The Ammassalimiut Kayak and its Demographic Evolution

by Robert Gessain

Extract from OBJETS ET MONDES, Volume VIII, part 4, Winter 1968

Documents gathered between 1884 and 1966 make it possible to undertake a study of the evolution of the number of kayaks in relation to the demographic development of the Ammassalimiuts. The numerical relationship between the population and the number of kayaks (in other words, the number of mouths fed by each hunter, since there was no hunter without a kayak and consequently the kayak can be considered as a demographic indication in the study of this population of hunters) rose from 3.4 in 1884 to 5.3 in 1930, and is now 20 for the whole population. In Greenland, the kayak once the essential tool of the Eskimo hunter, is slowly disappearing, but the frequency of its existence differs very considerably from village to village (1 kayak per ten inhabitants is Isertok, 1 per 24 in Kumiut and 1 per 600 in Tasida).

The Ammassalimiuts are Eskimos living in three fjords on the east coast of Greenland just above the polar circle.

It is our intention to clarify our present knowledge of the evolution of the kayak in Angmassalik from the beginning of our documentation in terms of numbers, shape and function.

In this first article, we shall consider the relationship between the number of kayaks and the number of inhabitants over the years, thus giving a demographic record of a technique (1).

The documents at our disposal make it possible for us to make reference to a prehistoric Eskimo society before it was in any way directly influenced by the Whites and then to follow the stages of evolution brought about by the gradual infiltration of techniques, social structures and religious beliefs of the West.

The kayak, with its complex, specialized armory is a “machine”, which is wonderfully adapted to the sub-arctic environment of Angmassalik. During the summer season it is the only means of hunting in the waters be teen the broken up ice floes; during the winter it is

also used together with the sledge on which it is sometimes carried.

This is one of the factors in determining the evolution from what was once an Eskimo society in complete harmony with its surroundings towards what has become a Danish Greenland society trying hard to find its way amidst the disruptive influences brought about by its contacts with the world of today.

Our Sources

We have made use of:

- the nominal roll of G. Holm, established between 1884 and 1885, when this group of Eskimos was discovered (Ref. 5);
- the nominal roll established by Ryder in 1892, available at the Danish Arctic Institute;
- our surveys 1935, 1935, 1936 (Ref. 2);
- our surveys 1965-1966 (Ref. 3);
- statistics of the Ministry of Greenland from 1894 to 1945. (Ref. 7)

The last mentioned document, as well as Ryder's list, which are extremely interesting, were given to us by Colonel J. V. Helk, Director of the Danish Arctic Institute. We would like to take this opportunity of thanking him for all the untiring and unstinting help he has given us.

The Name

In Angmassalik, the name “kayak” has not been used to designate this craft since the death of a man called Kayak. The word, *carquit* has taken its place. This change of appellation is explained by the fact that it is forbidden to utter the name of a dead person until the name has been reincarnated. According to the numerical relationship of births and deaths, this prohibition period may last from anything between a few days and a few years (2). When, as in this case, the term is used to designate an object, a new name must be found quickly. It is usually an *angakok*, a shaman priest, who is responsible for the choice, He must not utter the forbidden word, but utters a sentence involving the new term. After this the change of vocabulary remains established even after the reincarnation of the name.

How long ago was the term “kayak” dropped to designate the hunter's craft? We don't know. But in the list drawn up by Holm in 1884 there is a twelve-year-old boy called Kayak (No. 256); we have since learned that he was also called Maniguta and that he died in about 1911 leaving behind several offspring who adopted “Maniguta” as a patronym. In any case

it was therefore before 1872 (and perhaps several generations before) that the name of the kayak changed in Angmassalik. There are other examples of the influence of this custom on vocabulary: the terms *ammassat* and *ammassalik* were not used at the time when Holm visited the region. In this article we shall use the Eskimo term, “kayak”, which has now become universally accepted.

Fig: 1. Map of the Angmassalik territory. The letters refer to the fjords:

A. Sermilik
B. Angmassalik
C. Sermiligak

The numbers 1 to 15 indicate the location of the winter habitations. Their distribution is given in the table below:

	1884-85	1892-93		1884-85	1892-93
1. Nunaqitek	**	**	8. Norsit	**	
2. Kingek		**	9. Tasidarti	**	
3. Norajik	**	**	10. Sivangânasik	**	**
4. Quarmiut	**	**	11. Ikatek	**	
5. Immikertok			12. Savanganek	**	**
6. Umivi	**	**	13. Akerninak	**	
7. Kangârti	**	**	14. Inisalik		**
			15. ?		**

We do not know (#15) where the 17 inhabitants of the three tents found by Ryder in September 1892 at Siorartusok spent the winter, as they were still in their summer location and had not started to move to their winter resort. Several families, 42 people in all, returning in August 1885 from a sojourn of several years in the South, spent the winter of 1884-85 in Umivik (16 on the map).

Demography

When G. Holm arrived in August 1884 in the area, which was later to be known as the district of Angmassalik, he found in the three fjords 413 Eskimos,193 males and 220 females. The census taken in the fall of 1884 by Hanserak, a catechist and interpreter from the west coast of Greenland, groups individuals by village, family and age and shows amongst other things the number of kayaks and the name of the owner.

Holm and his little group spent the winter with this tribe of Neolithic hunters and then went South in the summer of 1885. For six years nobody visited the tribe, which from then onwards was known as the Ammassaliamiuts. Then Ryder, another officer of the Danish Navy, spent some time in the region on his return from a mission in the North. This was in September 1892,when the tribe was getting to the end of its summer migration and settling down in its winter quarters.

Ryder also took a census of the whole population on a family basis indicating the ownership of each kayak. This is an exceptional, if not a unique case of having at hand such documents concerning a population at the very moment when it is emerging from a prehistoric era.

Fig. 2 - Three kayaks returning from a hunting trip towing four seals
(Cl. R. Gessain, 1935)

Fig. 3 - Two hunters seen on the ice barrier. On apercoit la côte de la région d'Angmassalik derrière les glaces (Cl. R. Gessain, July 1934).

We were suite excited, thanks to Colonel J. V. Helk, to get our hands on Ryder's pocket-book manuscripts in Charlottenlund Arctic Institute. Thanks are due to these two Danish officers who, with their laudable precision in the field of demographic investigation, have contributed so much to science. After the establishment of the commercial and religious commission in 1894, official censuses were taken on a regular basis. We have been able to consult the nominal rolls and statistical data of the Ministry of Greenland, some in the Royal Archives of Copenhagen and others in the Arctic Institute. We would like to take this opportunity to express our gratitude to the Danish authorities of these institutions for the wonderful spirit of cooperation with which they have always responded to our many

requests.

Fig. 4 - *Umiak* and kayaks approach the shore where a large ice floe still remains in the inner bay. It is in the month of May or in early June that one can see side by side the summer boats and winter sledges. Drawing made in 1935 by Elisabeth Matigalak, who was 15 years old at the time.

The Kayak and the Working Population

The number of kayaks is the best indication in a given population of the number of hunters as, unlike the sledge, the kayak is an individual and personal device; it is used only by one and the same hunter. It is made by him to his personal specifications. A sledge can be used by one or two hunters, it may exist and not be used for want of dogs. Consequently, after periods of famine the number of sledges in use diminishes, as some of the dogs are eaten.

In the traditional Eskimo society, an adult male without a kayak is considered to be a sick man. For example, Amersak (No.337 in Holm's list), who was 35 years old in 1884, had no kayak. We have evidence that he died a few years later. So he was unable to get the skins and raft wood needed to build a kayak. His thirteen year old son had no kayak in 1884, which was an unusual situation at that age. Neither could Amersak play the role of a father for his son and make a kayak for him. One can see how precise analysis can be.

Fig. 5 - Scenes of summer life. Two *umiaks*, summer migration boats, surrounded by kayaks, pass in front of a family group (a wife and three children) standing on a peninsula. A hunter, lying in wait, shoots at a seal, the head of which can be seen to the right; on the horizon a seal is lying in the sun on an ice floe. Sketch made in 1935 by Julita (Juliette Make) 12 years old at the time.

However, there are rather more kayaks than full time hunters as there are always a certain number of children who have kayaks but who do not do much hunting: they are just apprentices. In 1884, six boys between the ages of 9 and 14 had kayaks, that is 5% of the total number of kayaks.

The age of fifteen is the lower age limit of the active male population in the traditional Eskimo society. The average age of children when they get their first kayak is about 12.

They begin their apprenticeship one summer and are capable of hunting a few months later. By the following summer the most skilful ones get their first bag (we know of some children of about 13 or 14 years of age who have about a hundred seals to their credit). Therefore, any healthy boy who is 15 or older and comes from a healthy family, and taking into account the number of seals he has caught before reaching that age, has to be included in our calculations as a “normal” provider of game and in our figures for the active male population. He is considered as a hunter by everyone in his tribe.

Fig. 6 - Graph No. 1. Comparative evolution of the population and the number of kayaks.

Kayaks and Consumers

These documents have made it possible for us to establish two graphs concerning kayaks (5). The first one shows the relationship between the number of inhabitants and the number of kayaks (Fig. 6); the second shows simultaneously the evolution of the quantity of kayaks and of the dimension of the population (fig. 7), One and the other were calculated according to the data, currently accessible, of 1884 to 1945. Beyond this date we retain only the references of 1967. From the Second World War, the documents will be analyzed in detail in a work in the course of drafting of Joëlle Robert. These two curves show under two aspects the same evolution. One can see three successive phases there.

1. A consecutive crisis with the first contact with Europeans which is marked by a considerable demographic fall and an overload of people to be nourished for each hunter;

2. A tendency to regularization; the report/ratio of the producers to the consumers drops, however that the number of kayaks grows at the same rate/rhythm as the demographic expansion, very accentuated since 1900;

3. Finally graph No. 1 shows an upward, trend and graph No. 2 shows erratic changes reflecting the beginning of an irreversible phenomenon: the constants of a stationary demography and stable balance characteristic of traditional Eskimo society were upset and influenced by the new conditions, and, as one can see, over the years the role of the hunter and his kayak as a provider became less and less important.

These graphs provide the bases for certain detailed analyses. The number of inhabitants as compared with the number of kayak hunters in 1884 shown in graph No. 1 is worthy of consideration.

Fig. 7 - Graph No. 2 Evolution of the relationship between the number of inhabitants and the number of kayaks since 1884.

Fig. 8 - Udere gives his seven year old son his first lesson in managing a kayak (Cl. R. Gessain, 1935).

By his discovery in 1884, Holm showed a population which, like the other groups of arctic hunters, maintained a stationary demography adapted to the resources of the environment. The figures for 1884 represent this state of balance. They indicate that in this prehistoric, autarkic Eskimo society, each hunter had to provide food for three and a half persons, including himself.

The first question is whether or not this figure is valid. Does the 1884 population count represent the normal numerical status of this group? We have been able to verify the fact that the number 413 corresponds to what we would call a minimum demographic situation, as there were considerable losses of life in the preceding years. About 15% of the population had disappeared, probably on account of famine affecting whole families. The proportion of the age groups had not been affected. But this fact leads us to think that the stable demographic situation of a population subject to a harsh selection and the hazards of the ecological environment cannot last for centuries, as is the case with the Ammassalimiuts, unless there is a numerical surplus providing a reserve to meet emergencies. Thus such a group evolves demographically between a minimum and a maximum, between a rock bottom and a ceiling, both of which are determined by the environment according to ecological fluctuations. When they were discovered, the Ammassalimiuts had just exhausted the greater part of their human reserves of security.

However, the population under 15 years of age represented 43.3% (this proportion would be 41.9 in 1892 and 42.1 in 1901) and the producer consumer relationship (3.4) is the most favorable shown on our graph. Considering the figures on our graph for 1890 and 1910, we think that we can safely say that this relationship hovered around 4 according to demographic and synergetic fluctuations. So, in a prehistoric Eskimo population a hunter

had to provide for the feeding, clothing and heating of himself and three other people.

The figure 4.1 in 1892 seems to be within the normal limits of the producer consumer relationship of this autarkic Eskimo society. However, it is evident from graph No. 2 that the population of 1892 had suffered a very serious demographic loss since 1884. After G. Holm's visit and his departure in the summer of 1885, whole families went south to see this world where they could find everything that the first Dane had brought with him in large quantities: firearms, cloth, iron and tobacco. The rise in the graph to 4.1 indicates a fact, which would be difficult to prove on the basis of the document presently at our disposal, that probably the huge migration to the South was selective according to age. The proportion of kayaks owned by those who left must have been greater than that of those who remained. For this long journey, taking several years and fraught with many dangers, there was a need for a large number of hunters to provide food for such a large number of families.

> Fig. 9 - Four hunters from Angmassalik have come to welcome the “Pourquoi pas?” on its arrival. The paddles act as stabilizers when the kayaks are at rest (Cl. R. Gessain, July 1934).

At this point, it must be emphasized that the demographic decline between 1884 and 1892 was certainly not due entirely to the migration, but in part to a coryza* epidemic aggravated by fatal cases of bronchial pneumonia, resulting from a lack of natural immunization. Such an epidemic is not mentioned in any documentation subsequent to Holm's visit, but Johan Petersen(quoted by Hedegaard) commented on the severity of the epidemic following Ryder's visit six years later.

*Note: Infectious Coryza (IC) is an infectious contagious respiratory bacterial disease of several avian species.

Decline of the Kayak

As far as the 1894 figure of 5.1 is concerned, which, in a still traditional society, indicates a considerable increase in the producer's responsibility, it must be interpreted as an indication of a serious population crisis.

Fig. 10 - Umiak, a large summer family migration craft surrounded by a group of kayaks. (Cl. R. Gessain, June 1935)

Fig. 11 - Kayak and umiak on the waterside. A large seal has been brought back by a hunter. It has been inflated so that it will float (Cl. R. Gessain, 1935)

In fact, at this particular time the total Ammassalimiut population was at its lowest point, as can be seen on graph No. 2. This resulted from the migrations to the south, which were then at their height, and also from the high rate of sickness and mortality resulting from the 1893-94 epidemic. There was a good chance that a hunter who had been sick for several months would not be able to resume his hunting activities immediately after his recovery, as he might be immobilized owing to the fact that his kayak had not been recovered soon enough, on account either of the lack of fresh skins, or of the sickness or death of the seamstresses; the whole family, as was generally the case, having been affected by the epidemic. For example, in Parnagal, 15 members of a household of 17 died in the winter of 1935-36 as a result of an epidemic of bronchial pneumonia. In small groups, the technical repercussions of demographic declines take longer to counterbalance on account of the shortage of replacement personnel.

On our two graphs we can see a very marked tendency towards a reestablishment of a balance between the years 1900 and 1910. The evidence is clear in the producer consumer ratios of 4.3 and 4.4. These figures are between 3.5 and 4.5, which, in our opinion, can be considered as being the permissible range of fluctuation for a state of equilibrium in such an autarchic group. However, the demographic expansion was already having an effect and adding to the responsibilities of each hunter as a result of the increased birth rate.

However, the number of kayaks increased regularly in line with the increase in the number of inhabitants. The graph shows a gradual return to the ratio between each hunter and the number of mouths to feed and bodies to clothe. The former social structure was heading towards a reestablishment of its functional balance. The old way of life was struggling for survival.

Regional Survival of the Kayak

However, there began a new evolutionary period after 1910, as indicated on the two graphs, which was destined to put an end to the former social structures. Society was changing. Technical, social and moral conditions were changing. Basic family units were established in little houses. Everybody was baptized and became monogamous. There were many more guns available. Ecological conditions changed. The surrounding waters became warmer. Shoals of cod began to re-appear between 1911 and 1915, and from that time onwards the Danes began to be interested in the development of the fishing industry, which, during the following decades, assumed considerable economic proportions.

Fig. 12 - Return of hunting: two kayaks pass in front of an iceberg. Close to them emergent two heads of seals. On the bridge, behind of the float, each hunter brings back a seal. Drawing carried out in 1935 by Igo (Egon Utuak), 10 years old.

Fig. 13 - Bear hunting in Sermilik fjord. In the distance two kayaks are approaching quickly to join in the sharing of the bear. Drawing made in 1935 by Akiliartsek (Tobias Bianco), who was 30 years old at the time.

The old way of life disintegrated by leaps and bounds. There were attempts to disperse groups of hunters on new hunting grounds. The migration to the north towards Scoresby Sund in 1925, and to Skjölungen to the south in 1936 are clearly reflected in the graphs representing the population and the number of kayaks. But these attempts could not counteract what from that time onwards seemed to be an irreversible trend. The Second World War, which for the first time upset the way of life in these regions, accelerated the disintegration of what remained of Eskimo society and seemed in the first instance to have an unexpected effect. During the first two years of the American occupation, the number of kayaks increased noticeably, as can be seen on graph No. 2 for the years 1942-43 and 1944. But this was just what might be called a swan song: the graph shows a downward trend from 1945 onwards. The days of the kayak were numbered, and it would only survive in certain isolated areas. Graph No. 1 shows that the number of inhabitants per kayak continued to increase to such an extent that in 1967 it rose to 20 persons per kayak; which is proof enough that the population was no longer dependent upon the kayak for its sustenance, and that the kayak civilization was coming to an end. In that year, 52.7% of the whole population were under 15 years of age, a fact which indicates the radical

demographic change from the former Eskimo society (1884: 43.3%). The figure for 1967 given on graph No. 2, 115 kayaks for 2300 inhabitants, is evidence enough of the diminishing importance of the kayak's role in society. However, these figures, 20 consumers for each kayak, and 115 kayaks per 2300 inhabitants, have no significance unless applied to the district of Angmassalik as a whole. The precision of our documentation makes it possible for us to undertake a more detailed geographical analysis. In fact, at the present time the kayak continue to survive in some communities but is disappearing in others. For example, in 1966 there was only one single kayak in Tasida (the small administrative capital now known officially as Angmassalik). This kayak belonged to Aza (Asser Utuange, born in 1932) who, having studied in Copenhagen, was a government employee. He liked kayaking and went hunting in his free time. He died at sea in 1967. Thus in this centre of population in which there were more than 600 Greenlanders, there were no more kayaks. The situation was not the same everywhere. In places where fishing had become predominant, as in Kumiut and Kulusuk, there were very few kayaks, but in certain villages there was a higher proportion of kayaks as compared with the size of the population. For example, in July 1966 we filmed a boar hunt at Tileqilak, a village with a population of 200. There were 13 kayak hunters leading the chase (1, Fig. 12).

Fig. 14 - In February 1966, Derch (18 years old), the son of Lazarus, did a drawing for me of his village, Isertok, which consisted of 18 houses grouped around a health centre, a church school and a store with its store house. Each of the houses is identified by the given name of head of the family living in it: in 15 cases the head of the family was a man, in 2 cases it was a widow and the last house served as Margrethe, the midwife's clinic. The family connections between these different houses are shown on the following genealogical table, on which only the names of surviving members of families appear. Around grandfather Samuel, who came to Isertok 40 years earlier to get married, are grouped the names of 5 of his sons in law, 4 of his nephews or great nephews and 8 of his wife's relatives: brother, sister, nephews, cousins - german, or sons of such cousins. Samuel, who was born in 1892, is too old to hunt, but 4 of his sons in law (and his son who lives with him and therefore does not figure in the list of heads of family) own kayaks and provide him with meat and hides. The same thing is true of Perte, whose son has a kayak and spends part of his time in Isertok and part of it in Pikiti, a neighboring hunting area, and of the widows Karolina and Ribika each of whom has a son who is a kayak hunter. Margrethe's husband, as well as Boas, Lazarus, Henning, Lars and Karal own

kayaks. Neither the storekeeper, Ole, nor his young assistant, Hans, has a kayak; but the latter's father who lives not far away, in Inisalik, is a kayak hunter and provides his son with meat. In all, the 13 kayaks in Isertok provide food for 131 inhabitants; or, more precisely, 15 kayaks from Isertok, Inisalik and Pikiti, provide for the needs of 144 persons. These figures, taken in comparison with the producer consumer reports for the whole of Angmassalik in 1967, indicate the heterogeneousness of the present distribution of hunters. The patriarchal structure of the habitat and the economy still remained firm in 1966, but it involved both employees and officials. The midwife was the wife of one of Samuel's nephews, the catechist teacher was his niece's husband, and the young storekeeper, who was responsible for radio communications was his great niece's husband... That was the way Samuel wanted it: in the evolution of modern society he continued to play his patriarchal role, keeping around him to members of his family just as it was in the large communal winter homes 50 years before.

Fig. 15 - Genealogical table showing the family relationship of 18 Isertok family heads in 1966.

One of the outstanding characteristics of the evolution of the kayak since 1884 until the present time is the unevenness of its distribution. Hence the kayak can serve as a demographic indicator in studying the variations in a population of hunters. In Eskimo society the kayak was the most specific piece of hunting equipment, the number of kayaks in each village was a precise indication of the number of able bodied males; in each patriarchal household, the proportion between the number of hunters and the number of inhabitants to be fed was constant. There was an established procedure to maintain this proportion at its best. Every summer, at the great tribal gathering Kringek, which took place at the time when the shoals of capelins (*ammassat*) swam by, a new distribution of the population for the following winter was agreed upon between the senior members of the households and the hunters (who, as a general rule, were their sons by birth, their adopted sons or their sons in law). This custom, which no longer obtains in the large centers of population, still survives in some shall communities. In 1966 the most typical case was Isertok, where old Samueli (Samuel Mikkelsen, born in 1899 and deceased in 1968), a supporter of the system of balanced communities, had regrouped the hunters in his family community (fig. 15). But the increasing number of new techniques overwhelmed the system of balanced communities. Throughout the whole region the hunter lost his preeminent

status and the kayak its importance. A very heterogeneous geographical distribution of population took the place of the traditional homogeneity. However, it is worthy of note that in Angmassalik, although the population increased six fold over a period of 80 years, the number of kayaks in 1967 was the same as in 1884, 115 and 119, and the number of seals caught was also about the same approximately 7000, and finally, the number of inhabitants living mainly seal meat cannot be significantly different from the population in 1884.
(Map, graphs and diagrams produced by the Museography Service of the National Museum of Man)

Notes

1. The structure of the kayak and its hunting equipment will be the subject of subsequent articles in this review.

2. French Expedition or the East coast of Greenland 1934-35: P. -E. Victor, M. Matter, M. Perez and R. Gessain. French Trans-Greenland Expedition 1936: R. Gessain, E. Kauth, Perez, P.E. Victor.

3. R. Gessain visited Green in 1935 from August 20 to September 20, renewing his acquaintance after a lapse of 29 years with the general population of Angmassalik. In 1966, he worked with M. Gessain from January to July, assisted by M.F. Burguburu for three months, collecting data concerning the major changes that had taken place. The content of this article has been discussed with J. Robert and P. Robbe, members of the Eskimological section of the Centre for Anthropological Research (Director - Robert Gessain), National Museum of Man.

4. In the phonetic notation of the Ammassalimiut language, c = ts as in tsar; q = voiced velar fricative. Thalbitzer, p.381, recording his observations made in 1905 & 1906 writes phonetically *carqin*. Since 1934 until the present time, we have all written *carqit* (singular), the final “t” being slightly pronounced.

5. A. Langaney established these graphs and discussed them with the author.

References

1. Gessain (R.). - Angmassalik, trente ans après. Evolution d'une tribu eskimo dans le monde moderne. *Objets et Mondes*, VII, 2, été 1967 (pp. 133-156).

2. Gessain (R.). - Makour mon frère, fils de mon fils. *Sciences*, n° 49-50, août 1967 (pp. 34-41).

3. Gessain (R. et M.). - Le phoque et fours (chasses d'été des Ammassalimiut). Film 16 mm, couleur, 15 mn, 1966.

4. Hedegaard (A.T.). - *Angmassalik* 1894-1915. Manuscrit, 90 p., Arktisk Inst., Charlottenlund, Danemark.

5. Holm (G.). - Ethnological sketch of the Angmassalik eskimo. 1911, in W. Thalbitzer 1914. *Med. om Grönland*, XXXIX (pp. 1-147).

6. Ryder (Lt). - *Fortegnelse over Beboerne i Angmassalik Distriktet i September 1892*. Manuscrit, 15 p., Arktisk Inst., Charlottenlund, Danemark.

7. *Statistisk Protokol*, Ministère du Groënland. Copenhague (document communiqué par le Colonel J.V. Helk).

8. Thalbitzer (W.). - The Ammassalik eskimo. Contributions to the ethnology of the east Greenland natives. *Med. om Grönland*, XXXIX, 1914.