	0.32	0.24	0.05
1921/22	3.58	6.09	1.05	5.20	2.55	2.39	2.29	0.22	0.43	0.33	0.06
1922/23	3.36	6.37	0.99	5.02	2.68	2.18	3.38	0.26	0.28	0.38	0.07
1923/24	2.60	7.35	0.88	5.23	3.45	2.14	3.41	0.24	0.20	0.34	0.12
1924/25	3.11	5.75	0.97	4.93	2.33	2.21	3.25	0.16	0.35	0.28	0.13
1925/26	0.78	6.76	0.69	4.97	1.11	2.12	3.62	0.20	0.30	0.26	0.21
1926/27	1.59	7.77	0.89	5.83	0.88	2.28	5.81	0.18	0.29	0.31	0.21
1927/28	3.16	6.20	1.33	6.45	3.29	2.04	1.96	0.17	0.32	0.45	0.22
1928/29	2.76	8.54	1.22	7.96	2.87	2.09	3.94	0.20	0.40	0.68	0.26
1929/30	3.10	7.98	2.38	6.56	2.20	1.47	7.22	0.09	0.30	0.76	0.35
1930/31	2.40	5.14	0.70	10,79	3.26	0.99	3.81	0.06	0.19	0.32	0.18
1931/32	1.92	4.19	0.71	5.61	1.76	0.48	3.88	0.05	0.08	0.56	0.11
1932/33	3.18	4.02	0.70	8.90	2.28	0.64	4.23	0.06	0.18	1.03	0.19
1933/34	0.95	3.33	0.63	8.71	1.74	1.34	4.28	0.03	0.09	0.66	0.17
1934/35	1.56	3.00	0.45	7.58	0.56	1.03	3.92	0.03	0.13	1.17	0.13
1935/36	1.84	2.62	0.69	8.30	1.06	0.46	3.61	0.06	0.06	0.75	0.10
1936/37	1.48	2.52	0.58	7.35	0.58	1.01	3.96	0.04	0.06	0.71	0.12
1937/38	1.36	2.20	0.60	7.41	0.40	0.95	3.67	0.07	0.05	0.69	0.09
1938/39	1.19	1.97	1.06	7.66	0.67	0.96	3.68	0.04	0.02	0.81	0.09

(From M. o. G., Bd. 134, Nr. 3, table 85).

land. Here sealing is still considerable, but sealskins are by far the most valuable product among the commodities yielding a cash income for the population, for which reason an increasing quantity of the skins of seals caught are now taken to the store in order to be exchanged for European commodities. The development in the purchases of articles of clothing in East Greenland, as compared with West Greenland, is shown in table XL.

Also here there is a steady increase for a group of store commodities, which would not seem to be necessary and might still rather be characterized as luxuries. In East Greenland, still more so than in West Greenland, it is perhaps a cost, which cannot be considered as quite fixed, because it has not been absolutely necessary. Perhaps it is not so much an actual need as a fashion, the result of the comparison arising out of the livelier intercourse—chiefly it seems with women who have been moved there from West Greenland.

Table XXXIX. Consumption of drapery goods per individual and year in the Christianshaab district 1919—1938.

Year	Shirting, white	Stout, bleached and unbleached	Stout, printed	Cotton good, figured and grey	Calico	Sewing thread	Cotton (for knitting)	Woollen jerseys (Faroes)	Woollen jerseys (Jutland)	Stockings	Wool (for knitting)
	m	m	m	m	m	real.	ball.	no.	no.	pair	kg
1919/20	2.00	3.05	1.72	3.40	1.61	1.03	1.45	0.12	0.11	0.07	0.06
1920/21	2.78	4.45	1.40	3.98	1.36	2.24	2.55	0.09	0.25	0.04	0.09
1921/22	2.66	5.35	0.65	4.22	1.25	1.69	1.98	0.20	0.22	0.15	0.05
1922/23	2.36	5.23	1.20	5.11	1.72	2.76	2.14	0.12	0.28	0.17	0.11
1923/24	2.10	4.60	0.97	4.19	1.13	1.98	2.51	0.16	0.25	0.01	0.08
1924/25	1.43	5.52	0.52	3.01	0.93	1.94	2.21	0.09	0.19	0.08	0.13
1925/26	1.37	5.83	0.45	4.86	0.41	2.39	2.31	0.14	0.27	0.08	0.14
1926/27	0.82	4.90	0.15	2.98	0.16	1.45	2.01	0.08	0.19	0.09	0.11
1927/28	2.46	4.63	0.93	5.55	1.02	1.43	2.88	0.11	0.22	0.04	0.16
1928/29	0.57	7.44	0.22	6.10	1.45	1.11	2.79	0.13	0.33	0.21	0.17
1929/30	2.00	5.10	0.89	4.85	1.47	1.26	2.70	0.08	0.20	0.28	0.20
1930/31	1.65	4.08	0.37	6.76	1.68	1.01	2.81	0.06	0.15	0.36	0.13
1931/32	0.46	3.87	0.60	5.40	1.65	0.45	3.02	0.01	0.18	0.32	0.05
1932/33	1.68	2.88	0.88	4.27	1.43	0.50	3.04	0.06	0.17	0.32	0.12
1933/34	1.49	2.46	0.48	5.59	0.84	0.90	3.19	0.05	0.14	0.48	0.12
1934/35	1.75	2.60	2.18	6.36	0.49	0.57	3.23	0.06	0.17	0.22	0.13
1935/36	1.50	1.80	0.59	5.61	0.55	0.39	2.79	0.07	0.08	0.37	0.13
1936/37	1.52	1.40	0.78	4.41	0.44	0.20	2.67	0.07	0.04	0.39	0.11
1937/38	1.01	1.08	0.81	4.71	0.22	0.19	2.72	0.05	0.01	0.26	0.12
1938/39	0.89	0.99	0.60	6.08	0.70	0.32	2.99	0.07	0.01	0.46	0.12

(From M. o. G. Bd. 134, Nr. 3, table 84).

Table XL. The East Greenlanders' purchases at the store of articles of clothing, calculated in kroner within the period 1899—1938.

5-year period	Number of population	East Greenland		Angmagssalik		Scoresbysund		West Greenland		
		in all	per individual	in all	per individual	in all	per individual	Upernavik	North Greenland	South Greenland
1899/00—1904/05 ..	434	1,682	3.88	1,682	3.88	..	..	6.13	6.56	5.29
1905/06—1909/10 ..	535	2,317	4.33	2,317	4.33	..	..	6.45	7.34	5.98
1910/11—1914/15 ..	592	3,356	5.67	3,356	5.67	..	..	8.32	8.49	7.03
1915/16—1919/20 ..	634	3,958	6.24	3,958	6.24	..	..	9.32	9.86	8.93
1920/21—1924/25 ..	706	7,674	10.87	7,674	10.87	..	..	14.89	15.41	14.93
1925/26—1929/30 ..	809	12,108	14.97	8,097	11.46	4,010	38.93	19.34	20.88	22.39
1930/31—1934/35 ..	956	16,635	17.40	12,341	14.87	4,296	34.10	19.42	22.15	20.03
1935/36—1938/39 ..	1,041	20,862	20.04	14,687	17.08	6,085	33.43	19.65	19.78	18.64

(From M. o. G., Bd. 134, Nr. 2, table 68).

C. Other Groups of Commodities.

Upon the whole it must be maintained that the development in Greenland in an increasing degree has made the native population dependent upon supplies from without, in so far as articles of food and clothing are concerned, and this may also be said to apply to a great number of the other categories of commodities. The purchases at the store comprise an increasing number of species of commodities (1899/1900 there were 720 which number in 1938/39 had risen to 1303), and many of these it has in the course of time become increasingly possible to term necessities. The following table (XLI) gives information as to the consumption for the various groups in kroner per individual during the twenty years between the wars.

Table XLI. Consumption in main groups per individual.

	Kroner per year		
	1919/20	1930/31	1938/39
Species of provisions and groceries	36.46	69.63	63.47
Shooting requisites	3.06	5.99	5.72
Drapery	10.70	25.31	21.07
Ironware, tools and implements	1.72	5.80	5.46
Enamelled ware, china, crockery and glass	0.55	1.38	1.15
Tobacco	4.37	12.00	10.94
Wooden ware	1.53	9.15	5.38
Fuel and diverse commodities	3.46	13.34	16.97
Other commodities	5.15	21.62	26.78
Total	67.00	164.22	156.94

(From Summary of Statistical Information regarding Greenland, tables 324, 325 and 326).

The consumption per individual in kroner shows a considerable rise in nearly all respects. The development has been fairly constant, following a fixed line i. e. in the direction of increasing consumption, although about 1930 there was some approach to a high conjuncture. A tendency towards decreasing expenses as regards European articles is chiefly the result of cheaper commodities, i. e. a certain limited substitution. The prevailing rule has been that more and more of the commodities at the store are becoming fixed costs.

Perhaps it might be useful to look a little more closely at the Greenland consumption of some of the important categories of wooden articles. It is here rather difficult to select special types, as the consumption has changed a good deal, but generally speaking a very considerable increase in the consumption of wood has been proved to be most pronounced in the period 1919/20—1930/31. About 1930 a great number

of wooden houses were built in Greenland, and a very large part of the population made the change from earth huts or very primitive buildings to proper wooden houses, which movement the Administration encouraged by favourable loans from the municipal funds. Later on the consumption of wood has decreased somewhat, as it is now no longer mainly a question of new buildings, but of additions and repairs, even though a considerable number of new buildings are erected in certain districts. A decrease in the consumption of wood for repairs will be possible within narrow limits, but in the long run a development of this kind might lead to a return to the building methods of an earlier period. Such a change may, it is true, be of a certain economic importance for the Greenlanders, but it is not desirable for Denmark, and generally speaking it must be considered as being at variance with the assumptions of a continued cultural development.

What is here said of wooden articles applies to several of the other categories of expenses; the fixed costs are necessary, in case the cultural development is to be continued along the lines laid down by the Danish Administration. As mentioned in the case of wooden articles it is possible, in some of the groups, to consider the costs as variable within a certain narrow interval, but as soon as this period is exceeded, they become fixed costs, which cannot be avoided because of the fundamental political-economic point of view.

D. Variable Costs.

Within the consumption of the population of Greenland there are naturally not inconsiderable groups of costs as to which it is possible to economize, should the necessity arise, that is, costs which in the present investigation and according to the fundamental point of view must be termed variable.

It will here be natural to mention such a group as tobacco, the yearly consumption of which, as expressed in kroner, has risen from 4.37 kroner per individual in 1919/20 to 12.00 kroner in 1930/31, after which there has been a decrease to 10.94 in 1938/39.

Table XLII contains more detailed information as to consumption in weight or per piece within the same period. It shows that the increase for a number of species has been considerable, but that the increase in quantity has not been proportionally as high as the increase in kroner, and this is owing to the increase of prices of individual commodities, which has taken place within the intermediary period.

It will be of particular interest to stop for a moment at the development of the consumption of cigarettes. Cigarettes were introduced into Greenland about 1930, and the consumption rose very quickly, not least because of the high incomes of the population during that period.

Table XLII. The consumption of tobacco per individual 1919/20—1938/39.

Financial Year	Roll tobacco	Pipe tobacco, fine	Cavendish	Portorico		Melange	Black G	Pipe tobacco	Chew tobacco	Cigars	Cigarillos	Cigarettes
				F. F.	ord.							
	g	g	g	g	g	g	g	g	g	no.	no.	no.
1919/20....	41	655	95	2	53	25	31	5	359	10.8	..	..
1920/21....	83	696	69	12	57	19	81	7	346	21.6	..	..
1921/22....	184	495	83	11	38	25	78	7	447	26.6	..	..
1922/23....	166	621	95	6	35	18	61	11	421	17.2	..	..
1923/24....	109	573	94	5	25	19	72	18	470	25.1	..	..
1924/25....	127	599	70	15	36	14	35	7	388	10.4	..	..
1925/26....	137	576	80	6	35	17	43	11	390	13.9	..	..
1926/27....	103	546	57	12	44	18	72	20	326	17.0	..	..
1927/28....	150	495	107	15	59	40	60	20	326	22.3	..	..
1928/29....	154	511	95	15	49	25	116	27	359	20.5	..	16
1929/30....	165	649	53	22	77	35	95	38	331	20.4	..	72
1930/31....	185	631	92	19	100	60	106	45	298	24.7	..	100
1931/32....	181	660	76	37	75	23	129	54	275	24.2	..	81
1932/33....	152	612	77	36	116	35	131	54	224	21.8	1.4	84
1933/34....	166	610	50	42	126	87	97	25	206	18.7	16.6	87
1934/35....	154	642	31	31	143	42	140	20	182	15.9	25.3	56
1935/36....	139	646	22	51	159	38	149	25	160	12.0	31.3	76
1936/37....	133	703	19	26	157	54	114	23	144	11.9	31.8	70
1937/38....	126	710	15	33	176	37	99	23	123	12.1	35.0	77
1938/39....	116	733	19	23	150	26	110	27	97	13.3	30.3	59

(From Summary of Statistical Information regarding Greenland, table 338).

Partly for reasons of health this development has not been looked upon with favour by the Greenland Administration, and therefore the prices have been doubled in the course of a few years, at the same time that the quantity of cigarettes sent up to Greenland has been considerably reduced. A rationing of the consumption has thus been attempted, and it must be supposed that a further reduction of this cost will prove possible, in case conjunctures should lead to a further decrease of income. There is, however, no great possibility of any real economic change through a decrease of the tobacco consumption, partly because of the smallness of this expense, and partly because at any rate a minimal consumption of tobacco in Greenland must now be said to have become a deeply-rooted habit.

It is hardly possible to carry out a far-reaching general decrease of the total consumption in any of the other fields, without conflict

with the assumption here set up as to a basis of existence corresponding with that of cultural development, but there are a number of commodities as to which a downward conjunctural movement may cause a reduced consumption or a substitution of cheaper groups of commodities. In this connection attention must be paid to a number of the varieties of provisions most in use, details of which will be given in the following table.

Table XLIV. The yearly consumption per individual of some of the most important varieties of provisions 1919/20—1938/39.

Financial year	Sugar	Coffee	Tea	Rye-flour	Wheat flour	Grits	Rice	Pease	Beans
	kg	kg	kg	kg	kg	kg	kg	kg	kg
1919/20	10.19	2.24	0.12	25.83	4.10	6.24	3.79	0.02	0.00
1920/21	12.59	2.77	0.12	28.11	5.70	6.96	2.68	1.42	0.09
1921/22	13.33	2.78	0.15	28.73	5.92	7.09	2.79	1.71	0.65
1922/23	13.12	2.76	0.16	30.48	6.17	5.63	3.92	1.51	0.44
1923/24	14.32	2.78	0.18	34.66	7.08	5.84	3.76	1.46	0.43
1924/25	13.80	3.00	0.16	31.47	6.58	5.90	3.39	1.24	0.26
1925/26	14.70	2.97	0.19	34.66	8.07	6.15	3.77	1.33	0.13
1926/27	17.47	2.69	0.22	31.49	8.69	5.64	4.29	1.22	0.21
1927/28	21.64	3.00	0.25	32.02	10.76	7.62	4.56	1.59	0.55
1928/29	21.63	3.20	0.31	34.96	12.17	7.78	4.77	1.45	0.44
1929/30	27.32	3.28	0.34	31.42	14.40	6.55	6.49	1.45	0.26
1930/31	29.30	3.33	0.37	29.16	19.22	7.49	5.77	1.53	0.08
1931/32	30.49	3.26	0.39	29.53	19.82	9.11	4.91	1.14	0.60
1932/33	32.91	2.87	0.39	31.69	21.99	8.77	5.64	1.13	0.58
1933/34	33.67	2.87	0.40	27.61	21.10	6.90	5.37	0.87	0.40
1934/35	33.68	2.66	0.41	31.77	20.11	7.50	5.02	1.15	0.27
1935/36	32.34	2.31	0.39	28.86	20.44	7.20	5.11	0.68	0.21
1936/37	34.07	2.12	0.39	30.43	20.38	8.01	4.60	0.34	0.15
1937/38	34.66	1.98	0.40	36.40	19.09	8.98	4.68	0.47	0.17
1938/39	35.80	1.93	0.41	28.49	16.48	6.08	7.48	0.51	0.17

(From Summary of Statistical Information regarding Greenland, table 329).

When regarding these commodities somewhat more closely it appears that there are some fields of production, where it will be possible to limit the consumption without having recourse to substitutes, and other fields, where a substitution based upon differences of prices is likely.

If we first look at the possibility of a complete restriction of one special article of consumption, it will be natural to regard tea and coffee together. Here some substitution is found likely owing to the relations of prices. Especially as far as coffee is concerned, the figures

show a slight increase within the first two years, and then a not inconsiderable decrease. There are perhaps two elements at work here, which may be considered separately: first that the price of coffee has been fixed comparatively high during the later part of the period; secondly that the population of Greenland may have felt some faint effect of the general economic crisis of the nineteen-thirties.

When next considering the possibilities of substitution in the economy of provisions of the Greenlanders, it is natural to mention the relation between rye and wheat flour. The consumption of the latter article has increased to five times the quantity in the course of fifteen years, whereas the consumption of rye flour has increased considerably less. The total increase may, it is true, be regarded as expressing a transition from a supply consisting of seal meat and other proteinous articles to a diet with bread and other carbonic hydrates, and as appears from the preceding it will not be possible to alter this development by the policy of prices adopted. On the other hand, the change in the relation between rye and wheat flour expresses a substitution of a distinct economic character. A change from the consumption of wheat flour to that of rye flour during a period of economic depression is possible without a decline of the total calorie covering, and here there is consequently a field, where a conjunctural downward movement will make itself felt, without effecting that which is the presupposition of the present investigation, viz. the maintenance of a gradually progressing cultural development.

Somewhat related to these considerations are the experiences made in Greenland during the War of 1939—45 as a result of the rationing system. The consumption of wheat flour and sugar has been greatly reduced, while at the same time the consumption of rye flour has increased considerably. And in the same manner as rye flour was to a large extent substituted for wheat flour and perhaps for sugar, there are in the Greenland consumption a long series of other possibilities of substitution, where a certain covering of requirements can be carried out by means of different qualities at different prices, but where a transition to a cheaper quality can only be effected, when the population is forced to submit to it by decreasing incomes or by increasing prices.

However, there can hardly be any doubt that the possibilities of substitution in the economy of Greenland are far smaller than the corresponding possibilities in that of other countries. The Greenlanders' demands for various articles of food and clothing, for wooden articles, tobacco etc. have, it is true, all of them a smaller cross elasticity than elsewhere, but as the Greenland community, because of its low income, also under rising conjunctures buys some of the cheapest commodities,

it is to be supposed that the cross elasticity is upon the whole essentially smaller.

This applies both to the group of provisions, from which the example quoted above is taken, and to groups relating to clothing, building materials etc. In these groups the possibilities of substitution are smaller than elsewhere, the consequence being that all the daily expenses must be characterized as relatively fixed. These expenses must therefore necessarily be defrayed, and there must be possibilities of an income sufficient to cover them.

It will perhaps be natural to make a single reservation in regard to this conclusion. It will be possible for the population of Greenland to replace a number of the articles purchased at the stores by the production of dried fish. The raw materials are present in abundance, and the necessary labour can easily be obtained, after the coming of autumn has stopped the selling of cod for the production of salted fish. Not least during the last World War the Administration of Greenland has made great efforts to encourage the population to increase the consumption of dried fish, but it seems as if these efforts have failed to bear the fruit desired. This is possibly because of the easy access to buying and selling at the many stores and the small conjunctural movements in the store prices, and it is possible that the population might be made to take a greater interest in changes, if the prices fluctuated more strongly with the conjunctures, and a greater strain were felt in periods of depression.

Thus the population of Greenland has some possibility of developing a special national policy of production and occupation along the familiar economic lines, but these possibilities can only modify the considerations treated in the earlier chapters, which will not in principle change the fact that the daily costs of requirements are of a much more fixed character in Greenland than in other more prosperous countries.

E. Fixed Costs Necessitated by Considerations of Health and Culture.

What has been said above as to an essential part of the expenses of the individual Greenland family making a fixed cost also in the main applies to the requirements of the total Greenland community. No further deliberations are necessary, where the total cost is merely the sum of the costs of the individual families, but it appears at least with equal clearness in the fields, where the total cost is not the simple sum of those of the individual families.

This first and foremost holds good of hygienic measures, the cost of which per individual must be greater in Greenland than in most

other countries. When it is a question of a physician, who is to attend to the population of a very extensive district, an essential part of his time must necessarily be spent in travelling, and this time cannot very well be used for regular medical work. If thus a Greenland physician has a district of twelve hundred inhabitants, he will not be able to give them the same medical assistance with the same amount of work, as if he has a Danish district with the same number of inhabitants. A similar view also holds good of the nursing of the sick and the work to be done by the great number of midwives, who are to be found scattered over the whole of Greenland.

At the same time it must be borne in mind that the need for medical treatment and hygiene is essentially greater in Greenland than in Denmark, and particularly tuberculosis is far more prevalent, while the treatment and cure of this malady, as is well known, requires a careful and extensive treatment. Add to this that a physician in Greenland must have much more work along general hygienic lines than e. g. in Denmark.

Housing conditions are as formerly suggested much poorer than in Denmark, and this e. g. finds its expression in the fact that the accomodation per individual in a Greenland house is much more limited than in a Danish one. In 1935 a number of measurements to this effect were undertaken, the result of which are given in table XLV, and they fully corroborate this fact, the average amount of space per individual being 8 m^3 with a considerable deviation.

When the dwellings are so small and the understanding of sources and dangers of infection not very pronounced, it is clear that the amount of hygienic work to be done by the physicians must be very great, and this no less applies to that of the midwives. Within a very limited area they must be present whenever required, that is, in a country with such a scattered habitation as Greenland there must be a very large number of midwives at the disposal of the population, and the exploitation of their working capacity—if it is possible to use this term—must be very small and, therefore, very expensive as calculated per "case", even with a far lower salary than that given in Denmark. It must here be borne in mind that the population of the whole of Greenland, distributed over about two hundred dwelling places, does not exceed that of a provincial town with 20,000 inhabitants.

The costs of the medical and hygienic work done in Greenland must naturally be rather fixed. This first and foremost holds good of the hospitals, the boats etc. of the physicians, the salaries of physicians, nurses and midwives, and this must also, if not quite so pronouncedly, apply to the future. It means, in other words, that when once a physician has been appointed in a district or a settlement, it will be felt as

Table XLIV. Amount of space per individual in the Greenland houses 1935.

Locality	Number of houses	Average number of inhabitants per house	Amount of space per individual m³
Lichtenau	29	4.2	5.9
Julianehaab	90	4.9	9.3
Qagssimiut	22	4.2	8.0
Arsuk	29	4.6	9.7
Narssaq	13	5.6	5.1
Sukkertoppen	108	4.5	9.8
Hunde Ejland	21	5.3	5.4
Ikamiut	15	4.4	5.8
Rodebay	18	4.4	6.7
Ritenbenk	23	4.4	9.7
Sarqaq	23	5.0	6.5
Umanatsiaq	10	4.0	3.6
Umanak	45	4.4	7.6
Prøven	52	3.7	6.3
Augpilagtoq	15	4.2	3.9
South Greenland	291	4.6	8.9
North Greenland	222	4.3	6.6
West Greenland	513	4.5	8.0

(From Summary of Statistical Information regarding Greenland, table 32).

a very severe blow, if the population is deprived of him because of economical strictures. If during a period of high conjunctures the number of physicians or the possibility of medical treatment have been increased by the building of hospitals, it will be very difficult to undertake restrictions during a period of depression etc., the curve of costs not being reversible as to time. It will here be natural to show that the development in Greenland has only been in one direction, viz. towards greater costs, and that the latter must therefore be regarded as a fixed expense for those responsible for the economy of the country. The following table (XLVI) shows the growth of the health service 1900—1935, and table XLVI gives a summary of the costs of sanitation in Greenland 1899—1938.

Both of these tables clearly show the gradual development which is characterized by an increasingly intensive treatment and continued increasing costs, this line being uninterrupted by any fall. The increase may be larger or smaller, but also in periods of depression there has

Table XLV. The growth of the health service in Greenland 1900—1935.

In Greenland	Physicians	Dentists	Nurses	Midwives		Hospital accomodation
				trained in Denmark	trained in Greenland	
1900	4	0	0	0	?	30
1910	7	0	4	4	80	?
1930	10	2	11	11	89	240
1935	10	1	16	14	98	325

1935	per 10.000 individuals				
	Physicians	Dentists	Nurses	Midwives	Hospital accomodation
Denmark (exc. the Faroes)	7.7	2.5	24.4	2.6	109
The Faroes	5.4	0.8	5,8	12.5	102
Greenland	5.5	0.6	9,0	62.2	181

(From Summary of Statistical Information regarding Greenland, table 41).

been an increase. New tasks are taken up year after year, and the health service becomes increasingly intensive, which i. a. appears from the great increase in the expenses for its working and maintenance (including more particularly the expenses for hospitals) which may be illustrated by the actual expenses for the working of the hospitals, viz. 3,747 kr. in the financial year 1899/1900 as against 121.052 kr. in 1934/35. Since 1935 this gradual increase has been continued until 1946, when there was an abrupt and great increase. This might be interpreted as a transition to letting the expenses make part of the general fluctuations in the economic life of the country, but the great increase may also be explained by a wish to raise the level of expenses according to views which are somewhat different to those formerly adopted.

If it may thus be maintained with good justice that the expenses for the health service of Greenland have hitherto had a fixed structure of costs, and that it is very difficult to effect a decrease (economy practiced during a period of depression); this applies still more to the expenses as to the educational system (which in Greenland is bound up with the church, both from the point of view of accounts and administration).

When there are about two hundred dwelling places in Greenland, which nearly all have children of school ages, the community must necessarily be characterized by a very great number of schools with comparatively few children in each. This is in itself expensive, as a very large number of buildings and teachers are required in proportion to

Table XLVI. The costs of the health service in Greenland 1899—1938.

Current expenses	1899–1900	1909–1910	1919–1920	1924–1925	1929–1930	1932–1933	1935–1936	1938–1939
	kr.	kr.	kr.	kr.	kr.	kr.	kr.	kr.
Salaries etc. for employees	10,716	24,014	65,963	59,219	78,502	98,931	86,046	101,823
Salaries and pensions for midwives.....	4,586	12,415	19,949	24,529	30,207	35,123	36,014	43,098
Salaries and pensions for nurses	..	..	7,000	10,512	19,906	29,721	30,116	37,440
Grants to employees and their survivors.....	..	..	9,079	898	1,095	1,065	1,015	1,920
Expenses for the working and maintenance of the health service.....	11,083	48,730	69,905	120,254	157,300	168,442	194,839	239,168
Danish training in midwifery for Greenland women.....	300	27	2,528	1,766	2,165	2,491	2,363	4,461
Bacteriological station.....	..	..	..	..	..	13,292	..	..
Extraordinary expenses	..	..	2,500	1,744	14,676	16,438	15,047	16,901
Educational grants.....	..	..	..	575	550	229	650	1,073
Depreciations.....	..	..	4,018	3,558	9,836	9,675	11,482	12,377
Interest.....	..	..	..	..	..	14,895	15,885	15,840
In all...	26,685	85,186	180,944	223,056	314,239	390,304	393,459	474,104
In all: expenses per individual.	2.43	6.86	13.57	15.99	20.69	24.54	23.84	27.50

(From Summary of Statistical Information regarding Greenland, table 42).

the total number of children. The consequence of the many small schools must be that an extension of the population's educational standard necessarily results in further schools for children of 14—17 years of age, with an effective supervision of the work in the many small schools etc., and all this is naturally expensive and cannot but lead to increasing costs.

When starting from the assumption mentioned in the introduction of this chapter, viz. that what is aimed at on the part of Denmark is a continued progressive development with an increasing contact with Danish cultural life, it is clear that the expenses for the educational system are of a pronouncedly fixed character, and that the burdens undertaken by the public under high conjunctures must also be maintained in a period of depression. This picture will also be presented by the financial accounts of the development, which has taken place in Greenland in the period 1915—38 (tables XLVII and XLVIII) which, it is true, corresponds with the statistical information produced as to the intensification of the school work in Greenland.

Regarding the church and school system a gradually progressing development has, as mentioned above, taken place in the same manner

Table XLVII. The expenses to church and schools in Greenland 1915—1938.

	1915	1920	1925	1930	1935	1938
Salaries to employees	45,950	60,625	76,667	116,152	145,213	176,616
Salaries and pensions to catechists in Greenland	38,714	72,578	78,373	126,344	101,399	130,223
Grants	8,648	465	852	399	550	100
Expenses for the working and maintenance of clerical districts, seminaries and schools	113,721	100,082	113,802	148,225	204,125	280,543
Training of native clergymen and teachers	3,288	7,840	4,407	3,354	2,566	5,671
Extraordinary expenses	..	..	..	2,050	1,885	5,523
Depreciations	..	3,708	7,938	20,909	21,837	26,843
Interest	..	..	..	..	37,710	45,765
	210,321	245,298	282,039	417,433	515,285	671,284

(From Summary of Statistical Information regarding Greenland, table 408).

Table XLVIII. Specification of expenses for the working and maintenance of church and schools in Greenland.

	1915	1920	1925	1930	1935	1938
Seminary	8,990	13,721	32,476	32,724	37,797	50,633
Secondary schools	..	..	..	11,435	36,852	43,913
Schools for catechists	965	2,735	2,500	..	7,053	1,003
Official journeys	7,667	13,258	9,800	9,587	9,363	13,954
Buildings and vessels	46,745	17,747	24,162	30,182	21,315	32,787
Requisites	6,412	13,994	7,465	12,688	11,177	26,352
Fuel	3,425	8,588	7,801	12,241	19,042	24,794
Other expenses	11,296	13,268	15,911	26,225	39,865	70,617
Publication of Greenland books	4,188	2,092	4,123	4,996	10,101	..
Passages, insurance	24,033	14,679	9,564	8,147	11,560	16,490
	113,721	100,082	113,802	148,225	204,125	280,543

(From Summary of Statistical Information regarding Greenland, table 409).

as regarding the health service. New tasks are taken up in succession, and the older ones are intensified. There can be no doubt that also these groups of costs have a pronouncedly fixed character, and any period of depression can hardly be imagined under the given conditions.

In the same manner as the expenses to church and schools have a very fixed character, the expenses to trade and navigation—always under the given assumptions—have a similar character, although not quite so fixed. This is illustrated in details by table XLIX, worked out on the basis of figures in the accounts, which are in their turn divided, according as to whether it is chiefly a case of expenses in Greenland or in Denmark. The former figures are recalculated according to the price index of Greenland, whereas the figures relating to the navigation are recalculated according to the Danish wholesale price index, and finally the costs of the trade are divided and recalculated (according as the expenses are incurred in Greenland or in Denmark) from each of the corresponding price indexes already mentioned.

Like that of the other figures the total picture presented is one of

Table XLIX. Principal groups of the expenses of the Greenland Administration, recalculated according to price indexes 1919/20—1938/39.

Financial year	Expenses in Greenland			Expenses partly in Greenland and partly in Denmark	
	administration	sanitary system	church and school	trade	navigation
	kr.	kr.	kr.	kr.	kr.
1919/20	119,128	180,944	245,333	422,019	485,187
1920/21	123,368	166,241	245,298	421,954	591,844
1921/22	148,110	188,916	316,054	671,183	551,297
1922/23	139,623	195,097	301,953	803,034	541,408
1923/24	144,371	177,514	282,895	832,519	555,413
1924/25	136,221	185,881	240,414	855,154	483,503
1925/26	159,911	225,112	231,180	1,130,912	572,363
1926/27	265,433	224,506	263,235	1.330,707	576,622
1927/28	191,133	282,331	331,384	1,534,054	672,853
1928/29	390,611	317,006	370,215	1,525,554	710,245
1929/30	327,459	308,077	369,598	1,585,219	920,512
1930/31	390,615	324,165	417,433	1,915,330	857,941
1931/32	413,145	394,687	488,293	2,073,794	1,122,451
1932/33	531,774	481,858	583,685	2,226,568	893,568
1933/34	461,476	502,024	628,714	2,129,518	930,824
1934/35	495,022	474,175	607,539	1,990,897	840,467
1935/36	488,007	452,253	592,282	1,959,447	725,815
1936/37	445,674	439,815	600,431	1,877,790	673,198
1937/38	461,241	484,713	644,575	1,976,175	764,987
1938/39	429,573	455,870	645,465	2,093,175	956,909

(From Summary of Statistical Information regarding Greenland, table 433).

a gradually increasing tendency, and the expenses must in all respects —always assuming the maintenance of the cultural policy followed— be said to be relatively fixed in character. Under the given conditions the navigation of Greenland cannot be abandoned, any more than the supply of the necessary articles provided by the stores for the covering of the requirements of the Greenlanders.

As the net result of the investigations of the present chapter it may be maintained that there is a possibility of regarding the expenses for food, clothing etc. as variable costs, although it will be more difficult to carry out this view in the case of Greenland than in the case of richer and warmer countries. If on the other hand the cultural views, as mentioned above, are made the conditions of an economic system, the result will be that many more groups of costs in the economic life must be regarded as fixed, so that it is very difficult to accomplish the cultural development, in case the community is exposed to essential conjunctural fluctuations.

CHAPTER IX

THE COVERING OF THE FIXED COSTS AND THE THEORY OF PRICE POLICY FOLLOWED

A. Is it possible to distribute the fixed costs?

Viewed in the light of the theories discussed in the preceding chapter, the economy of Greenland has a pronouncedly fixed structure of costs, and when trying to arrange an economic policy towards this country, based upon economic-theoretical considerations, it will be natural to draw parallels from other fields, where the structure of costs is also of a fixed character. As characteristic examples of this it will be natural to mention the railway tariffs for the transport of goods and present-day rates for electricity. In both cases it has been attempted, in earlier periods, to distribute the costs with the same standard of distribution on all the unities yielded. Such a policy of prices has long ago been abandoned in all fields, where the structure of costs is pronouncedly fixed. The railroad tariffs for the transport of goods are based upon the principle of "what the traffic will bear," so that the different kinds of goods to the highest extent possible contribute to the permanent establishment, and this main principle is somewhat modified by exceptional rates, the special reason for which it is not here the place to discuss in details. For the rates of electricity the policy of prices is fixed by a differentiation, carried out according to the use made of it (lighting, power and heat) and according to periods (which are often determined by the time of maximal use being co-related to the different areas of demand, in which manner fixed rates are introduced). The individual views adopted in that case are not mentioned here, but it is presumed that the different slants are known, it being necessary to emphasize that there is a natural relationship between the structure of costs in these areas and the structure of costs in Greenland, and that the Greenland policy of prices is best understood when comparing it with the special conditions within those fields.

Already as a consequence of this, one must theoretically keep aloof from a policy of prices, which will fix them on the base of a so-called

equal distribution of the fixed costs. Such a viewpoint is, however, not unknown as far as Greenland is concerned. It has been emphasized from different quarters and in different ways, and it would seem natural to subject a single case to closer investigation. For this it is thought most serviceable to adduce the fundamental considerations set forth by the Committee of 1906, in whose report (p. 12) it is i. a. stated:

"According to the views of the majority the basis of the fixing of the rates ought to be the proportional distribution of the costs which are meant to cover those of the in- and outgoing commodities[1]), and this rather with a tendency to make the greatest additions to the former, though every commodity should bear its own costs. For the ingoing commodities this means that the sale prices obtained in Copenhagen are paid to the Greenlanders for every single group of commodities, after deducting their share in freighting and trading costs; for the outgoing that they are sold at purchase prices with an addition corresponding to their share in trading and freighting costs.

„Within the ingoing and outgoing commodities the freight of every single group of commodities must, as far as possible, be calculated according to the actual costs, the deciding factor being the weight of every single article and the space it takes up, as for instance according to the stowage regulations of the customs. However, in fixing the expenses for freight it must be realized that much more is used for transport than has hitherto been recorded as actual navigation expenses, seeing that these must be supplemented by expenses such as payment for labour in loading and unloading, sea insurrance of vessels and commodities, interest paid on and amortization of the vessels, various expenses for warehouses, loss of interest etc., all of these costs, including the navigation expenses, being in the following termed costs of transport..."

Starting from the above-mentioned principles it is possible to distinguish between the individual groups of commodities according to their utility and necessity, so that for instance the additions within the groups of incoming commodities is greater on articles of luxury than on means of production (though the addition must always cover the freight); this only corresponds with the raising of the prices, which the State elsewhere effects by taxation.

On the other hand, the commercial members of the Committee were rather more doubtful as to the point of view adopted by the directors of the Royal Greenland Trade, viz. that a difference should be made within the Greenland products, so that the Greenlanders, particularly as regards sealskins, are paid essentially less than they would have been

[1]) i. e. Commodities to and from Greenland, respectively.

paid, if the rule recommended above were followed. These considerations are typical of the manner in which the discussion has been carried on by those who want to transfer the calculation principles of private competetive economic life to Greenland, without realizing that the structure of costs of private enterprise and that of the Royal Greenland Trade are essentially different.

The result of the price policy aimed at by the Committee must necessarily be that the prices, both in buying and selling, were to be fixed in such a manner that they would in Greenland fluctuate with the conjunctures of the market; for the products sold to the Greenlanders the fluctuations would be greater than elsewhere, owing to the high fixed costs (particularly resulting from transport), but because of their being so necessary from the point of view of consumption they will hardly be subject to very great fluctuations. For the commodities sold from Greenland the prices would be lower than elsewhere, in case the costs were to be paid, but the really important factor is that these commodities would be subject to many great changes, and a good deal of them would presumably have to be entirely abandoned during a period of depression. In case the economic conditions of Greenland should become so unstable, as would be the result of the private calculation method it would, as mentioned above, hardly be possible to carry out the cultural work in a satisfactory manner.

In opposition to the views of the committee of commercial experts it is natural to maintain that even an estimated distribution of the fixed costs would be more difficult to effect in the economy of Greenland than elsewhere. As is well known, a correct distribution of this kind cannot be made, and the only possible basis for discussion would be a relative valuation, which might form a support for a proper fixing of prices.

Also this must be doubted in cases like the present, and for two reasons. In the first place, the costs of the Greenland community, as emphasized in the preceding chapter, are in the main fixed, so that the picture of costs—the cultural tasks outweighing the profitableness— is essentially of the same structure as that for electricity works and railways. Secondly, and this is more decisive, if the dominance of the cultural tasks is abandoned, the costs are distributed over a very large number of fields, and the possibilities of the latter to beat a number of the individual grants contain so many elements of estimate and arbitrariness that an attempt to distribute and calculate the costs for the individual commodity cannot be supposed to eliminate the arbitrariness, except by a mere estimate, and in such a calculation it is in the main only possible to attempt to cover the element of arbitrariness so as not to be immediately obvious.

This also appears from the fact that there is in Greenland a very close connection between trade and economic life on one hand, and the administration and cultural work on the other, which fact prevents an actual distribution of the costs. If for instance we glance for a moment at the position of the manager of a settlement and try to find out how the expenses for wages, accomodation, offices etc. should be correctly distributed over his various tasks, either in his capacity as administrator or on the different institutions for which he works, the difficulties are immediately evident. As a result of the development which has taken place he cannot now, as he could a century ago, be regarded as a merchant, whose principal task it is to distribute the commodities sold and to see to the buying of the Greenland products from the population. This is expressed by the very change of the term of "trader" to that of manager, denoting an official office. His tasks are now largely characterized by social and cultural functions, as for instance the work imposed upon him in his capacity of "Sysselmand" (ɔ: chairman of the district council).

A rational attempt to distribute the costs must first aim at finding a criterion for the distribution of the various tasks performed by the manager, perhaps by analyzing the time spent on each. But even if it were possible to divide up his time in this manner, it would not be a point of real interest, seeing that his work, both as a trader and as a manager, must first and foremost consist in his being present, and how would it be possible to distribute, on a fairly rational and justifiable basis, this being at the disposal of the population and administration?

In the same manner as the work done by the manager is partly commercial and partly administrative, it may be maintained that the expenses to public health, church and schools are not only to be regarded in the light of a cultural, but also of an economic function. When the average age is lengthened by health measures, the productive period (number of working years) in proportion to the total life-time is lengthened, and this must necessarily be of the greatest possible importance for the population as a whole, not only socially but economically. This also applies to schooling, which on one hand is a humanitarian and a cultural function, and on the other of economic importance by increasing the efficiency of the population in carrying out their daily tasks. It is therefore difficult to imagine how a distribution along these lines can possibly be of any theoretical or practical value.

When regarding the expenses for navigation or telegraphic service, also these must be characterized as fixed costs. which cannot be distributed in a justifiable manner. If it is wished, whatever happens, to keep up the intercourse between Denmark and Greenland, there must necessarily be a number of fixed costs which cannot be distributed, and as

they are necessary both for the cultural intercourse and for the commercial enterprise, it would be quite arbitrary to fix a limit for the part of the navigation expenses relating to the administration and the cultural intercourse, and those which might reasonably be said to be trade costs.

But even as regards the part which might with good justice (or according to an estimate) be assigned to commercial enterprise, the distribution would nevertheless be quite arbitrary in relation to the various species of commodities. When for instance looking a little more closely at the schooners, which carry on the navigation between settlement and outposts, a number of elements of arbitrariness make themselves felt. The navigation of the outposts is partly an administrative (cultural) and partly a commercial task, and even if the former be disregarded, there will, for instance, be no rational basis for maintaining that the costs of navigation from settlement to outpost and back again should be distributed with equal amounts, when the two passages take the same time. Such a distribution could not even be made in the case of free competition, where freight rates in both directions may vary greatly, being determined by the demand for tonnage.

If, however, a certain amount of costs were imagined to be referred to the navigation from settlement to outpost, the distribution of the latter on the individual categories of commodities transported would imply a new element of considerable arbitrariness. Here the expenses might be distributed on the individual commodities, according to their weight or to the space taken up by them. This would, however, be unreasonable, when the articles of export have such a different value as they have in Greenland, inasmuch as the less valuable commodities in this manner presumably yield a deficit, though they might contribute to covering the fixed costs of the navigation. Should this lead to the conclusion that the result of such a proceeding must be to give up the enterprise yielding a deficit, this would be unacceptable according to ordinary economic principles, as long as it contributed, if ever so little, to cover the fixed costs of the Royal Greenland Trade and to the raising of the incomes of the Greenlanders. The only thing to be done would be to apply to the price policy the generally acknowledged principle relating to enterprises with large fixed costs, that is, to fix the additional payments according to what the individual categories of commodities can bear. A system of distribution like the one advocated by the Committee of 1906 would, in reality, only come to play a part in the case of an extended navigation, either by making use of a larger schooner or by considering an extension of the navigation beyond the normal period. In that case it would be necessary to apply the view generally adopted in the extension of some establishment; it then in reality be-

comes a marginal consideration (the marginal proceeds, greater than the marginal costs) as is common in economic theory.

It would thus not play any real part in the price policy of Greenland, if the fixed costs were distributed on the individual species of commodities; one must confine oneself to a general consideration, which can be used as a motive for a possible fresh investment of capital or fresh trade dispositions.

If in pursuance of the views set forth by the Committee of 1906 an attempt were nevertheless made to distribute the costs, the most reasonable way of doing this would be according to time. Many costs may naturally be referred to certain years; in other cases only a division by means of depreciations can be undertaken, with the same limited degree of correctness which is known from depreciations of permanent establishments. Thus it will be possible to carry out a price policy in such a manner that every year, to all intents and purposes, is made to balance independently of other periods of accounts.

Over against an economic policy of this kind it will, from the point of view of economic theory, be possible to maintain that there is very little motive for chosing the astronomic unity, the year, as the fundamental basis of dispositions regarding prices. Economically it will presumably be more to the point to carry on a price policy on the base of costs throughout a conjunctural period, perhaps even to take into account partly the structural change and partly the general cultural tasks which have formed the basis of the Danish policy in Greenland, and which are included in the present investigation as one of the assumptions to which a certain weight has been attached.

If the latter economic consideration is made the basis for the fixing of prices, it is a step in the direction of the economic policy, which has as a matter of fact been followed by the Danish Government in relation to Greenland, and in order fully to understand this policy it will be natural to regard the problems of the prices in their theoretical context, when the fundamental basis of the short- or long-run dispositions made is of a humanitarian or cultural nature.

B. The Theoretical Basis of the Humanitarian Price Policy.

The price policy followed by the public authorities presents two sets of elements; on one hand, the public authority is a monopolist and as such has a tendency to follow the same price policy as other monopolists; on the other, the public authority is characterized by its price policy being the welfare of all citizens, while the commercial result is of secondary importance. Whether the one or the other object in the individual case becomes of primary importance partly depends upon

the balance of political power, partly upon various ideologies and theories.

In Greenland we are brought face to face with a population living on the marginal line of human existence (cf. the fact that Greenland had been inhabited north of Angmagssalik, but that the population here was on the point of dying out, when the contact with the outer world was established), and it will perhaps be to the point, here more than anywhere else, to emphasize and justify a price policy, the chief aim of which is the maintenance of human subsistence. Starting from this point of view an attempt may be made to apply the following consideration: The ordinary equation for the economy of a citizen, his income and expenditure, may be expressed in the following manner:

$$m_1p_1 + m_2p_2 + \ldots m_sp_s = M_1P_1 + \ldots M_qP_q$$

where $m_1 \ldots m_s$ express the quantities of various kinds of commodities, which the citizens in question buy, and $p_1 \ldots p_s$ the purchase prices corresponding with the commodities, $M_1M_2 \ldots M_q$ the quantities he sells, and $P_1P_2 \ldots P_q$ the corresponding sale prices. The quantities $M_1 \ldots M_q$ not only comprise articles of consumption, but also of investment etc. He will now buy so many goods that the marginal utility of every applied monetary unit of his income is the same, and this also holds good of the incomes of the Greenlanders.

When, as in Greenland, it is a question of a closed community, the regulating authorities may influence the amount of the income as well as production and consumption through the price policy followed. If they wish to increase the consumption or to restrict a field of production in order to avoid excessive exploitation, the prices can be lowered and vice versa. Thus the regulating authority has the possibility of subordinating the economic dispositions to the fundamental cultural point of view, and this can, as will be mentioned later on, be done in various ways.

A regulation of this kind can not only be effected as price relations at the given moment, but also as price relations throughout a longer period, and there is no necessary connection between the Greenland prices and the prices of the world market. It is possible to assess the conjunctures and, if it is thought desirable, to give the population a higher standard of living than the economic and geographical possibilities actually permit.

When attempting a distribution of income between the periods, so that citizens derive the greatest profit from their incomes, an attempt must be made to transform the latter to utility value; in this manner a sum of utility is obtained which for the individual citizen corresponds with the total profit.

If it is further supposed that the marginal utility of the individual is a greatly increasing function in Greenland, where the incomes are nearer the minimum of subsistence than is the case in warmer and richer countries, it will be possible to obtain a maximum of marginal utility, when the incomes in each individual period are fairly equal.

It must be borne in mind that the manner of thought here described is not an expression of a comparison between different incomes for different individuals, but a varying period of income for the same individual, a comparison, which it must be possible to make when abstaining from drawing too far-reaching conclusions from it, inasmuch as not even the situation of the individual is the same at two different epochs.

But when conditions in Greenland must be estimated to be of such a nature that the supposition mentioned above applies to all persons individually, it must also be supposed to apply to the sum of them, even though, as already mentioned, there are very considerable divergences between the individuals themselves. Thus, for all individuals as individuals, and for the group in its entirety the utility presumably becomes greatest, when it is attempted to make the incomes at the individual periods homogeneous, that is, a social regulation is made, by which means the conjunctural fluctuations are avoided.

The great question must now be how and to what extent the possibilities of income for the individual within several periods may be made entirely or in part homogeneous. This cannot be done by eliminating the fluctuations called forth by natural conditions, but fundamentally (that is, if it were possible to alter the conjunctural development of Greenland for the duration of a period) there is nothing to prevent the fixing of the individual prices according to the average of that period. In this manner an economic balance will be attained in the most important respects, and an essentially greater possibility for the covering of the requirements, which are of the greatest utility. The condition of carrying out of this principle must be, whether it is possible to form an opinion on the conjunctural movement and the development of prices.

If further attempting to maximize the income one might start by assuming that all citizens have the same possibilities in this respect. In that case a problem arises: the dependency of the amount of production varying differently within the individual fields. There are some fields, where the stock is fairly unchanged, whether the production is great or small, whereas in others the stock largely depends upon the amount of the production. It may here be assumed that there is a desire for keeping the stock constant, and this in its turn presupposes—all other factors of the production being constant—that the level of

prices is determined according to this effort irrespective of the costs of production.

The conditions put forward as to homogeneous possibilities of income, however, do not hold good in the Greenland community, the geographical differences along the coast being too great for that. If both purchase and sale prices are the same all over Greenland, the cultural aim, viz. to make all Greenlanders equal from the point of view of economy and work, will not be fulfilled. The Greenlanders, who live in the more favoured regions, have the possibility of earning more than those, who live in the less favoured, and removals are difficult to carry out and furthermore do not give the Greenlanders the same economic possibilities.

On the other hand, it will not be difficult to carry out the conditions here put forward, in case different prices are used for each individual. This manner of proceeding—where the special natural conditions are also taken into consideration—will, however, not as a rule be possible, because the individual producers cannot be kept so strictly apart that special prices may apply for each of them or only for each dwelling place.

As this is generally not the case, it becomes necessary to reckon with a certain difference in the incomes of the average citizens, and the consequent difficulty may now be solved in various ways. The prices for the different possibilities may be regulated in such a manner that the sum of the distances from the average become the minimum, or a special valuation-coefficient may be assigned to the individual deviation.

However, also another method can be used, viz. to assign a special valuation-coefficient to the individual prices, according as they are of more or less importance in the economy of the Greenlanders. If there is one product which in the above-mentioned approximated system can be considered a gain for the total result, a relatively high price may be fixed for it, always presupposing that this does not interfere with the respect generally paid to the keeping up of the stock. Another product which gives a corresponding deficit can then get a lower price, again presupposing that the production of it is being limited by this means. The improvement of the total economic result thus obtained must be co-related with the inequality of the increased income (the amount of work done by the individual being the same). Whether a disposition of this kind can be taken and then to what extent, must in the last resort be a question of valuation and lies outside the purely economic discussions.

When turning from expenditure to income it must, according to what has been emphasized above, be a presupposition of the cultural work that the fixed costs for the maintenance of life can be covered,

that is, there is a further equation of existence for the average citizen, the form of which is the following: $m_1 k_1 + m_2 k_2 + \ldots\ldots = K$ in which $k_1 k_2$ is the calorie value per unit of quantity of the individual commodities sold at the store, and K is the total calorie requirement of the commodities, which the Greenlanders are obliged to buy in order to attain the necessary covering of calories. It will always be the first concern of the individual citizen to attempt to keep up the balance of this equation, and it thus also becomes a definite expression of his functions of demand. For an average producer like the Greenlander it is not always possible to cover the above-mentioned requirements, and there is consequently a possibility of the regulating factor assuming a lasting effective importance.

Under such conditions the total expenditure will be the same but with an increased covering of calories, in case a low price is fixed for the commodities (bought at the store) with the greatest percentage of calories per kr. and a high one for the corresponding articles more in the character of luxuries. Thus a social factor of valuation is introduced into the policy of prices, but in the knowledge of the quantity of calories the latter also contains a factor, which it will be possible to calculate in the individual case.

Such a factor of valuation need, however, not be restricted to the absolutely necessary, or to such conditions where the factors of the community agree as to which is the most serviceable. Where the price-regulating authority and the individual citizen have divergent ideas as to what is useful for him, it can be much more widely applied and is not necessarily limited to articles of food, but may play a part as to clothing, housing, working implements etc.

A very reasonable application may be found for this idea, if the quantity of commodities m_2 is of a very lasting character. The citizen will project back the future advantage to the moment when the decision was taken; that which decides the dispositions in the choice of purchases is, therefore, the intensity with which the projection takes place.

When the individual member of the Greenland community values the immediate satisfaction far more highly than the future one, whereas the Administration rather weighs those benefits against each other in another way, it will be possible to bring about a balance in the consumption according to the point of view of the superior authority, by raising the prices of the articles of immediate consumption and lowering those of future ones, and in that manner to induce the citizen to buy the very quantity, which is serviceable from the point of view of the price-regulating authority.

If instead of two there is a larger number of commodities, the prices of which are to be fixed, the principle is the same. There will,

however, be a series of commodities (e. g. fats and margarine) where the possibilities of mutual substitution are so great that a regulation of the individual prices will have a pronounced effect on the related characters of commodities; thus the intended regulation of consumption is restricted in its effect, and under such conditions it will be natural to collect the individual commodities in groups with a common, or at any rate a strongly related mutual valuation-coefficient.

Even though such a stressing of the valuation-coefficient affects the various groups of articles of consumption in their mutual relation, this is still more so when comparing commodities of consumption with producers' commodities (implements). The regulating agency may attach special weight to the fact that in coming years an increasing quantity of means of production, requiring a greater outlay of capital, will be at the disposal of the population (e. g. motor boats and fishing tackle for the Greenland fisheries). If the Greenlanders do not spontaneously understand this, it will be possible to influence them in the direction of providing more and possibly more expensive means of production through the fixing of the price relations. In that way the regulating authority of the moment may further a future production and thus the future incomes of the Greenlanders.

The assumption has hitherto been that the incomes reckoned with were determined as a type of a coming conjunctural period and thus constituted an average within the latter. This assumption can however be changed, if a community regulated in this fashion receives a grant or a deduction from another community, either from the point of view of old-fashioned, purely mercantile colonial policy or according to more modern ideas, which favour the yielding of a grant with the object of attaining social-political progress.

Furthermore, such a system, with calculatory considerations forming the basis of the price policy, must assume that these valuations do not always agree with the experiences made, and that there are certain deviations, which can be determined as deviations in costs from the amount estimated, after the dispositions have been undertaken. These deviations may, in their turn, become an element in the coming price dispositions, and in the accounts this may take the form of a reserve fund, which may be both positive and negative. Thus a quite steady level of prices cannot be expected, but only a development with greatly subdued fluctuations.

As time goes on, there will also be a possibility of gradually lessening these attempts to subdue the fluctuation, so that for instance the price level of Greenland more nearly approximates the ordinary movement of the economic life in other countries. The object of such a development of the price policy must be that the population of Greenland

should aim at becoming a link in the world market, in the same manner as all other people are. This view it will be too expensive and too difficult to carry out within a short period, but the idea is that the development of the price policy and the cultural influence should in that case be co-ordinated, and before this can be worked out in details, a time-determined valuation of the cultural and commercial views must be undertaken. In the course of time the Administration of Greenland has frequently been reproached with attaching too little weight to the furthering of an economic liberation through freer commercial intercourse and an alteriation of special phases of the monopoly system.

CHAPTER X

THE PRICE POLICY FOLLOWED IN GREENLAND

A. Prices of Native Products.

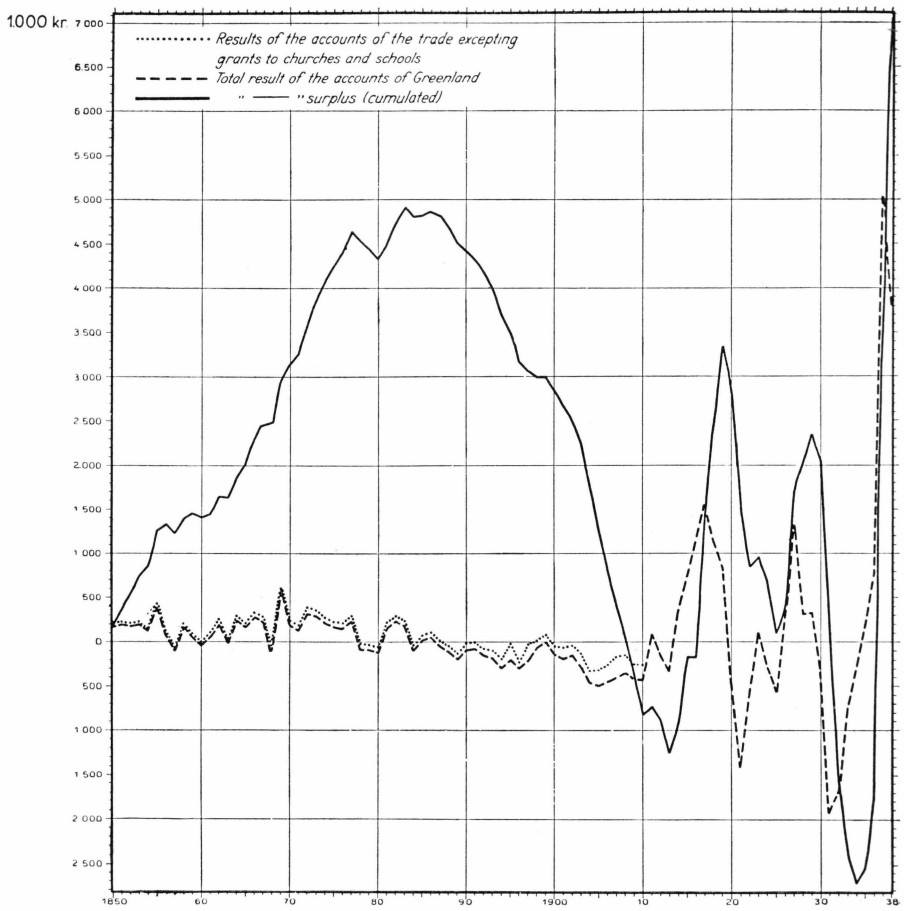
In the preceding an account has been given of the fundamental principles underlying the price policy followed by the leading Government officials of Greenland, and it has also been maintained that such a policy cannot be laid down accurately, as long as the future development of prices is unknown. Here it can only be a question of an estimate, which fact has not always been fully realized by those making the dispositions.

A present-day investigation, however, shows that the economy of Greenland throughout a longer period has produced a balance in the Danish public accounts. In the following diagram (L) the final figures have been given, both the direct and the cumulated ones.

It appears from this diagram that the yearly profit has been greatly fluctuating, and that the cumulated curve has first been rising and then falling until the first World War. In the period after 1914 the fluctuations became more violent with very high incomes through the actual years of the War and a considerable fall during the following crisis, while balance has only been obtained through the extraordinarily high cryolite proceeds of later years. A very essential cause of these fluctuations is the fact that the prices paid to the Greenlanders have not been determined by the world market, but according to the standard of income, which the authorities found reasonable for a Greenlander; this will therefore be mentioned in detail, and an attempt will be made to justify it in the light of actual conditions.

In the 18th century money was not used as a normal circulating medium in the relation between the Royal Greenland Trade and the Greenlanders. The only function of money was as a standard unit, and as such it was of a certain importance, the relation between those

Table L. The result of Greenland in the Danish public accounts 1850—1938.



(Reproduced from Summary of Statistical Information regarding Greenland Diagram CXVI).

commodities traded in and those traded out[1]) being calculated in the Danish monetary unit. In an older period this as a matter of fact played no practical part, as the standard unit used and the normal means of payment were a barrel of blubber. In the course of years the value of money as a circulating medium was realized, and at the beginning of

[1]) "Trade in" and "trade out", literal translations of the Danish "indhandle" and "udhandle", which designate the special form of trade intercourse existing between the natives and the stores and established by the Administration of Greenland, the natives "trading in" their hunting products at a uniform price, and the store "trading out" imported commodities, for which the natives pay a price fixed every year by the Administration.

the 19th century special Greenland notes were introduced with a very small value; the latter were gradually used as corresponding with the notes in circulation in other countries.

As far as an older period is concerned, it may thus be very largely maintained that the purchasing power of the Greenlanders was determined by the price of a barrel of blubber. Through a long period, this was fixed at two rigsdaler, and for this amount they could buy what they thought would be most useful for them of the various commodities to be found at the store.

When in the eighteen-thirties the interest in a higher civilization for the Greenlanders began to make itself strongly felt, it was realized in many different quarters that there must be a reasonable proportion between their material and their spiritual culture. From a practical point of view this means that the raising of the price of blubber was regarded as the condition of a cultural development. Influenced by the lively discussions in the 1835 Commission the price of blubber was in the following year raised to 3 rigsdaler, in 1840 further to $3^1/_3$ rigsdaler and in 1844 to 4 rigsdaler, and at the same time the prices of the other Greenland products traded in (seal skins, fox skins etc.) were raised in a corresponding degree.

A principal cause of this rise was the desire to provide better accommodations for the Greenlanders, and the moving spirit in these efforts was GRAAH, at that time one of the directors of the Royal Greenland Trade. He maintained that the state of the Greenland dwellings contributed to the slow increase of the population, and he adds in this context:[1] "In the spring the roofs often threaten to fall in and force the population to move into tents, while it is perhaps still freezing hard; in the autumn the houses are frequently not repaired, before snow and cold set in. This is undoubtedly the chief cause of the epidemic diseases which nearly every year ravage Greenland. Besides, where 30—40 people live together in a single dark, stinking house, damp with urine and decomposed articles of food, the health of the inmates is bound to suffer. The poor quality of the Greenland houses is to a large extent the fault of the inhabitants themselves, inasmuch as they build their houses very carelessly and sell their last drop of blubber to the trader in the hope of good hunting the following day, though they must know from experience, how wretched their earth huts are, and the suffering they subject themselves to, when in want of this article, the most important of all in a Greenland household, and without which they neither have light nor heat, neither dry clothes nor tolerable meals. But the reason is also in part to be looked for in the poverty of the population, which is caused by

[1] M. o. G., Bd. 145, Nr. 1, p. 326.

trading difficulties. If like the Icelander the Greenlander could panel his earth hut and provide it with proper windows and a rain-proof roof, much would be won; for then he would not take pleasure in changing his dwelling so often, as he does now, and he would consequently use more care in the building, which work at present only devolves upon the women. These are the changes which, in the first place, I should wish for in the Greenland houses, as they might thus become lighter and airier, less damp and cold, in other words cosier and more healthy abodes, which might contribute towards giving the Greenlanders more taste for order and cleanliness, at the same time that their economic conditions might be improved by the raising of the prices of the native products".

The extent to which it has been possible to improve the standard of housing, is a question which will be dealt with in the following chapter. Here mention is only to be made of the fact that, after the rise of prices in the period 1836—44, a lengthy period of stagnation set in as regards the prices paid for the commodities sold by the Greenlanders. When in the eighteen-fifties the question of an improvement in the general standard of living became of actual importance, what was aimed at was not so much an improvement of the conditions of the individual Greenlander but of those of the population as a whole. It was endeavoured to give them a freer and more independent position through the establishment of boards of guardians, in which manner the amount covering the rise in the trading-in prices should not only benefit the individual Greenlander but the whole of the population, the guardians acting as intermediaries. Thus the policy of prices was made a social factor and contributed to further the community and cooperation between the Greenlanders of a district.

The next important rise in the trading-in price of the predominant article, i. e. blubber, took place during the last thirty years of the century. The motive of this was again the wish to increase the incomes of the Greenlanders, as the steadily increasing cultural intercourse and interaction between Greenland and Denmark made it desirable that the ordinary Greenland family should have a larger sum at their disposal for purchases at the store. However, the ordinary basis of an increase of the purchase prices, viz. the improving of the market did not come about. During the whole of the latter part of the 19th and the beginning of the 20th century the price of blubber on the world market was tending to fall, but it was against the wishes of the administration that this development should cause an economic retrogression for the Greenlanders, the economic conditions and the cultural influence being estimated as very closely interrelated.

As appears from diagram L, which shows the place occupied by Greenland in the Danish public accounts, the falling prices of blubber

caused the surplus which Greenland had hitherto yielded to be changed into a deficit, without in any way influencing the purchasing possibilities of the Greenlanders themselves. The lowered increase of the population which might have been expected under a freer economic system, and which in arctic regions not infrequently is connected with difficulties as to sealing and the sale of blubber did not set in in Greenland. The population in all regions of Greenland increases gradually and in a healthy manner, which has a natural connection with the more stable economic conditions.

The same fundamental idea made itself felt during the World War 1914—18. Owing to the extraordinary demand on the Danish market, which was partly cut off from the outer world, the price of blubber rose very much, and there suddenly proved to be a possibility, either of obtaining great profit for the Exchequer or of improving the standard of living of the population. The fundamental thought described above would, if continued, lead to the wish of keeping Greenland outside the extraordinary war conjunctures, and a natural consequence of this would be that the Danish Government did not let the succeeding years of depression exercise any influence on the economy of Greenland, which in its turn resulted in a considerable deficit on the Greenland accounts.

In the years between the wars the prices of native products on the world market were subject to considerable fluctuations, and this caused very great variations in the accounts for Greenland. These movements in the prices of Greenland products were chiefly in a downward direction, and the fairly adequate balance demonstrated in the diagram was only attained through greatly increasing revenues from the concessioned cryolite mining and trading company.

It will be of interest in this connection to compare the violent fluctuation of the Greenland accounts—characterized as they are by the development of prices on the world market—with the incomes of the Greenlanders within the same period. In order to form a correct estimate of conditions it will be necessary, not only to calculate the incomes of the Greenlanders from the sale of native products to the store, but also the greatly increasing incomes which the population of Greenland have had in the present century as permanent employees or as labourers engaged in various tasks, also under the Administration (the institutions). The many tasks which have been undertaken in the course of years have resulted in a considerable amount of work, for which it has been possible to use the native population. A number of calculations have been made as to the incomes of the Greenlanders during the present century, and the results for the main settlements Julianehaab, Christianshaab, Jakobshavn, Ritenbenk and East Greenland are given in the following tables (LI—LV).

Table LI. The yearly cash incomes of the Greenlanders in 5-year periods in the Julianehaab district, 1899/1900—1938/39.

Financial year	Salaries	Hired work	Trading-in	Other income	In all	per family à 5 persons
	kr.	kr.	kr.	kr.	kr.	kr.
1899/1900.....	19,961	4,511	29,225	7,156	60,853	118
1904/05.....	29,015	5,871	41,423	8,068	84,379	149
1909/10.....	30,475	10,577	40,360	10,812	92,224	157
1914/15.....	36,071	21,363	51,356	11,340	120,130	196
1919/20.....	54,599	21,659	70,093	13,362	159,713	251
1924/25.....	78,132	59,984	101,097	21,661	260,874	385
1929/30.....	82,213	93,409	201,647	42,750	420,019	590
1934/35.....	97,808	86,321	181,449	54,434	420,012	552
1938/39.....	120,484	89,411	103,240	54,014	367,149	490

(From Summary of Statistical Information regarding Greenland, table 444).

Table LII. The yearly cash incomes of the Greenlanders in the Christianshaab district in 5-year periods, 1899/1900—1938/39.

Yearly average	Salaries	Hired work	Trading-in	Other income	In all	per family à 5 persons
	kr.	kr.	kr.	kr.	kr.	kr.
1899/1900—1904/05 ..	6,676	1,312	9,198	1,715	18,901	190
1905/06—1909/10	8,145	1,801	11,129	3,118	24,193	242
1910/11—1914/15	7,624	2,318	12,638	2,085	24,665	235
1915/16—1919/20	9,675	3,026	9,717	1,790	24,208	239
1920/21—1924/25	12,371	5,470	17,513	3,163	38,517	363
1925/26—1929/30	14,978	11,709	34,772	4,593	66,052	555
1930/31—1934/35	18,802	13,212	32,353	7,313	71,680	562
1935/36—1938/39	24,425	15,672	29,337	7,443	76,877	610

(From Summary of Statistical Information regarding Greenland, table 445).

Table LIII. The yearly cash incomes of the Greenlanders in the Jakobshavn district in 5-year periods, 1899/1900—1938/39.

Yearly average	Salaries	Hired work	Trading-in	Other income	In all	per family à 5 persons
	kr.	kr.	kr.	kr.	kr.	kr.
1899/1900—1904/05 ..	5,172	1,532	14,562	3,271	24,537	199
1905/06—1909/10	6,396	2,135	18,323	3,105	29,959	256
1910/11—1914/15	6,999	2,549	18,974	2,898	31,420	269
1915/16—1919/20	8,953	6,054	18,285	3,243	36,535	297
1920/21—1924/25	16,996	13,435	30,366	4,773	65,569	541
1925/26—1929/30	22,151	22,891	61,655	9,922	116,619	863
1930/31—1934/35	24,955	40,314	56,769	12,685	134,723	860
1935/36—1938/39	30,326	36,585	49,441	10,599	126,950	806

(From Summary of Statistical Information regarding Greenland, table 446).

Table LIV. The yearly cash incomes of the Greenlanders in the Ritenbenk district in 5-year periods, 1899/1900—1938/39.

Yearly average	Salaries	Hired work	Trading-in	Other income	In all	per family à 5 persons
	kr.	kr.	kr.	kr.	kr.	kr.
1899/1900—1904/05 ..	6,435	2,035	9,278	2,043	19,791	222
1905/06—1909/10	7,657	2,986	10,431	2,001	23,075	221
1910/11—1914/15	7,232	2,836	11,171	2,286	23,525	205
1915/16—1919/20	11,200	3,039	9,613	2,245	26,097	216
1920/21—1924/25	13,241	7,259	11,994	2,313	34,807	301
1925/26—1929/30	15,518	9,433	16,118	2,833	43,902	426
1930/31—1934/35	16,087	11,211	19,433	6,425	53,156	532
1935/36—1938/39	18,210	9,680	16,009	7,514	51,413	520

(From Summary of Statistical Information regarding Greenland, table 447).

Table LV. The yearly cash incomes of the East Greenlanders in 5-year period, 1899/1900—1938/39.

Yearly average	Salaries	Hired work	Trading-in	In all	per family à 5 persons
	kr.	kr.	kr.	kr.	kr.
1899/1900—1904/05.....	3,204	1,442	164	4,810	58
1905/06—1909/10.....	4,001	1,689	561	6,251	57
1910/11—1914/15.....	5,382	1,584	840	7,806	68
1915/16—1919/20.....	4,826	3,257	1,556	9,639	74
1920/21—1924/25.....	7,785	4,633	2,490	14,908	106
1925/26—1929/30.....	15.202	10.195	4.416	29,813	188
1930/31—1934/35.....	20,946	14,415	4,190	39,551	207
1935/36—1938/39.....	24,979	16,066	6,094	47,339	228

(From Summary of Statistical Information regarding Greenland, table 448).

These tables all show a gradual and constant development. The income has risen from one year to another, somewhat varying in the different areas, but showing a pronounced homogeneity contrast with the total economic result for Greenland as viewed in relation to the State accounts and so also to the world market. The difference between the various areas is essentially due to divergences in natural conditions. As a general result it must be possible to say that the Greenlanders have had a gradually increasing cash income (as contrasted with the fluctuations of the world market).

To this it might perhaps be objected that the income, instead of the cash amount, should express the real income. When used for this purpose the cash income per family must be calculated according to the Greenland price index, the result of which is shown in the following table.

Table LVI. Cash income in Greenland re-calculated according to the price index.

Financial year	Julianehaab	Yearly average	Christianshaab	Jakobshavn	Ritenbenk	East Greenland	
						Angmagssalik	Scoresbysund
	per fam. à 5 pers.		per fam. à 5 pers.	per fam. à 5 pers.	per fam. à 5 pers.	per fam. à 5 pers.	per fam. à 5 pers.
	kr.		kr.	kr.	kr.	kr.	kr.
1899/1900 ...	149	1899/1900—1904/05	241	253	339	73	..
1904/05	179	1905/06—1909/10..	295	312	270	70	..
1909/10	190	1910/11—1914/15..	287	362	250	83	..
1914/15	235	1915/16—1919/20..	281	349	254	87	..
1919/20	248	1920/21—1924/25..	297	523	291	92	..
1924/25	318	1925/26—1929/30..	491	764	377	104	557
1929/30	574	1930/31—1934/35..	639	977	605	165	701
1934/35	642	1935/36—1938/39..	656	867	559	171	597
1938/39	463						

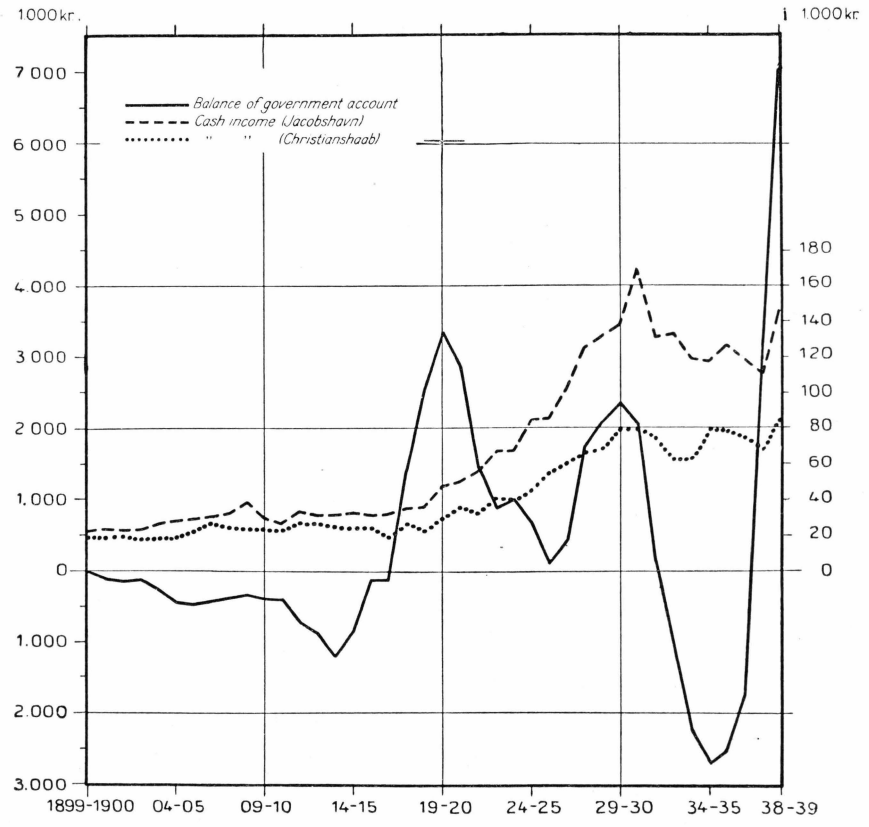
(From Summary of Statistical Information regarding Greenland, table 449).

This table in the main shows the same picture as the preceding summaries, and in order to elucidate the importance of this, a comparison has been made in diagram LVII between the cash incomes of the Greenlanders in a more prosperous and a poor settlement, respectively.

This diagram clearly shows the development which has taken place. Owing to the fluctuations of the world market, the social economy of Greenland in its entirety would be subject to violent conjunctural changes. These have been accumulated by the monopoly and have not been permitted to make themselves felt in Greenland. Irrespective of the great fluctuations of the market the Greenlanders have been able, year after year, to improve their income somewhat, both when they have as a whole had comparatively good incomes (war conjunctures) and in the years when the prices on the world market have been extremely low. According to the views of the Administration this has been the soundest basis of the cultural development, which on the part of Denmark has been established as the central aim of the colonisatory work in Greenland, and to which consequently also the policy of prices has been subordinated.

In order to understand this gradual development of the living conditions of the Greenlanders it is, however, necessary to call attention to the fact that their real income is not only conditioned by the cash amount at their disposal and the purchasing power of this money, but also by the very considerable real incomes in the shape of their own daily consumption of meat and fish, which are the direct profit of hunting and fishing, and which therefore have not been entered into the statistics

Diagram LVII. Comparison between the cash incomes of the Greenlanders and the balances of the Government accounts 1899/1900—1938/39.



(From Summary of Statistical Information regarding Greenland Diagram CXVIII.)

based upon the turn-over of the store. It is here chiefly a question of the products of sealing, but it is a difficult—theoretically insoluble—task to try to compute the real income by a summation of cash income and meat production etc.

A certain approximation may be attempted by re-calculating the natural products to monetary units by reckoning either with the factual prices within the period investigated (1899—1939), or with the approximate prices which in 1920 were current in the district in question. By an investigation for the Julianehaab main district the price of seal meat in 1925 was fixed at 25 öre per kg., that of seal blubber at 12 öre, of shark and cod liver at 10 öre and of birds' meat at 15 öre pr. kg. The quantities calculated have been described in detail in the special

Table LVIII. Re-calculation table for

Year	Seal meat	Whale meat	Seal skins				Seal blubber	Shark and cod-liver
			large		smaller	speck-led		
			bladder-nose	other kinds				
	kg	kg	no.	no.	no.	no.	kg	kg
1899/1900	20	20	90	78	54	500	$9^3/_5$	$7^1/_5$
1904/05	20	20	90	78	54	500	$9^3/_5$	$7^1/_5$
1909/10	20	20	90	78	54	500	$9^3/_5$	$7^1/_5$
1914/15	20	20	90	78	54	500	$9^3/_5$	$7^1/_5$
1919/20	25	20	120	100	75	1,000	12	10
1924/25	30	20	240	180	120	1,500	18	15
1929/30	40	20	240	180	120	2,000	22	12
1934/35	40	20	360	300	240	2,000	20	10
1938/39	40	20	360	300	240	2,000	22	11

(From M. o. G., Bd.

Table LIX. Estimated value of consumption of natural

Year	Seal meat	Whale meat	Birds' meat	Other meat, bear meat, beef and lambs, meat	Milk	Fish	Berries
	kr.	kr.	kr.	kr.	kr.	kr.	kr.
1899/1900	129,253	2,096	4,674	1,380	1,000	31,440	3,196
1904/05	161,888	2,298	6,778	2,460	1,000	34,476	3,505
1909/10	125,483	2,367	5,602	2,145	1,000	35,508	3,610
1914/15	164,439	2,485	12,541	2,145	1,000	37,272	3,789
1919/20	155,989	2,577	10,545	2,070	1,200	48,330	3,930
1924/25	122,673	16,200	11,425	2,475	1,200	61,542	4,171
1929/30	75,894	43,200	15,134	1,975	1,500	75,264	6,559
1934/35	72,000	37,800	20,873	2,975	2,000	69,354	7,051
1938/39	140,000	0	42,468	4,025	2,000	68,652	6,980

(From M. o. G., Bd.

article[1]), so no further commentaries will be set forth here, and the total result will only be given in the tables LVIII—LXI.

A calculation such as described in these tables naturally contains considerable elements of uncertainty, seeing that there is much by way of estimate both in the quantity and the prices of natural products. But when keeping this before us, it will be possible to conclude that the real income of the Greenland family, irrespective of the violent economical fluctuations outside Greenland, has been gradually

[1]) M. o. G., Bd. 131, Nr. 7.

the consumption of natural products in öre.

Carrion blubber	Bear meat	Beef	Milk	Cow hides	Calf skins	Sheep and lambs	Birds' meat	Birds' skins	Fish of all kinds	Berries	Sewing thread
kg	kg	kg	kg	no.	no.	no.	kg	no.	kg	kg	kg
4⁴/₅	30	40	10	3,340	300	..	12	5	4	10	200
4⁴/₅	30	40	10	3,340	300	..	12	5	4	10	200
4⁴/₅	30	40	10	3,340	300	..	12	5	4	10	200
4⁴/₅	30	40	10	3,340	300	..	12	5	4	10	200
6	35	50	12	3,340	300	..	15	6	5	10	200
6	50	50	12	3,340	300	..	15	6	6	10	200
6	50	75	15	3,340	300	1,000	20	8	7	15	300
5	50	75	20	3,340	300	1,000	30	8	6	15	300
5	50	75	20	3,340	300	1,000	30	8	6	15	300

131, Nr. 7, table 15).

products, calculated from the prices given above.

Seal skins		Speckled seal skins	Seal blubber	Shark and cod-liver	Carrion blubber	Diverse bird skins, cow hides etc.	Green-land fuel	In all	Number of families à 5 persons	Proceeds of natural products per fam.
large	smaller									
kr.	kr.	kr.	kr.	kr.	kr.	kr.	kr.	kr.	kr.	kr.
4,969	3,218	500	13,972	216	0	1,119	7,940	204,973	524	391
5,730	4,355	500	15,667	216	0	1,183	8,960	249,016	575	433
5,129	2,836	500	15,585	216	0	1,194	9,800	210,975	592	356
5,566	5,345	500	18,950	4,197	0	1,240	10,520	269,989	621	435
7,025	5,479	1,000	22,980	6,047	0	1,420	11,420	280,012	644	435
8,467	6,030	1,500	27,517	9,625	300	957	11,860	285,942	684	418
4,179	2,869	2,000	19,435	8,072	600	1,064	12,340	270,085	717	377
2,391	11,462	2,000	12,956	7,332	500	1,079	14,040	263,813	770	343
4,293	15,034	2,000	25,130	7,865	0	1,079	13,480	333,006	763	436

131, Nr. 7, table 16).

increasing with small variations, partly as a result of natural conditions, partly because the fluctuations of the world market have been permitted to make themselves felt in Greenland, though in a very subdued form.

However, I do not consider it in any way advisable to make comparisons between the incomes of the Greenland population and the incomes of a corresponding group of people elsewhere. On one hand, the purchasing power of money varies far less in Greenland, on the other—and this I consider far more decisive—the price relations have been quite different from those obtaining in most other parts

Table LX. Income per family in the Julianehaab district 1899/1900—1938/39, calculated from the Greenland prices.

Year	Number of families à 5 persons	Proceeds of natural products	Income from trading	Other cash income	Total income
		kr.	kr.	kr.	kr.
1899/1900	524	391	56	62	509
1904/05	575	433	72	77	582
1909/10	592	356	68	91	515
1914/15	621	435	83	113	631
1919/20	644	435	109	142	686
1924/25	684	418	148	237	803
1929/30	717	377	281	309	967
1934/35	770	343	236	316	895
1938/39	763	436	136	354	926

(From M. o. G., Bd. 131, Nr. 7, table 18).

Table LXI. The real income of the Greenland family 1899/1900—1938/39.

Year	Cash income according to price index	Income in kind according to price in 1920	Total
	kr.	kr.	kr.
1899/1900	156	484	640
1904/05	181	537	718
1909/10	194	440	634
1914/15	238	539	777
1919/20	251	435	686
1924/25	321	344	665
1929/30	576	278	864
1934/35	651	254	905
1938/39	471	285	756

(From M. o. G., Bd. 131, Nr. 7, table 20).

of the world. Thus it may be adduced that about 1920 a kg. seal meat in the Julianehaab district cost 25 öre, whereas f. inst. a kg. sugar at the same time cost 60 öre and a kg. rye flour 20 öre, and this example might be supplemented by many others. Under these conditions I do not think it advisable to attempt a comparison between the level of prices in Greenland and those elsewhere, and this also must apply to the income.

Another method might also be used in the investigation of the real incomes of the Greenlanders, that is, to begin by examining the amount to which the food requirements (re-calculated in calories) are

covered by the natural production, and how much must be covered by the store; in the same manner it may be examined, how much of the clothing of the population is covered by natural products, and how much is left to be covered through purchases at the store. The chief thing would then be to satisfy the demand which was not covered by natural products, in direct relation to the rising cash incomes, followed by an investigation as to whether the population had become more prosperous or perhaps relatively poorer through the change.

This method must, however, be considered problematical because of the many and very considerable elements of uncertainty, which necessarily make themselves felt in such a calculation.

As the need of commodities from the store has increased greatly in the present century, in consequence of the stagnating or retrograding natural production and the quickly increasing population, there can be no doubt that the factual rise of the real income has not been so great as the rise of the cash income, and this will undoubtedly also be the case when the cash income is re-calculated according to the Greenland price index. Part of the change which results from the transition to purchasing at the store and the increased dependency upon the latter, it will in various quarters not be considered correct to characterize as progress and development. In the main we must confine ourselves to stating that a change in the consumption has taken place, but whether the individual observer is inclined to characterize this as progress must depend upon factors of valuation, which are rather of a political than of an economic character.

B. Prices of Imported Commodities.

The prices demanded at the Greenland stores have since 1782 been fixed for one or more years at a time, the so-called general price rate. When once a price has been fixed for a period, it remains unchanged (or did so until the second World War) throughout the period and at all Greenland stores. Normally the prices are fixed in the course of the summer, and in the autumn they are sent up to Greenland under sealed covers, which are opened under control at the beginning of the new financial year and remain unchanged, at any rate for the whole of that period.

In former times it often happened that the rate remained unchanged for a 5-year period, the motive presumably being that smaller fluctuations on the market were of no importance in the economy of Greenland. In a single case a price has remained unchanged for fifteen years (1904—19), but this was for quite special reasons. When in accordance with the prevailing practice it should have been changed in 1909, a distinc-

tion between the Royal Greenland Trade and the Administration had been effected by the Act of 1908, and in the following years negotiations were going on as to how the provisions of this act were to be carried out in detail, so that trading in Greenland was made to follow the same lines as elsewhere, i. a. by the prices in Greenland being made to correspond with the purchase prices in Copenhagen, plus costs of transport etc. Before a new policy of prices had been finally established, the Act of 1908 was replaced by that of 1912, after which trade and administration were again put under the same direction. Before the new directions had carried out a new set of prices, the War 1914—18 broke out, and the purchase prices on the world market rose considerably. The Government then decided that, from the point of view of economy, Greenland should be kept as much as possible outside the War, and that the pre-war prices should remain unchanged for the whole of its duration etc.

After the end of the War it was decided that the prices in Greenland should by slow stages be raised to the level of the world market, and not until about 1924 these prices can be regarded as having again been fixed according to the Danish purchase prices of the Royal Greenland Trade, with certain additions.

The additions to purchase prices have never been fixed on the basis of an attempt to distribute the costs. By the introduction of the fixed prices in 1782 it was resolved to divide the imported commodities into three categories: those most needed, those less necessary and those which, in relation to the Greenlanders, might be characterized as luxuries. The purchase prices for the commodities of these three groups were given a gradual addition, smallest for the first and greatest for the last of these groups. Even though no calculation of costs has as yet been attempted, any more than a distribution of the actual kinds of commodities, it can be estimated that none of these groups have been changed with their average costs, so that the whole of the profit, in the years when there was a profit, has been taken from the difference between the trading-in prices and the prices which might be obtained by the sale in Copenhagen.

The justification of such a price policy has not merely been the difficulty attached to or the impossibility of distributing the fixed costs, for then it would have been most natural to use a more homogeneous addition for all groups of commodities, possibly rising with the increasing importance of the fixed costs.

An essentially more correct justification of the method employed has undoubtedly been the factor of valuation frequently mentioned in recent theoretical economy, according to which the public authorities by their price policy pay special attention to the degree of utility, which in their opinion must be ascribed to individual fields of consumption.

For Greenland no differentiation of prices has ever been carried out for the individual purchasers any more than prices varying from one district to another. On the other hand, the whole of the Greenland price system rests upon a valuation of the utility of the various categories of commodities throughout Greenland. This means, in other words, that by the public price policy followed the consumption of the Greenlanders has shifted from groups of commodities, which were considered less needed, to such as were estimated more necessary.

In exceptional cases the prices in Greenland have even been fixed considerably below the costs of production, as the development of a certain requirement was so desirable that it was considered necessary to fix a price determined by what the authorities thought the Greenlanders were able to pay, when more than a century ago it was considered desirable that the population of Greenland should abandon the original earth and peat huts in favour of wooden houses[1]).

The wooden houses sent up in 1836 were calculated to cost the Administration a purchase price of 266 rigsdaler per house, and with a smaller change in the following year 250 rigsdaler. The freight per house was calculated at half the price or 120 rigsdaler for the four commercial shipments, as the material could be stowed on deck. Irrespective of the fact that the 370 rigsdaler did not comprise any part of the ordinary costs of the Royal Greenland Trade, it was thought that a Greenland family could not pay such a price, and that the introduction of the houses could not be effected, if the prices were put higher than the value of 16 barrels of blubber, which was $3^1/_2$ rigsdaler per barrel at the time when the above-mentioned calculatory considerations were taking place, the price of the house being then fixed at 56 rigsdaler. In a similar manner the price of a Greenland stove, for which the Royal Greenland Trade paid 45 rigsdaler, was fixed as low as $10^1/_2$ rigsdaler.

In spite of these low prices the population of Greenland did not take the desired interest in the houses and the stoves, as it proved extremely difficult to procure the necessary fuel; wood had to be fetched from afar (as a rule within the deep fjords), and so it was particularly expensive in proportion to the level of income. In order to promote the desirable transition to the wooden houses it was, therefore, necessary to provide other fuel, and here the North Greenland coal mines became of value. The working of these, however, proved to be so expensive that there was no prospect of selling a suitable quantity, if the prices were fixed at the cost of production, and so they were put at a much lower level. When on a later occasion and with a view to supplying the native population with the necessary wood for the repair of the huts, the price of this was also fixed very considerably below the costs of production.

[1]) M. o. G., Bd. 145, Nr. 1, pp. 325—44.

When looking at the development during the succeeding years it is rarer to find such extraordinary deviations from prices fixed on the base of the purchase (or the costs of production) with an addition such as described above. It is as if the differentiated additions, as time went on, have been regarded as something which could not be subjected to changes. This must be characterized as unfortunate from a theoretical point of view, as the development has necessarily caused the conditions determining the factor of valuation to change with the situation. Various commodities, which formerly were articles of luxury, have now become necessities and vice versa, though in a less pronounced degree. A revision and, in the individual case, a new justification for the factor of valuation ought to take place with certain intervals.

As an example of a valuation based upon the special Greenland conditions the consumption of cigarettes has already been touched upon. The rapidly increasing desire for cigarettes among the young people of Greenland has not been regarded in a similar light by the authorities. It is true that it has not been thought possible to stop this consumption, as cigarettes are used all over the world, and it would be looked upon as a very severe manifestation of the monopolistic policy, if they could not be bought in Greenland, which measure would in its turn result in disabuse and smuggling. On the other hand, an attempt has been made to keep down the consumption by means of a comparatively great addition to the price. All of these considerations must thus be taken into account when fixing the prices, and further it should be borne in mind that there are no taxes in Greenland, and that a particularly great addition to the prices of cigarettes will have the same effect as additional prices elsewhere for taxation purposes.

By such a revision of the factor of valuation it may be considered natural for some commodities to have different factors of valuation for the various articles of consumption. In some cases a limited consumption may be termed a necessity (entirely or in part) with a consequent small addition to the price, while a more extensive use of it might be considered rather in the light of a luxury and thus justify a higher price. In case the commodity were entirely homogeneous (and the term monopolistic competition could not be used in relation to two more or less distinct markets) the distinction between the two parts of the consumption is carried out by means of rationing, with a higher price for that part of the purchase which was not naturally included in the rationing, nor is such a distinction unknown in the present-day economy of other countries. As an example of a commodity, for which it might seem reasonable to use this manner of proceeding, I am inclined to mention sugar.

In other fields the fundamental principle of the system will naturally lead to what might be termed a false differentiation of prices. By this

is meant two closely related commodities with a cross elasticity, one of them containing an element of luxury in relation to the other. This element of luxury need not be particularly great, but it would bring about a division of the consumption between the commodity, which is more of a necessity from that which has rather the character of luxury, and it would be in full agreement with the fundamental idea of the economic policy of Greenland to make an essential addition to the purchase prices.

In order to be able to penetrate somewhat more deeply into the policy of prices and to establish better valuation-coefficients (or to fix other additional percentages) it will be of interest to try to elucidate the dependency of the consumption on the income generally, or on the part of the income which is for instance used for articles of food.

No information is at hand as to the income of the individual Greenlander or his and his family's consumption (household investigations). On the other hand, we know the average quantity of commodities sold per individual for a longer period in a main settlement or in the whole of Greenland, the sale price and also the average cash income. On the strength of this an attempt has been made to show, whether there was any connection between the quantities and prices, and the sale price being frequently rather unchanged, this investigation has been able to concentrate on the relation between the quantity of consumption and the cash income.

In the present investigation[1]) it has first been graphically established that the consumption, in relation to the income, rather followed a straight line, and then a computation has been made of the dependency of the consumption on the cash income by the method of the least squares, it having proved that the connection between observations rather follows a straight line. As the consumption is somewhat different during the first years of the century and the succeeding twenty years, the investigation has been divided in the case of the two periods, while special calculations have been made for the equations given below for the first 20-year period.

The first thing to be found is the dependency of the consumption of articles of food on the total consumption, reckoned as corresponding with the total cash income through the following equations for the period 1899—1919.

For Christianshaab $y = 0.45\,x + 7.68$
For Jakobshavn a) $y = 0.41\,x + 12.98$
— — b) $y = 0.48\,x + 9.12$
For Ritenbenk $y = 0.53\,x + 2.73$

[1]) M. o. G., Bd. 134, Nr. 3, p. 98.

For Jakobshavn the consumption 1918/19 has been entirely uninfluenced by the difficulty of supplies during the war, for which reason two relations have been calculated: a) where all the figures are included, and b) where the consumption 1918/19 is left out of the calculations.

In the same manner the relation between the total consumption and the consumption of clothing have been calculated and the following equations found:

For Christianshaab	$y = 0.167\,x - 0.64$
For Jakobshavn	$y = 0.258\,x - 6.00$
For Ritenbenk a)	$y = 0.14\,x + 1.16$
— — b)	$y = 0.21\,x - 2.24$

For Ritenbenk a single, quite extraordinary year has been left out of the former equation.

From the two sets of equations it appears that out of the surplus income of one krone in the three districts, between 45 and 53 öre respectively have been used for articles of food, and between 14 and 25 for clothing (the high figures for Jakobshavn must presumably be due to the relative prosperity of the main settlement, the small figure for Ritenbenk to the comparatively large production of seal skins in that district).

The experiment has been followed by an attempt at calculating how an added surplus consumption of articles of food should be distributed on the various main articles, and the method here used is the same as that employed at the distribution of the surplus consumption for fats and articles of clothing, it being borne in mind that a few quite extraordinary years of supply are left out:

For farinaceous food (bread):

Christianshaab	$y = 0.45\,x - 1{,}91$
Jakobshavn	$y = 0.42\,x - 1.36$
Ritenbenk	$y = 0.19\,x + 5.39$

For sugar:

Christianshaab	$y = 0.22\,x - 1.38$
Jakobshavn	$y = 0.22\,x - 1.42$
Ritenbenk	$y = 0.168\,x + 0.019$

For grits and rice:

Christianshaab	$y = 0.055\,x + 0.7$
Jakobshavn	$y = 0.0176\,x + 5.21$
Ritenbenk	$y = 0.12\,x + 0.26$

For dried fruits:

Christianshaab	y	= 0.019 x	−0.33
Jakobshavn	y	= 0.026 x	−0.63
Ritenbenk	y	= 0.066 x	+0.00

For coffee (the period 1899—1909):

Christianshaab	y	= 0.14 x	+0.40
Jakobshavn	y	= 0.002 x	+3.76
Ritenbenk	y	= 0.17 x	−0.55

For coffee (the period 1909—19):

Christianshaab	y	= 0.17 x	+1.10
Jakobshavn	y	= 0.01 x	+5.42
Ritenbenk	y	= 0.09 x	+2.79

From these equations it appears that under the conditions of life prevailing in the districts during the first twenty years of the present century the marginal use of the money (surplus consumption amounting to one krone) has been as follows: In Christianshaab 45 öre for flour and bread, 22 öre for sugar, 5—6 öre for grits and rice and 14—17 öre for coffee. In Jakobshavn 42 öre for flour and bread, 22 öre for sugar, 2 öre for grits and rice, $2^1/_2$ öre for dried fruits, and about 1 öre for coffee. In Ritenbenk 27 öre for flour, 17 öre for sugar, 12 öre for grits and rice and 9—17 öre for coffee.

It might perhaps not be superfluous in this place to call attention to the fact that these figures must be used with the greatest caution. Nevertheless they are of considerable interest i. a. as an illustration of that which was emphasized in the preceding, viz. that it would be fatal for Greenland, if the prices of the world market were followed to any extent worth mentioning, and an unlimited fall of prices was permitted to set in, as it would naturally be hard to have to economize when about 45 öre of the marginal krone, in so far as it is used for articles of import, are spent on flour and bread.

Further, as against the average calculation generally used in statistical investigations, it must be emphasized that in any case as far as Greenland is concerned and with the relatively small income of the native population it will be more natural to make use of a marginal consideration.

For the period 1919—1939 a similar task is much more complicated, as the prices have been varying from year to year, for which reason the investigations are limited to a corresponding calculation of the distribution between articles of food and drapery goods in the total purchase at the store. In order to eliminate the fluctuations of prices

as much as possible the consumption has been re-calculated according to the various Greenland price indexes. In this manner the following results are obtained for the same settlements as to which the corresponding figures are calculated, viz:

For the consumption of articles of food in relation to the total consumption:

Christianshaab	$y = 0.37\ x + 15.79$
Jakobshavn	$y = 0.25\ x + 36.51$
Ritenbenk	$y = 0.34\ x + 20.07$

For the consumption of drapery goods in the same manner:

Christianshaab	$y = 0.13\ x + 3.42$
Jakobshavn	$y = 0.15\ x + 0.18$
Ritenbenk	$y = 0.15\ x + 0.18$

From these calculations it appears that the Greenlanders within the last twenty years seem to have had a greater use for the marginal krone in the several new fields where the consumption has risen i. a. in consequence of the strongly increased cultural contact with Denmark.

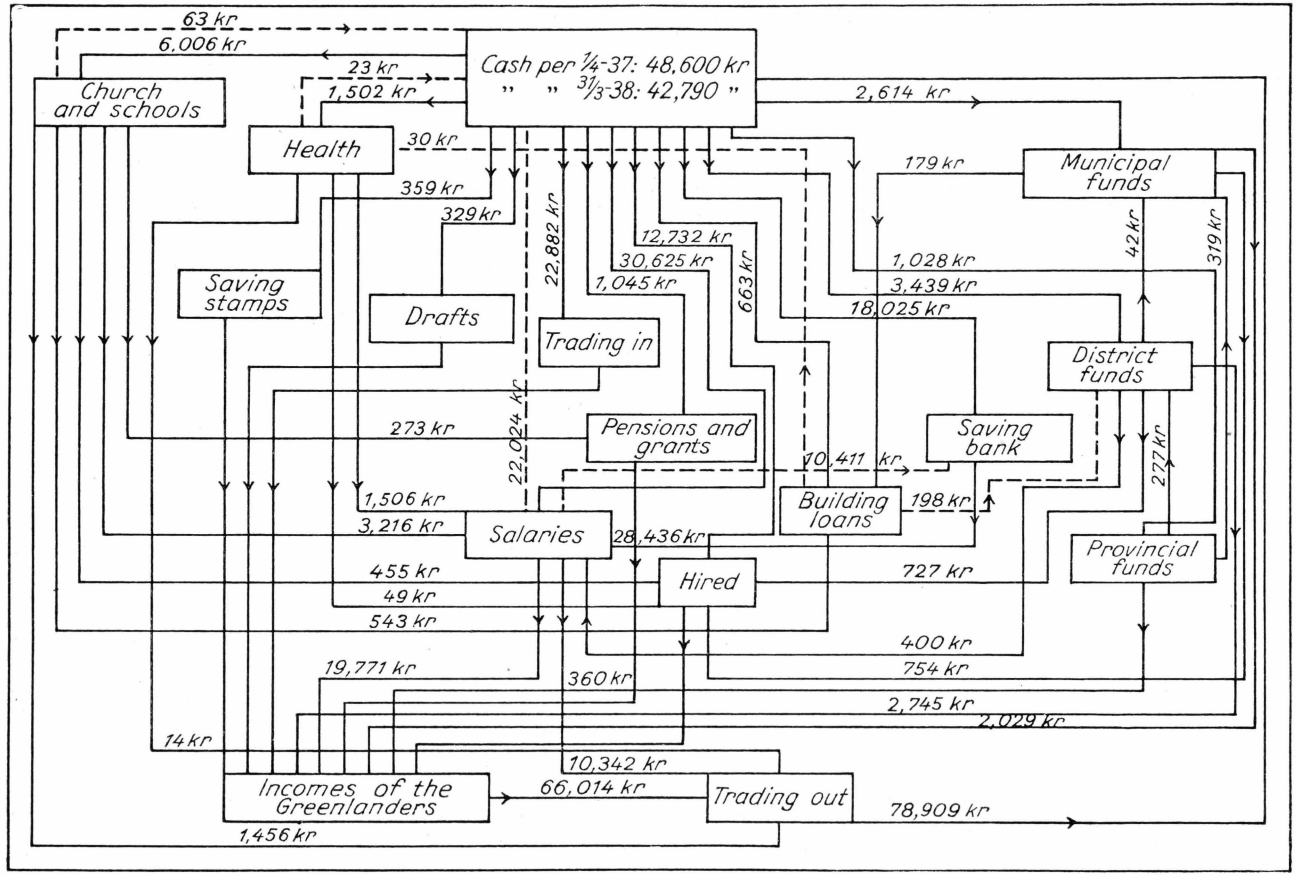
From a purely practical point of view there can naturally not be a sufficient basis for the direct use of the figures given above, which are fully realized only to comprise certain North Greenland districts, but they make it probable that the investigations should be continued in such a manner as to enable us gradually to form a well-founded opinion of the manner in which a raising of the level of income must be supposed to be used.

If conversely the authorities entertain a wish that the consumption of some commodity or other should reach a certain level, there is a possibility through calculations to form an estimate of what the income should be, how trading-prices should be fixed etc. Further, if calculation of price and cross-elasticity are made on the strength of the very comprehensive material in the Greenland accounts, there are better possibilities of carrying out in detail the price policy already now used in its general features.

Such calculations can naturally never be anything but a support of the economic policy, which the State wishes to follow.

It will, however, here be natural to call attention to the fact that the Greenland community is not too complicated to permit of the setting up of a total "national account", which shows the entire circulation of money in a few financial years. Such an account has been set up for a single settlement in a single year, cf. the following diagram:

Diagram XLII. The circulation of money at the Christianshaab settlement in the financial year 1937/38.



(From M. o. G., Bd. 134, Nr. 3, diagram 6).

but considerations may be extended to several settlements and several years, in the same manner as it is possible to make a total budget under different price contingencies.

Such calculations of the various economic possibilities naturally belong to the future, but it is undoubtedly a desirable consequence of the general Danish point of view, viz. that the real income of the Greenland population should not vary greatly with the conjunctures, but as far as possible should be kept on a steady level, rising with the general development.

In case too high a pressure should be brought or have been brought to bear upon the Administration of Greenland, with the object of abandoning the gradually rising development at a time of high conjuncture and in the hope, by this means, first to be able to introduce the maximum prices of the world market in Greenland, and secondly to stabilize them, it would be of interest to undertake calculations as to what it might be imagined to bring about by way of an increasing deficit during a future period of depression, for instance, with price relations, such as they were known on the market some time before the outbreak of the second World War.

C. Immediate and Future Benefits.

In every decision regarding the use of his income a citizen must weigh the consideration of covering an immediate or a future need. Such deliberations were already necessary in the primitive community where the Greenlander, when catching a seal, should decide whether to use the meat at once (possibly to distribute it among the other members of the dwelling place), or whether, if they were satisfied already, to give it to the dogs or to place it in a depot to be used in a coming period of stress. In the same manner he had to deliberate and to decide, whether the skin of the seal should yield a relatively speedy satisfaction through being used for clothing, or whether it should be used for umiaks and kayaks and so, through better hunting, contribute to the future covering of requirements. These deliberations were undertaken on the strength of the Greenlanders' knowledge of the present time and their valuation of the future, and they harmonized very well with the social conditions, which they knew thoroughly, in the same way that they must themselves pay for their mistakes by suffering hunger, in case the dispositions made proved to be wrong.

As the store became of essential importance for the purchasing and selling of commodities, new features were gradually introduced into these deliberations. By selling the skins at the store the Greenlanders were able to provide themselves with a cash income, which they might

at once turn to formerly unknown means of enjoyment or articles for use; add to this, that within the colonization period they were not subject to starvation in the same manner as formerly, as it was possible to get assistance from the Royal Greenland Trade or the relief funds founded at an early period. In that way a change took place in the valuation of immediate and future benefits, and it was not always easy for the individual consumer to estimate this in all its bearings; at any rate the development was more than formerly felt as an incitement to prefer the immediate to the future benefit.

This was unfortunate for many reasons. Of these particular mention should be made of the fact that, because of the store, it became possible for the population to buy new implements, which in their turn might increase the hunting proceeds and so also the real income. From an older period mention should in this connection be made of fire arms to which were subsequently added smaller or greater trade implements, such as fishing boats and fishing tackle, in very recent times also motor boats. It was not always easy for the individual Greenlander to realize that in the course of a short time it would pay to have the best fishing tackle, even though the immediate expense was very considerable. When having got into the habit of attaching great importance to the means of enjoyment, they lost to a certain extent the power of making such decisions, and the whole of the cash amount which at the given moment was at their disposal was often spent in purchasing the most pronounced immediate goods (means of enjoyment).

This change in the valuation of immediate and future benefits was already observed in 1835 by the trader Lassen in the Julianehaab district[1]) "—it is well known that coffee made its way into the Greenland community, nay, to such an extent that the natives for this, their favourate drink, were apt to sell the skins which were so extremely necessary for tents, umiaks and apparel, for which reason many fathers of families now possess neither tents nor umiaks, while their apparel is mean and ragged." According to Lassen this was also to the detriment of the Royal Greenland Trade, as the Greenlanders could not travel about and collect supplies by means of what they had caught in the summer, but were obliged to go on living in the miserable winter huts "—which was merely owing to the trade in coffee, the best skins having gone to serve the coffee pot."

The coffee pot had greatly increased the need of support in times of stress, as the occupations of the Greenlanders were only sufficient to supply them with absolute necessities and hunting implements; "—it is a well known fact that the Greenlanders are far keener to drink

[1]) M. o. G., Bd. 145, Nr. 1, p. 369.

coffee, to eat such food as plum-soup and rice-soup instead of providing, in exchange for their products, what is necessary to continue their hunting, the consequence of which is that, if they cannot keep on borrowing rifles, powder, lead etc., they must live at the cost of their countrymen and dawdle through life in the houses or on the rocks, as long as there is anything left anywhere, and when at last a stop is put to this resort then—emergency food is distributed."

The formerly mentioned raised prices of the Greenland products showed a tendency to cause the Greenlanders to sell more than they could well spare, and the consequences of this were most grieveous, when the population of a settlement were ravaged by an epidemic, as at Jakobshavn in the spring of 1844. The situation there has been described in details by the physician RUDOLPH[1]),who was of the opinion that the conditions of the Greenlanders, during the five years he had been in the country, had become worse, because they sold far too many of their skins in order to obtain the coffee so eagerly coveted by them. He writes in 1844: "The consequences have never been so evident as this year, when a long and severe winter had already weakened the resistance of the population, which would by no means have been so terrible, if they had not been utterly destitute of clothes; here at Jakobshavn as also at Claushavn women, children and old people have gone practically naked throughout the winter; the few articles of clothing which they possessed were rotten and filled the house with an intolerable stench." Even though the men, who were to ply their out-door trades, must have better clothes, also these were of poorer quality than formerly. The population as a whole were very weak, when in the spring of 1844 an epidemic broke out and in the course of 4 months carried off 37 persons, mostly women and children.

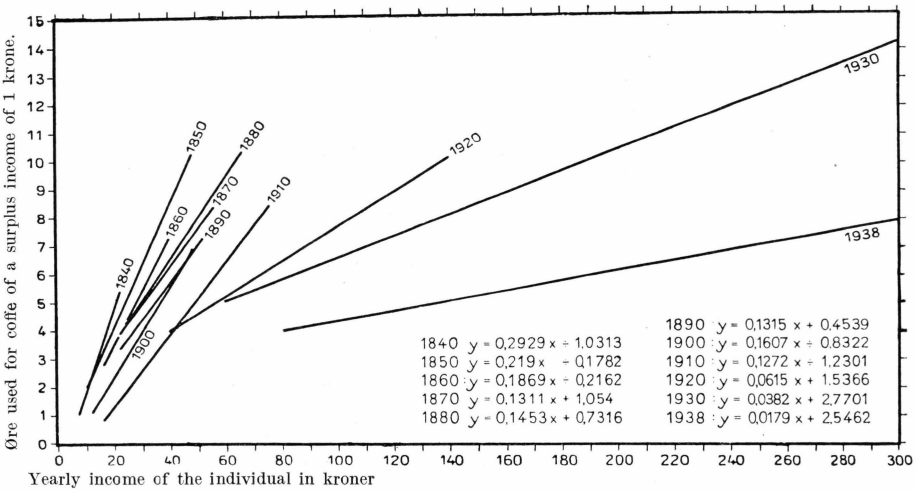
Already in the winter, when distress was great, RUDOLPH had induced the Greenlanders at Claushavn and Jakobshavn to stop buying the much coveted coffee in times of need, but he adds: "On the sly the Greenlanders drove from this place with their skins to Klokkerhuk, situated about 24 miles from here in order to buy coffee, and that happened at a time when most families were visited by illness and sorrow, and when hunger and misery were indescribable."

In the preceding mention has already been made of the general consequences as to the policy of prices inferred by the Royal Greenland Trade from such conditions of demand, viz. the fixing of the additions to prices, not according to an average distribution of costs, but by introducing a special factor of valuation, the result of which must be a change of the consumption in the direction desired by the Trade. It

[1]) M. o. G., Bd. 145, Nr. 1, pp. 345—51.

might be asked what would in the course of time be the effect of such a policy, and it is rarely possible to give exact information, seeing that a number of various factors act together, i. a. the general cultural work. It would, however, be of interest to prove that the use of the marginal money unit, for instance for the buying of coffee, has greatly changed in the course of time.

Diagram LXIII. The Greenlanders' use of a surplus income of 1 krone for coffee at various times.



(From Summary of Statistical Information regarding Greenland, diagram CXXIV).

In this diagram information has been given as to the use of the surplus income for the buying of coffee at various times. The summary shows that the demand for coffee, as far as concerns the surplus income in money, is very much on the decrease, as through the intercourse with the Danes the Greenlanders have found a number of other fields in which to use their surplus income.

As a supplement to the efforts which, as already mentioned, have been made to teach the population to attach more importance to future than to immediate benefits, mention may be made of the Greenland saving banks, which were established partly in order to give the Greenlanders the means of saving during the summer months, when incomes were high, for the time of need in winter, partly in order to teach them the value of saving and of the interest thus obtained.

A further supplement to the work done in order to limit the demand for immediate benefits would be the efforts made to facilitate the population's access to various implements requiring the investment of capital. Among the expensive implements in which, on the immediate behalf of the population, the Administration takes an interest are motor boats. The Greenland hunters are, however, rarely possessed of sufficient

capital, and in order to make it easier for them motor boats were sold at Copenhagen cost price (or a trifle higher or lower), irrespective of the many transport costs, only a small part of the amount being paid in cash and the remainder free of interest out of the catch of the person in question. (Irrespective of wear or diminution of value a larger annual sum is paid, when the catch is great, than when it is small). By this measure it is expected that the catch will be considerably increased, and the importance of this is valued more highly on the part of the Administration than the risk of having to take back a boat for the remaining debt.

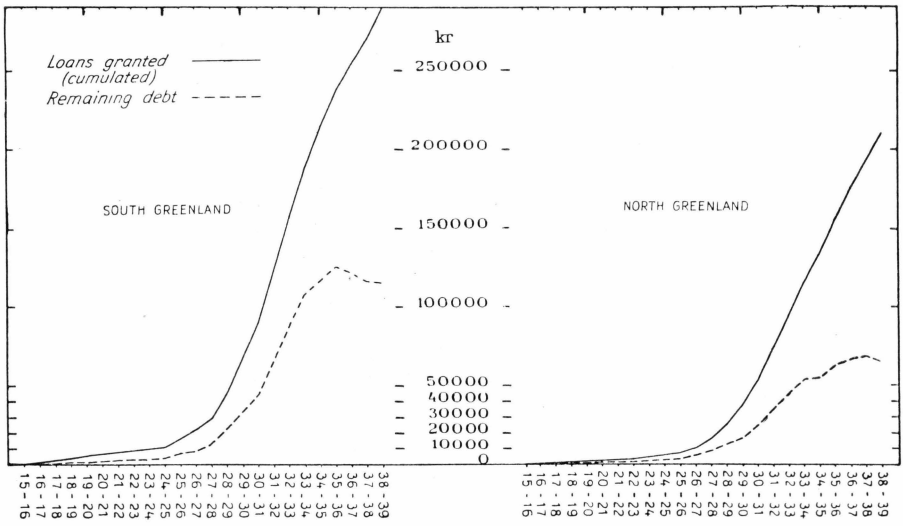
Another investment of capital which is highly valued by the Ad-

Table LXIV. Loan and remaining debt regarding loans to the Greenlanders for house building and implements.

Year	South Greenland				North Greenland			
	Loans paid out	Loans cumulated	Part payment	Remaining debt	Loans paid out	Loans cumulated	Part payment	Remaining debt
	kr.	kr.	kr.	kr.	kr.	kr.	kr.	kr.
1915.....	245	245	140	105	75	75	15	60
1916.....	735	980	283	558	360	435	78	342
1917.....	797	1,777	508	847	335	770	137	539
1918.....	1,493	3,270	810	1,529	175	945	293	421
1919.....	1,480	4,750	1,116	1,894	50	995	241	230
1920.....	1,500	6,250	1,164	2,229	860	1,855	255	836
1921.....	1,492	7,742	1,141	2,581	366	2,221	317	885
1922.....	1,580	9,322	1,399	2,762	755	2,976	381	1,259
1923.....	1,443	10,765	1,175	3,031	1,069	4,045	383	1,944
1924.....	2,000	12,765	1,444	3,587	1,335	5,380	851	2,429
1925.....	4,558	17,323	1,746	6,399	1,781	7,161	989	3,220
1926.....	4,493	21,816	2,229	8,663	3,295	10,456	1,015	5,500
1927.....	6,970	28,786	3,809	11,824	5,942	16,398	3,191	8,251
1928.....	16,765	45,551	6,103	22,486	9,322	25,720	5,016	12,556
1929.....	21,757	67,308	11,702	32,540	11,971	37,691	8,086	16,441
1930.....	23,290	90,598	11,835	43,995	16,633	54,324	8,303	24,771
1931.....	32,611	123,209	9,737	66,869	19,292	73,616	8,516	35,546
1932.....	33,800	157,009	11,811	88,858	21,180	94,796	11,412	45,315
1933.....	30,496	187,505	12,542	106,812	21,082	115,878	12,439	53,960
1934.....	28,130	215,635	17,706	117,235	18,409	134,287	17,699	54,670
1935.....	22,753	238,388	14,777	125,211	22,817	157,104	13,936	63,551
1936.....	16,602	254,990	20,174	121,639	19,195	176,299	16,039	66,707
1937.....	16,165	271,155	21,507	116,297	18,450	194,749	16,362	68,795
1938.....	18,920	290,075	19,811	115,406	17,217	211,966	20,881	65,131

(From Summary of Statistical Information regarding Greenland, table 62).

Diagram to table LXIV.



ministration of Greenland is the building of houses. The old houses were in certain respects unhealthy, more particularly as the narrow space per person enlarged the danger of infection which was very great in a country like Greenland, where tuberculosis was widely spread, and this made the providing of larger and better buildings particularly important from the point of view of health.

Already from an older period all Greenlanders in public positions were given access to building loans on very favourable conditions (which arrangement has been established by the new Act regarding salaries and wages of 1920), and when the district councils were founded in 1925, they were supplied with funds which i. a. could be used to continue such loans, free from interest, as had already been more sporadically granted to all Greenlanders for the building of houses and the providing of trade implements.

The easy access to loans through the district funds, more particularly for the building of houses, was greatly used, not least about 1930. From table LXIV it appears that already in 1915—26 a number of building loans had been granted, but that their number greatly increased in the following year.

From the column for part payments it appears that the latter in 1939 were almost as great as the loans granted. During the recent war it was very hard to obtain timber, and now, when the development in Greenland and the higher incomes have created an increasing need for building material, the situation in this respect as everywhere else is very difficult.

In addition to the loans for the building of houses it will be natural also to mention the rather considerable loans granted to sheep farmers. Here loans may be necessary, both for new buildings, for live stock and possibly also for works connected with the improving of the soil. Half of these loans are granted by the State (the Sheep-farming Station) and half from the provincial funds of South Greenland.

In many overseas countries, which have come into contact with European trade and commerce, the question as to the relation between immediate and future benefits has been particularly pressing in connection with alcohol. Also in Greenland there have, in the course of time, been examples of a strong craving for alcoholic drinks, which is decidedly unfortunate from a long-run point of view. When this craving has not led to the same unfortunate results as elsewhere, this is because the monopolistic administration has been able to limit the consumption of alcohol by limiting the access to it. The quantity of alcohol permitted has always been strictly rationed (cf. e. g. the regulation regarding the import of alcohol to the settlements of Greenland, approved by the Minister of the Interior, May 10th, 1904, and Letter of January 2nd, 1937, to the provincial administrators), and there are very strict provisions to prevent abuse of the right to provide alcohol in trading with the Greenlanders.

Of later years it seems as if attempts have been made to evade the regulations regarding alcoholic drinks by producing beer from sugar, and one of the measures to prevent this has been the rather strict rationing, which during the last war has been carried out in Greenland.

D. Ex post and ex ante.

When it has been possible, in the period from the middle of the 19th century and up to 1940, to follow such a price policy in Greenland that incomes and expenses have fairly balanced, this is naturally to some extent due to chance. If the prices are fixed so that the population has several average possibilities of income, no attention need be paid to the basis, which the world market would otherwise condition.

But in addition to these partially accidental circumstances it should be mentioned that, by the fixing of the prices, the directors of the Administration of Greenland at any rate deliberate among themselves, what they would like to give the Greenlanders, and what they think they are able to give them. These deliberations are in their turn governed by those who control the grants, that is, by the policy laid down by the Danish Parliament.

As long as it has been a more or less tacit assumption of the policy of Parliament that balance was what was to be aimed at, this has naturally led to the following of the economical movements, though in a very subdued form, and as the movements have all along been alternately rising and falling, a certain balance has been obtained when regarded from a long-run point of view.

There are many tendencies pointing in the direction that such a balance will not be aimed at in the future. The demands for a quicker development of economic possibilities and cultural measures in Greenland have made themselves more strongly felt, and the wish to preserve an economic balance is at the present time less pronounced than in the years between the wars, while there will no longer be an economic point of equilibrium to turn round. The fundamental view will then change from an economic to a social-political one, with the consequence that the prices must be fixed according to what is thought reasonable, and—human nature being what it is — the demands for what is reasonable will unavoidably increase and keep on increasing.

It must, therefore, be expected that the regulation of the standard of living, by means of the price policy aiming at an economic balance, will not in the long run have the same weight after 1940 as it had before then. Within a certain period one may imagine the carrying out of a price policy of a more social-political character, with price relations which are favourable for the Greenlanders, but there will be a not inconsiderable possibility of such a line being regarded as a favourable conjunctural movement, in case the economic possibilities of Denmark should prove to deteriorate on essential points.

If one chooses to regard such a possibility as more than pure theory, it would be a good plan to supplement the price policy along social-political lines with an increased work of enlightenment among the Greenlanders. In the first place it should be attempted, through the municipal councils, to make the native population realize the fact that the price relations are fixed for their immediate and future benefit according to social-political points of view, and also the risk attached to establishing a level of prices in Greenland, which necessitates a steadily increasing deficit, when the prices are fixed irrespective of geographical conditions and the productivity of the population. A development of this kind must make the community still more dependent than formerly upon the grants supplied from Copenhagen, and the chief object of the educational work, which must be considered desirable under these conditions, must tend to show that when it is wished to raise the standard of living and the culture of the Greenlanders, this should first and foremost take place by an increase of the productivity and a more intensive exploitation of the economic resources of the country.

CHAPTER XI

THE PRICE POLICY AND THE GREENLANDERS

The price policy described in the preceding chapters necessarily implies a number of far-reaching consequences for the population of Greenland in a number of different fields.

A. The Control exercised by the Monopoly.

When the economy of Greenland, as described in detail in former chapters, builds upon the wish to supply the Greenlanders with a regular and gradually increasing income, this results in a price policy which on decisive points differs from that of the surrounding world, as being based upon the efforts made by the individual enterprise to obtain a maximal profitableness. In some cases the prices paid by the monopoly trade in Greenland are essentially higher than elsewhere, in other cases considerably lower. The former is more particularly the case in periods of depression, the latter especially under high conjunctures.

Such a divergence in the economic policy necessitates a strict regulation of imports and exports, and this can only take place under a monopoly which controls access to the country.

These regulations were originally contained in the Royal Statute of March 1776, and have been defined in Act No. 86 of April 1st, 1925, which in its turn makes the basis ot the rules of navigation in the seas round Greenland (May 22nd, 1925). Pursuant to this act, section 1, it is forbidden for any vessel, whether Danish or foreign, to call at or to stay on the coasts or islands of Greenland, to prepare or to take their catch ashore in order to prepare it, or otherwise to stop in Greenland waters; furthermore, except by special permission, trading and other intercourse with the inhabitants of the country is forbidden both ashore and at sea, including the sale or giving away of second-hand wearing apparel, bedding and the like. Exceptions from these regulations are found in sections 2 and 3, according to which it is permitted for vessels in distress or in need of water for drinking purposes to seek harbour in Greenland.

These regulations have, in the course of time, been criticized in various quarters, from the point of view that there was no reasonable justification of the economic possibilities of Greenland being exclusively reserved for Danish subjects residing in Greenland.

When during the last generation there proved to be a possibility of considerable fisheries off the coasts of Greenland, the fishing population of the Faroes in particular expressed the wish to be allowed to fish in the coast waters of Greenland, and to be permitted to call at one, by preference several harbours on the coast, and this wish the Danish Government and Parliament to a certain extent felt bound to agree to. In the above-mentioned act of April 1st, 1925, section 2, the Administrator for Greenland (at that time the Ministry of the Interior) was authorized to give special permission for sealing, hunting and fishing in the waters of Greenland, and this led to the founding of a special Faroes harbour; furthermore, a series of temporary acts authorized the Ministry, under special stipulations and within certain specified boundaries, to give permission for Danish and Icelandic vessels to carry on fishing in the territorial water of Greenland, within the line of demarcation connecting the outermost islets, skerries and reefs.

In 1939 a wish was expressed on the part of the Faroes for the opening of more harbours on the west coast of Greenland, and for an extended access to fishing. This wish was complied with in Act No. 84 of March 15th, 1939, in which the Ministry for Greenland (the Ministry of State) was given certain authorities. By the discussions on the act within the Greenland provincial councils and its carrying out, criticism was expressed as to the extended access to harbours and fishing, and it was maintained that if the provincial councils had been consulted beforehand, they would never have agreed to the act.

One of the Greenland representatives in the provincial council said[1]): "It used to be the custom that the provincial councils were consulted beforehand, when important bills were on the point of being passed. It would have been more correct, if this had also happened now; it is a disappointment for us to be faced by an established fact. Resistance to the Act is in vain. We cannot fully realize the consequences of this act for the economic interests of the Greenlanders. Unlike the inhabitants of the Faroes our breadwinners cannot go elsewhere. It seems to us that the Ministry of State has paid more attention to the interests of the Faroes. The trifling decision left to us we now have to make under factual pressure, but there is a great difference between the economic situation of Greenland and that of the Faroes."

A resolution proposed by a member of the provincial council, the

[1]) De grønlandske Landsraads Forhandlinger 1939, p. 124.

Rev. GERT EGEDE, was passed by the provincial council of South Greenland, and it runs as follows:

"When the provincial council resignedly has accepted the Act in question and, forced by all the circumstances to be taken into consideration, abstains from protesting against its contents, this is done as a result of its rooted confidence in the Administration of Greenland, and with a full understanding of the urgent reasons which have induced the legislation to issue the act — — — it is an absolute condition of the attitude adopted by the provincial council in this matter that the extreme limit of concessions has here been reached, and that the Government fully realizes this, also that a fishery inspection or a maritime policy is established to the necessary and fully effective extent, according to the specified proposal of the provincial council."

The provincial council of North Greenland declared itself entirely in accord with the point of view adopted by that of South Greenland.

From this it appears that the representatives of the Greenlanders did not favour the attempts made to limit the monopoly regulations and the closing of the country, if ever so little, and from the remarks quoted it can be concluded that the native population has not regarded the regulations for the closing of the country in the light of compulsion.

In the course of the negotiations carried on in the spring of 1946 between the parliamentary Greenland committee and the representatives of the Greenland provincial councils, the regulations regarding the monopoly and the closing of the country were also discussed, as to which the report of June 12th, 1946, contains the following: "The Greenland Delegation have unanimously declared themselves in favour of the retention, for the time being, of the present trade monopoly as authorized by the Act on the Administration of Greenland. Further, it is wished to keep up the regulations hitherto in force about the navigation and closing of the country, as the Greenlanders cannot yet be estimated to have attained so far in spiritual and material development that an opening of the country now, or in the very near future, can be regarded as justifiable. On the other hand, it is thought desirable that access to Greenland is opened for Danes, who are either born there or who by relationship with Greenlanders or by virtue of having worked there for many years are closely connected with the country. The question of such minor alleviations of the rules for the closing of the country have been discussed in the provincial councils of 1945, though no proposal to this effect has been made — — "

Thus it may presumably be concluded that the strict closing of Greenland, which has been necessitated i. a. by the very characteristic policy of prices, has been fully understood by the Greenlanders them-

selves, and they have shown a mature recognition of the fact that the closing has been made with a full understanding of their economic and cultural interests. The closing has not—at any rate not during the last hundred years—led to any monopolistic exploitation, but has been a link in the general policy, according to which the Greenlanders should be matured to participate in the economic and cultural intercourse with other countries and populations.

When it has been possible to effect such a thorough closing of the country throughout centuries and that without smuggling to any considerable extent, this is particularly due to the isolated situation of the country, and to the fact that the navigation was only carried on by means of the vessels of the Administration or by vessels chartered and controlled by the latter.

At the present time one cannot, however, close one's eyes to the fact that the isolated situation, which formed the basis of the closing, cannot in the future be considered so effective, as it was in former times. By the extension of air routes Greenland has already become a necessary link in the international system. There is even so a considerable traffic across the northern Atlantic (which presumably will increase rapidly in coming years), and as the result of this the necessity will arise for quicker and more exhaustive meteorological reports, also from Greenland, and the work with arranging such a service is already going on apace.

This, it is true, does not imply any immediate reduction of the closing up of the country, but together with the radio service which brings news from all over the world, even to the remotest outpost, it shows that the connection with the outer world has been greatly facilitated. Foreigners are now able to go to Greenland in airplanes and to land at one of the large aerodromes, and so the Greenlanders will more quickly become acquainted with the new ideas of the day and be influenced by them. It can therefore be expected that the outer world will in the future knock more forcibly on the door of Greenland, than has been the case in the past, and the demand for a facilitation of the contact with the outer world will probably not become less pronounced by the fact that Greenland, during these latest years, has also acquired a certain importance from a military-political point of view.

If the consequence of this should be a diminution of the closing of the country and a transition to other economic-political points of view, this will not conflict with the line followed by Denmark. On the contrary it has been emphasized time after time, both on the part of the Greenland Administration and the Danish Parliament, that the closing of the country and the monopoly were only measures carried out with the view to form a basis for the cultural development, and that the Danish regulations of conditions should not last longer than until it was

realized that the population of Greenland was sufficiently mature to decide about its own future and its own affairs.

Attempts have been made to effect the maturing desired i. a. by developing the Greenland self-government in an increasing number of fields, and greater attention has been paid to the views of the Greenlanders regarding their own affairs. A maturing process of this kind does not only aim at the cultural, but also at the economical aspect of existence. The latter problem is, it seems, the most difficult, as it cannot be solved merely by letting the Greenland organs of self-government incur expenses, which the Danish tax-payers are made to pay, for instance through the suggested development of the Greenland price system, with the resulting increasing expenses for the Exchequer.

B.

Self-Government in Greenland.

When the Greenlanders were in a state of transition from being free persons with their economic existence resting entirely on their own hunting ability, to dependency on the stores, it might have been feared that the material benefits thus obtained would in part be counterbalanced by their dependency on the Danish Administration and the Danish officials, which would in the first place be the natural consequence.

This view was maintained with great strength by RINK, LINDORFF, KLEINSCHMIDT and JANSSEN in a lengthy memorial to the directors of the Royal Greenland Trade of May 2nd, 1856[1]). In this emphasis was laid on the difficulties attaching to the assistance to be rendered to the population in case of distress, as the Danish officials residing at the settlements lacked the necessary knowledge of the mode of life and manner of thinking of the scattered inhabitants, and the authors then continue: "Still less than in other countries such a knowledge can be kept up, except when supported by an institution closely connected with the locality and the people, who have their homes there. Thus it is evident that, in spite of the best will in the world on the part of the giver, the prevailing rule for such distributions cannot be the worthiness of the person in want, but that the guardian of the poor more or less limits his efforts to those right before his eyes, or to those as to whom he can get reliable information, a very difficult task in this country — — —It must further be borne in mind that the Greenlander, as can easily be understood, does not stand on such a low level that, besides the psychical satisfaction he receives through being helped, he can not at the same time conceive the idea of certain rights, all the more as

[1]) RINK: Samling af Betænkninger og Forslag vedkommende den kongelige grønlandske Handel, Kjøbenhavn 1856, pp. 181 seq.

the help consists in objects, which in Greenland may be equivalent to cash and a common circulating medium, and that an unjust distribution of this help may therefore easily rouse his suspicions and confuse his ideas of right and fairness."

Besides this criticism of the assistance granted it was emphasized in the memorial that little or nothing had up till then been done to rouse the interest of the Greenlanders in common affairs, but that the communication with the Europeans had had rather a weakening effect on their mutual relation: "Their respect for their own unwritten laws and customs has been blunted, and in the place of this only the Mission has been able to awaken any spiritual life among them, but apart from that they lose themselves more and more in striving for immediate enjoyment of what they are able to obtain through the Royal Greenland Trade and the Europeans —."

Rink and his supporters were of the opinion that it would be possible to start a healthy movement by the establishment of new institutions, viz. the boards of guardians, by which the native population, in close collaboration with the Danes, might gain some influence over their own conditions, in so far as they were thought to be able to grasp them.

I shall not here enter into the details of most of the individual phases and the development of the board of guardians, as the institution has been frequently dealt with in the literature relating to Greenland, for instance by Oldendow[1]). Only one link in this development can be supposed not to be universally known, and as it is of essential importance to the following statement it should be mentioned here.

In 1880, when Rink had worked for the greater part of a generation in the service of Greenland and the Greenlanders, he collected his views on the relation between Danes and Greenlanders, and of the further development of the organs for the self-government of Greenland in a draft of legal provisions for the Greenlanders. Shortly after 1880 he retired from office, and so his draft has hardly been discussed by the Government or Parliament, but it is of interest as an expression of the sum total of Rink's experiences with regard to the self-government of the Greenlanders.

Rink further proposes to develop the institution of the board of guardians which had been tried through a quarter of a century, so as to extend it both with regard to schools and public health. With regard to schools sections 19 and 20 of the proposal will be quoted here[2]).

Section 19. "The schools are controlled by the Danish clergymen, each for his own district, and by certain surveyors elected by the board of guardians among the oldest and ablest men at the various dwelling places.

[1]) K. Oldendow, Grønlændernes egne Samfundsorganer, Kbhvn. 1936.

[2]) Rigsarkivet. G. Diverse Korrespondance Sager m. v., Lb. Nr. 37.

These surveyors report to the Danish clergymen on the course of instruction, whether the catechists fulfil their duties, and whether the children or their families show negligence and indifference in relation to the school.

Section 20. Each of the three church districts should have their school funds, administered by the Danish minister for the district. To these funds the Royal Greenland Trade should contribute a yearly grant, in South Greenland corresponding with one sixth, in North Greenland with one eighth of the amount paid to the Greenlanders for traded-in products. By means of these funds and according to certain detailed regulations the clergyman should defray all school expenses in his district, including the buildings of the mission with the exception of the church of the settlement and his own dwelling. It would be his task, by this means, to make the expenses for schools harmonize with the resources of the country, to encourage the catechists who help in this and the actual school work, to supply the dwelling places with suitable accomodation for schools (where such schools are needed) and finally always to try to have some spare cash for unforeseen expenses. Finally he should work towards making the Greenlanders of each dwelling place render some assistance to the maintenance of their catechist and also to the building and repair of their school. As to all this he should consult with the men mentioned in section 19, and regarding the building also with the administrator of the settlement."

The characteristic feature of this proposal is that RINK is of the opinion that the development of the school system of Greenland should be bound up with the economic resources of the country. If the production of the Greenlanders rises, the trading-in and so the revenues of the school system are increased, that is, the individual Greenlander, by means of his work and his catch, helps to advance the development of his country, inclusive of its school system. The individual Greenlander may further help the development of the school system by giving the local catechist the best possible conditions of life, and by making the buildings belonging to the school as good as the place permits. Through his right to share in the decision he comes to take a greater interest in all related problems.

On the other hand, the development of the school system in RINK's opinion should evidently not take place at a quicker rate than all other branches of the work of the community, and he further stresses this view by his comments on the proposal:

"There can hardly be any doubt that questions such as the building and the repair of a school-house at an outpost in Greenland can best be negotiated by the inhabitants themselves, together with the Danish clergyman. At the present moment these affairs, down to the least detail, are being treated as no concern of theirs."

As to public health the proposal made by RINK of organizing sick aid in Greenland follows exactly the same lines. He says in his comments: "Concerning the many disagreeables of his isolated position and his arduous journeys the new physician will find that he has taken upon himself a most thankless job, and he tries, now in one way now in another, to surmount these difficulties by the direct use of European resources. The most dangerous of these difficulties is that, in the eyes of the population, sick nursing is regarded as a kind of pauper relief, and that in eyes of the physician all Greenlanders must be paupers. The only way in which it is possible more or less to realize what is demanded by way of medical aid among the Greenlanders, is the establishing of the sick aid funds proposed in connection with the above-mentioned regular training of native nurses. There will then be a prospect that the most suitable supply of medicine is demanded, and that the resources of the country are used both for medicines, food for the sick and hospitals, and finally that the capacity of the natives is turned to account in assisting the physician."

Thus also regarding public health it was the desire of RINK that development and progress were to be bound up with the efforts of the population itself, as regards the production and a direct interest in the furthering of the work in question. From a material point of view RINK's proposal would perhaps have caused a slower development, than has as a matter of fact taken place, as for instance with regard to the building of hospitals or the same medical treatment as that given in Denmark, but it would on the other hand have given the Greenlanders a stronger feeling of the importance of their own efforts, and upon the whole a greater harmony would have been established in the development in different fields. RINK's proposal must undoubtedly be viewed in connection with the anxiety he felt because of the heavy fall in the prices of the Greenland products within this period, by which fall the economic basis of the country must have been considerably weakened.

As mentioned above, RINK's proposal was not acted upon. During the ten or twenty years after his retirement the organisation of the boards of guardians hitherto in force was kept up, though in such a manner that the interest taken in the activity of these boards seemed to be decreasing. Early in the 20th century a very lively public discussion was started on the administration of Greenland, especially with a view to the self-government of the country, and this discussion as to which the reader is referred i. a. to the above-mentioned work of OLDENDOW, resulted in the Act of 1908. According to this act the boards of guardians were abolished and replaced by municipal and provincial councils; the municipal bodies were made to comprise comparatively small areas, the tasks ascribed to them being those, which required the greatest

knowledge of local conditions. In addition, two provincial councils were established, one for North and one for South Greenland, and their principal task was to act as guides and advisers for the Government in the administration of Greenland.

Pursuant to the Act of April 18th, 1925, which is now in force, three sets of councils were established: Municipal councils, district councils and provincial councils. The task of the municipal councils was partly to see to the maintenance of order, partly under the supervision of the chief administrator of the province (the Landsfoged) to administer the municipal funds, out of which expenses should be defrayed for the necessary help to persons unable to provide for themselves, and also for the support of measures for the mutual benefit of the members of the municipality, including health and medical treatment and the training of the young people in practical occupations. The remaining funds were to be divided among the breadwinners of the municipality (the repartition) after setting aside reserves according to certain rules.

It seems natural to stop here for a moment to look at the latter regulation, seeing that it is an institution peculiar to Greenland. The repartition was introduced with the first regulations on the boards of guardians, and the object was to further the forming of real capital in the Greenland community. Before the introduction of the repartition the breadwinner had never, at any season, had any fairly large amount at his disposal for the purchase of articles of real capital, such as various implements and building materials, and the intention was that once every year he should receive such an amount, so as to be able to undertake economic long-run dispositions. The repartition is of less importance nowadays, when saving banks have been introduced, and the State gives special yearly interest to them, in order to stimulate the population to save; in fact, it may even at times counteract its original design by making it more difficult for the municipal council, with the funds at their disposal, to defray expenses for the mutual benefit of the dwelling place (f. inst. the providing of motor boats), seeing that a few persons entitled to a share of this sum can go against any such dispositions, and so voices are heard from circles otherwise eager for progress that the repartition should be abolished or restricted[1]).

The regulations for the activity of the district councils are given in a decree of May 29th, 1926. According to this, the district council is to decide on the paying of grants to the blind, deaf and dumb, as well as to cripples and others with a physical or mental defect which makes them in part or entirely unfit for work (section 16). Further, the district

[1]) The majority of the municipalities of South Greenland and a great number of the municipalities of North Greenland in 1946 voted for the giving up of the repartition.

council may also grant loans for new buildings and implements and give assistance (cash grants) to new houses and fire arms for new bread-winners.

According to the Act of 1925 (section 16) the provincial council is to take part in the formulating of such judicial decisions, as concern the whole of the Greenland community, and to report on all proposals for laws and decrees concerning public provisions for the district or the whole of the country. The provincial council takes part in the decisions made for the disposal of the provincial funds according to certain fixed rules. As to the detailed regulations of the decree of May 29th (section 26) the consent of the Ministry must be obtained for any extraordinary disposition of the provincial funds.

Each of the Greenland councils disposes of funds, for which there are special regulations in the Act of 1925 (sections 35—39). According to section 36 the Administration of Greenland, on behalf of the population, contributes to the funds a yearly rate, fixed as a fifth of the value of the monopolized Greenland products, which have been traded-in during the financial year and are destined to be sent to Denmark and calculated according to the trading-in rate at any given time. In addition to the amount mentioned in section 36 the authorities pay a yearly rate of two per cent on all the (cash) salaries of the Denmark and Greenland employees.

Thus it is a not inconsiderable activity, which is exercised by the Greenland councils; as to the details of this the reader is referred partly to the yearly reports of their proceedings, and partly to the statistics published by the Administration of Greenland.

In an economic investigation like the present it will be natural to call attention to the fact that the proceeds of the funds are not determined by the prices of the commodities bought and sold in the world market, or by the total economy of the Greenland Administration, but according to the purchase prices in Greenland. Thus there is a gradual rise in the proceeds of the funds, in the same manner as mentioned in connection with the incomes of the population, and there has been the same gradual increase of the funds as of the general economy of the country. This has both a favourable and an unfavourable effect. The favourable effect appears from the preceding, the unfavourable consists in the failure to direct the attention of the municipal organs to the importance of the productivity and the profitableness, or to the problem of substitution and scarcity, an expression of the choice which in many cases must be made between two in themselves desirable benefits.

During the last World War the Greenland provincial councils held joint meetings in order to discuss a number of problems of mutual interest, and in 1945 the question of the further development of self-

government was taken up for discussion. These meetings were continued in the discussions, which in the winter of 1945—46 took place between the representatives of the Greenland provincial councils and the Danish parliamentary Greenland committee, and the report of June 12th, 1946 recommends a raising of the Greenland funds by a rate of 2 per cent of the administration expenditure to hired (periodically hired, as a rule unskilled) labour, corresponding with the 2 per cent already granted on the salaries of the employees.

For the municipalities it was proposed that they should generally have the right to use their funds for purposes of public utility, for instance the building of halls for meetings and lectures and store houses for hunting and fishing products, the equipment of public baths and repair workshops, the purchase of motor boats and larger implements for common use, measures for the removal of offal, roads, the digging of ditches, well-sinking, wireless installations and possibly cine-cameras.

As to the district councils the Greenlanders themselves laid great stress on the desirability of their having an opportunity to express their opinion before the election of members, and that nominations should not be unlimited as to time—with a view to the exceptional cases where a member elected should possibly prove to be found lacking in the necessary qualifications for the fulfilling of his task—for which reason the committee agreed on a proposal to the effect that in the future members were only to be appointed, after the district council had declared themselves, and that the appointment should be for four years at a time.

As to the position of the provincial councils the two together had in 1945 proposed an abolishment of the administrative division into North and South Greenland, and instead of that to introduce a central administration for the whole of Greenland, consisting of one provincial council and one chief administrator (the Landsfoged). The Danish parliamentary representatives did not deny that the development in Greenland tended towards a gradually more centralized form of administration, and they fully realized the wish of strengthening the feeling uniting all Greenlanders which was at the back of this proposal; but at the same time they were of the opinion that the time was not yet ripe for a final resolution, and that the necessary experience must be obtained under more normal conditions. The committee therefore agreed to a proposal that for a period of five years joint provincial councils should be held every second year, and that the proposal as to the centralized form of administration should be taken up for renewed and final discussions.

None of this proposals can be said to be dictated by special economic considerations. The parliamentary point of view in 1946, as con-

trasted with that of 1925, is the strong emphasis laid on the carrying out of all necessary measures tending to promote progress, irrespective of costs. This view does not coincide with the one expressed by RINK, according to which the economy of Greenland should in the long run be determined by the geographical possibilities of the country. However, the extremely humanitarian and pronouncedly cultural point of view now adopted contains one element of danger, viz. that the present Danish Parliament runs the risk of tying down its successors by the dispositions now made. If it should prove impossible to continue, in a period of depression, the support which is now, under Danish economic high conjunctures, given to Greenland in the shape of grants, nothing will be gained by having let the Greenland community be carried along by the Danish conjunctural wave. In any case there must be a weighing of expenses as to what can be obtained in any given case (not only economically but also culturally), but until now it has always been the prevailing idea in Denmark that the weighing must be undertaken from a long-run point of view. The economic consideration is apt to lead to a limiting of expenses proportionally with what might in itself be desirable (the scarcity of means).

The necessity of a limitation of expenses proportionally to the possibilities of payment has not been without response in the provincial councils. Thus, at the provincial council meeting in 1945, the following statement was made by HANS LYNGE: "As long as we receive gratuitous teaching in our schools, and as long as the church and the health service are gratuitous, we cannot exercise any great influence on the administration of the country. There is something disarming in the fact that there is always a deficit in Denmark's dealings with Greenland. But not only that—equality between Danes and Greenlanders can not be effected as long as we enjoy so much gratuitous help. I propose that an economic revision is made, which by introducing a better legislation for salaries and wages, and one which fairly corresponds with the prices of the world market, will enable us to pay for the instruction of our children, the help we receive at the hospitals and in the churches. Under the protection of Denmark an attempt ought to be made to let us try to manage our own affairs. In order to obtain independence we must run the risk ——"

For an economist there is a strong appeal in this realization of the connection between income and expenditure in a self-governing area. However, the reasoning is not quite correct. Even though the prices of salted fish on the world market have been very high during the years of the War, the proceeds have not been sufficient to cover the costs of the supplies sent up to Greenland, and it appears with sufficient clearness from the public accounts that in the years 1939—45 it has been necessary

to contribute considerably to the economy of the country. Add to this that it is the prevailing idea that the considerable rise in salaries and wages effected in the course of 1946 should be kept up, even though the prices of salted fish fell to what was the approximate level between the wars. This rise must consequently find its justification in general cultural points of view and not in economic considerations.

The problem raised as to the economic aspect of the increased self-government in Greenland—which no one in principle will try to oppose—has thus not been settled, neither by the reform of salaries and wages nor by the proposals set forth in 1946. It will, however, undoubtedly be an urgent one in the future, and in the following and concluding chapter an attempt will be made to account for some of the possibilities at hand.

CHAPTER XII

ECONOMIC POSSIBILITIES OF THE FUTURE

In an economic valuation of the financial problems of Greenland, both at the present day and in the future, it will perhaps be unnecessary in this connection to emphasize that such a valuation will depend upon the aims put forward by the political authorities in Denmark and Greenland. Whether the one aim is better and more correct than the other, is an extremely important political question, but the lines followed are laid down as a result of economic-theoretical deliberations. The problem to be faced from the point of view of economic theory is whether the aims advanced on the part of the political parties are best attained by the one or the other set of dispositions, or whether it is perhaps possible to demonstrate that it can best be solved (for instance with the least costs) by means of a third set of measures.

A. Relevant Aims.

In present-day discussions of the question of aims in the relation between Denmark and Greenland it will be natural to begin by emphasizing that there are a number of possibilities, which at any rate at the moment are not of any political interest, for instance, the former frequently applied principle of colonial policy, viz. that a colony should be of the greatest possible profit for the mother country. This view may be split up into several, according as profit is supposed to mean profit during a shorter or longer period, and each of these fundamental views would in their turn give rise to economic deliberations as to the manner in which the specified aims might be attained.

But also as regards aims, which for the moment may be supposed to be of interest, several can be mentioned. One may put forward the aim that the economy of Greenland must tend towards being self-contained, so that the prices in the individual year are to approximate as nearly as possible those of the world market, and that the costs are deducted in the case of the products sold and added to the commodities purchased. It may further be assumed that the various Green-

land expenses for the benefit of the population are included in the prices, so that the total economy of Greenland year after year is made to pay. The system of aims here advanced may be called Aim 1.

It would also be possible to put forward the aim that the economy of Greenland should be self-contained, but this is not meant to apply to the individual prices or to the individual years. The economy of Greenland should be self-contained but only for a longer period, and within this period the prices must be fixed in such a manner that the population should have a relatively uniform standard of living, rising gradually and parallel with the supposed rise in productivity. It is in the main this aim which has been described in the preceding and can here fittingly be termed Aim II.

We might also set forth the aim that the population of Greenland should be considered as part of that of Denmark, and that it might as such be entitled to a standard of living and to cultural, educational and health conditions corresponding with those prevailing in the mother country between the North Sea and the Baltic. This would include an investigation of the economic consequences implied, which system of aims in the following may be termed Aim III.

Further, it may be assumed that the Greenlanders and the Danes are two different peoples, living under widely different natural conditions, but in such a close human contact that the country with the richer natural possibilities is willing to help the other through its difficulties, either as an aid towards the further education of the population or as a lasting support resulting from the unfavourable natural conditions. This group of aims may be termed Aim IV, but it must be borne in mind that the definition is here so vague that it contains possibilities of variation of the help given, that is, the form of the aim is such as must in the individual cases assume political decisions.

Finally, in the system of assumptions, it is necessary to set up some connecting links regarding the world market. Here there would be no sense in setting up assumptions based upon present prices (the spring of 1947), as these have been determined by the War of 1939—45 and the resulting quite abnormal economic situation (i. a. the great efforts made to buy cheap articles of food for the starving millions). These conditions can hardly be supposed to last, unless there is a new World War, and in that case no purpose whatsoever will be achieved by indulging in considerations as to the future. As always in economic theory, where considerations pointing far into the future will be set up, one must take one's starting point in fairly normal conditions. Quite "normal" conditions, it is true, never exist, and economic deliberations with economic conditions, such as they were f. inst. before the first World War, making part of its assumptions, are not economic-

ally relevant to Greenland. Therefore, it is necessary to build on the time between the wars as the most normal one, presumably not considering the first years after 1918 with their high conjuncture and depression, but only to regard the period 1924/39 as a period which may be said to form a whole, because it contains in itself very considerable conjunctural fluctuations.

This period showed an annual deficit of about three million kroner on the general activity in Greenland, which deficit could be covered by the average State revenues from the cryolite mine. This revenue, it is true, is not due to any effort on the part of the native population, but it originates from Greenland, and so it will be natural to assume that it should also in the future be fully used for the benefit of that country.

If it were possible to reckon with the prices of the world market settling at a level, which was 60—100 per cent higher than the one before the war, but that the price relations (which in their turn are based upon costs etc.) remained fairly unchanged, and if also the living conditions of the Greenland community were kept on the same level the result would be that the deficit, expressed in kroner, would be 5—6 millions.

The market would naturally always bring about some variations in calculations of that kind. As such may be mentioned that the prices of furs in the future may be expected to be influenced by the many fox farms now found all over the world (possibly also by a decreasing demand in consequence of the high taxes), and this will presumably cause the long-run tendency of the prices of furs to be relatively falling.

For Greenland, both as regards costs and supply, some variation may be expected. Among the expenses to be taken into account must be reckoned the rise in 1946 both of payment for hired labour and of salaries to employees; and also the steadily increasing demand for public expenses in all fields, as to the amount of which it is impossible at the present time to form any real opinion, beyond the fact that it will be a fairly considerable one.

As to supply it is to be hoped that a rise will be brought about by the increased productivity; the great occurrences of cod in connection with the sending up of many new motor boats should at any rate make an increasing trading-in probable. Finally, results may be hoped for from the new trades, which are being developed. In this connection, however, it should be borne in mind that there is always the usual risk of the cod disappearing or of the diminishing of the occurrences.

Even when taking the conditions prevailing in the years between the wars as the starting point of one's economic considerations, it is necessary to realize that, in spite of everything, there are so many different factors that great care must be shown in forming too fixed an

idea as to the future economic result. The only thing that seems fairly certain is that if conditions become as they were in the years between the wars, only with a higher price-level, the economic result will be a yearly deficit (always apart from the revenues of the cryolite mine) of five to six million kroner. There will be deviations from this figure, and some people will expect the deficit to diminish in consequence of an increased productivity, whereas others will expect a considerable rise in consequence of new great unprofitable costs. All that can be said is that fluctuations in both directions will balance each other.

On this basis one may now imagine that the question of establishing a new economic policy will not materialize, as long as the present economic conjunctures last, so that all costs are granted which are thought desirable for cultural purposes, but that the problem as to the line to be followed in the economic policy of Greenland must be taken up for consideration during a probable period of depression, when for financial reasons it will be necessary to subject all the expenses of the Danish State to critical discussion.

B. Economic Consequences.

In a period of economic crisis or low conjuncture in Denmark one may thus imagine that the economic aims regarding Greenland would be taken up for political consideration. It will naturally be impossible a priori to form an opinion of the details of the political premises, which will then have to be reckoned with, but it would nevertheless answer the purpose, if it were attempted to decide, from the point of view of economic theory, which financial consequences might be imagined as the results of the four political aims mentioned above.

When carrying out a development in the direction of Aim I and assuming a standard of living like the one in the years between the wars, the result will be that some prices will be raised and others lowered. The average incomes in some districts (for instance, when there are many blue foxes) will rise and in others they will fall. This may, according to the usual economic theory, lead to a number of removals to districts with better economic conditions, followed by new movements, if the conjunctures of the world market should undergo changes other than temporary. Thus if the Greenland economy were entirely based upon cod fisheries, one might for instance imagine the entire population to be assembled in the Godthaab district or within a very few areas. In this manner a number of economies could be practiced, not least as regards transport and administration, but what would be the result if the occurrences of cod diminished, if only for a couple of years, or ceased altogether?

By an economic policy of this kind some temporary advantages could be obtained, and there are some who from a short-run point of view are adherents of such a development. It may, on the other hand, be observed that removals of this kind will be very expensive, not least because of the new houses etc. which must be built; to move them back will also be very expensive, and to these expenses must be added that it will take a long time, with the attendant great costs, to have the men trained afresh for their old occupations.

If the prices of cod fall to the same relative level as in the years between the wars, it may be difficult to make this industry pay, and it is possible that one cannot, as far as Greenland is concerned, raise the marginal income above the marginal cost, so that the trade must be suspended for a shorter or longer period.

As a special characteristic of Greenland mention should be made of the large cryolite revenues. Even at such times when efforts are made to introduce a liberalistic economy, it would be reasonable, if the State kept these revenues and used them in Greenland for churches, schools, medical and health service and administration, so as in the main to avoid the large amounts to be paid in taxes.

Besides the change taking place at a given time in the price relations between the various Greenland areas, Aim I also leads to a change in the revenues throughout the years. Thus it will be seen that the incomes of the population in some years might be 50 per cent higher, in others 50 per cent lower than under the hitherto prevailing conditions, indeed as already mentioned the fluctuations might be supposed to become still greater.

Even though the average incomes would be the same, the usefulness for the citizens during a conjunctural period would upon the whole be smaller. The extent of the consumers' rent (fall in use) would be determined by the decrease in or rise of the marginal use of the money. As Greenland is an area, the position of which from the point of view of the world market is that of a marginal producer, and as the living conditions of the Greenlanders are much nearer the minimum of existence than those of most other nations, it must be supposed that the consumers' rent in Greenland will be considerably higher than in most other areas.

The particular weakness attaching to Aim I as an economic-political principle is not only what may be concluded from its consequences for Greenland, but also the fact that in countries with much more favourable natural conditions, as e. g. Denmark, a number of regulations have been carried out in the years between the wars, the economic object of which can be characterized by the fact that a fall in income coming from without must cause the smallest possible fall in consumers'

rent for the population. As owing to the geographical conditions the falling consumers' rent in Greenland is estimated to be considerably greater than the corresponding one in Denmark, the arguments, which in the case of Greenland could be applied in favour of following the fluctuations of the world market, would be considerably less forceful than a similar argumentation for freer conditions with a lessening or abolishment of the restrictions for Denmark, and here the demands for greater freedom in the economic life and the formation of prices have not been able to make themselves felt.

When turning to Aim II this group has been described very exhaustively in the preceding. Where it is a case of considerations touching the future, it must be borne in mind that the line of development as regards the incomes of the Greenlanders, which was fairly gradual until 1940, of later years has shown a very considerable upward curve. According to the views underlying Aim II this development may be characterized as a special high or war conjuncture, transferred to the social life of Greenland. If from such a situation an attempt is made to return to one of equilibrium, this might be imagined to be carried out by stabilizing the incomes, until through a gradual development the corresponding economic level had been obtained; or else the high conjuncture might be succeeded by a depression, which brought back the former level. With the development undergone by the stressing of the cultural line such a working out is hardly politically relevant.

When passing to consider the economic consequences of what has been termed Aim III, viz. the aiming at homogeneous conditions in Greenland and Denmark, special attention must be paid to the fact that the economic-geographical conditions are essentially different. Denmark is a small area, Greenland a large one, and the difference merely in costs of transport for the same service would be incalculable. If the same medical and health service, the same school system etc. and the same salaries should be introduced into Greenland, it would mean a rise of expenses as to the extent of which the spokesmen of this aim hardly have a clear idea.

Aim III would bring about a very much greater deficit for Greenland. There can naturally be no doubt that Denmark, with its four millions of inhabitants, could easily pay a deficit on a Greenland population of twenty thousand, but at the same time attention must be called to the fact that the Danish people would probably, at a lower cost, be able to give the Greenlanders the same standard of living by moving them to a small Danish island.

By applying the considerations which form the basis of Aim III, the population of Greenland are unavoidably very far removed from the conditions of life based upon the economic geography of the country

and upon Nature herself. The distance between conditions of life determined by political considerations and those determined by Nature, is so great that the population, not merely in a period of transition but in all future, will probably be dependent upon the good will and constant assistance of the Danish Parliament. It has always been the economic line followed by official Denmark that the population of Greenland should be assisted to a development, which made it self-dependent and economically self-contained, while a development which was the economic consequence of Aim III would lead to a continued and extended dependency, with the result that, if the assistance were reduced during an economically difficult period in Denmark, it would presumably cause a bitterness, stronger and perhaps more justified than the gratitude felt for former assistance.

If finally Aim IV were adopted on the part of Denmark, viz. to help the population of Greenland to economic independence, so that the Greenlanders of the future would be economically equal to the population of Denmark and thus constantly dependent upon supplies, it must not be forgotten that economic-geographical conditions being as they are, the Greenlanders live in a country on the margin of the areas, where human beings are at all able to exist, and it is necessary to face the economic consequences of the fact that the Greenlanders, less than other people, can bear the effects of falling conjunctures, which threaten them with more pronounced economic fluctuations than most other countries. The economic consequence of this must be an economic assessment between the various conjunctural periods and the possibilities of income in the various parts of Greenland, and this assessment can only be carried out under a monopolistic system, which at any rate in a great part is based upon the line now adopted.

It is naturally not necessary to base this assessment upon the possibility that Greenland in the coming 20—30 years should be able to pay its way; it may just as well be carried out by adopting the fundamental consideration that the Greenland community in the coming 20—30 year period is to receive a grant from the more prosperous Denmark to an amount of fifty or a hundred million kroner or perhaps more.

When working for the welfare of the Greenlanders according to Aim IV the consideration arrived at will probably be that their material conditions ought to follow a gradually progressing development, which however need not be limited to the average rise of the productivity. There is nothing to prevent Denmark from carrying out, for cultural and humanitarian reasons, a more rapid rise in the standard of living than conditioned by the productivity, as long as the Danish community is willing to cover the resulting deficit.

But a gradual development is from the point of view of Aim IV to be preferred to a high conjuncture, followed by a depression. According to this economic-political fundamental principle it cannot be sanctioned if Greenland under high conjunctures, such as have characterized the period immediately after the war, is carried very far in the direction of improved material, sanitary, educational etc. conditions, and then, when the situation of Denmark changes from the high conjunctures of the war years to a period of depression, is left to follow it into the depression. Such a development will in Denmark lead to privations, but in Greenland not only to hunger and want, but also to bitterness against the conduct of the economic life, which has given rise to the great and unintelligible economic fluctuations.

The result of Aim IV must be that the development in Greenland is characterized by the cultural work, which has been the leading feature of the Danish Greenland policy, and that the economic factors must to a large extent be sub-ordinated to the cultural ones. But when adopting this line it would be natural also to correlate the development with a greater economic responsibility and so also a greater authority for the Greenlanders, as emphasized in the above-mentioned statement of HANS LYNGE in the provincial council.

An increased responsibility of this kind may be found in the increasing collaboration between the Danish Parliament and the provincial councils of Greenland, which in the course of time must also find expression in the actual economic field, but on the strength of the aim set up it will be natural to expect that the increased responsibility should be fulfilled in greater detail by the development of Greenland from a monopoly under a centralized administration, to a kind of cooperative community, the characterizing feature of which would be that it was a unity in its relation to the outer world, but also with a far more divided and mutual economic responsibility in its relation to the country itself.

The line here suggested is in essentials a continuation of the fundamental principle of the Greenland Act draughted by Dr. RINK as early as in 1880. In the course of time there has, it is true, been some deviation from this line, as an outcome of the wish to attach as much importance as possible to the cultural tasks, and it will undoubtedly be necessary in years to come to emphasize the independent responsibility of the Greenlanders themselves in an increasing number of economic fields. According to my opinion this can, as described in the preceding, only be effected, if the Greenland State monopoly becomes a Greenland cooperative community with independent economic responsibility within cooperative organs.

C. Greenland as a Cooperative Community.

The economic development in Greenland may easily tend towards a situation, where it is not possible to create a community based upon competition, i. a. because Greenland is too poor to have more than one store (or place of distribution of commodities) in most of the inhabited places (the competition implying an immense waste without the price-mechanism of the free competition becoming effective). On the other hand, it is not possible to maintain a monopoly system proper, because this must presuppose a concentration of economic power which, as a matter of fact, cannot be established when acknowledging at the same time the justification of the wish for an extension of the Greenland self-government and this, as is well known, has always been the aim of the Danish Greenland policy. The Danish Parliament can surmount the resulting problem by fulfilling all the wishes brought before it. But the problem remains, it being simply in human nature to demand more or more, when there is a probability that one's wishes will be fulfilled, and will in any case time after time present itself and demand to be solved.

The basis for the economic independence of the Greenlanders must be a realization of the economic-geographical conditions of the country. It must be admitted that great sins have been committed by the Danish Administration in withholding information of economic and market conditions, and this will bring its own punishment, when opposition in Greenland, as everywhere else in the world, will be more inclined to see the drawbacks than the advantages of the existing system.

A development of Greenland in a cooperative direction will be more difficult than a corresponding development elsewhere, because, as has been described in the preceding, prices from the outer world cannot be used as a starting point, which must be taken into account when making valuations. Neither is it possible to use the same small unity of time; viz. the year, which elsewhere is used as an economic standard of measurement as regards time, but an attempt must be made to undertake an assessment of the economic fluctuations. It is possible that at some future date the very fluctuations of the world market may be assessed and more stable conditions created, in which case a cooperative Greenland economy will be facilitated, but as long as this is not the case, the population of Greenland can only be benefited by having more stable prices than those of the world market, so that the fundamental principle of cooperation may be applied to a longer period than a year. Add to this that in case Denmark wants to continue the cultural policy hitherto followed, this will necessarily involve the giving

of a grant, which is very considerable in proportion to the number of people concerned.

The outcome of all this must necessarily be that Denmark, having to pay the deficit in the individual case, must be able to exercise a certain influence on the prices fixed, and the tasks for which the population is best able to bear the economic responsibility, are the most immediate ones. As was already proposed by RINK, more than half a century ago, there will be nothing to hinder the extension of the Greenland self-government both as regards the medical and health service and the schools. In that case a limited amount must be set apart for these new tasks, so that the Danish community may have some influence on its use in proportion to what it is made to pay. It will hardly be more difficult for the Greenland representatives than for the representatives of other countries to realize that there are at the present moment sufficient means to carry out measure A, whereas measure B is in itself desirable, but that there is unfortunately not enough money for it at the present moment.

Also as regards the trading activity it must be possible to extend the self-government and the responsibility of the Greenlanders. In the individual municipalities, where the population itself is desirous of this arrangement, it should be possible to hand over the store to them, so that the functions of the Greenland Administration are here limited to wholesale business, but in such a manner as to retain the tasks it has hitherto had regarding the assessment of conjunctures and the regulation of incomes.

A Greenland cooperative store of this kind cannot, like a Danish one, be fully organized according to the Rochdale principles, as the latter presuppose a community based upon competition, and in Greenland the cooperative store must also necessarily be a municipal institution, where all the inhabitants of the district are equal.

Important factors in the management of such a store must be the fixing of the salary of the manager, and more particularly the additions to sale prices made at the store. It may be a uniform wholesale addition or a differentiated one, more or less following the same principles as those now applied in the Greenland Administration (smaller additions for necessities, greater ones for luxuries). The presupposition must further be that the municipal council should adopt a rational policy as regards supplies, so that at times when the connection with the wholesale market could not be kept up, there would be sufficient spare supplies, and that the local administration should understand the costs of keeping a too ample stock.

How far it will be possible to go in the future must naturally depend upon the political conditions obtaining at any given period. If the

Greenlanders to an increasing degree will try to acquaint themselves with the economic problems concerning their own community, they will be able to contribute largely to the development of the greatest possible independence.

To the extent that the Greenlanders prove themselves able to take charge of their own economic conditions and are willing to undertake responsibility, not merely as regards expenditure but also as regards income, to the same extent there will hardly on the part of Denmark be any reluctance to grant them an extended economic self-government.

Færdig fra Trykkeriet den 11. Juli 1949.