ANALYSIS OF THE RELATIONSHIP BETWEEN SOCIAL STRUCTURE AND STRESS BEHAVIOR IN PRIMITIVE SOCIETIES

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Two population groups have been chosen for this study based on the findings of two conscientious and presumably unbiased ethnologists: the Tikopia [1] and the North American Eskimo [3].

The Tikopia

The book on the Tikopia is especially suited for a study under this heading. It circles around a very acute stress situation caused by two heavy typhoons which were followed by exceptionally severe drought resulting in famine.

The Tikopia live in the Western Pacific on the Island of the same name under the authority of the British Solomon Islands. Firth [1] calls them a small-scale strongly patterned community of people in a very isolated situation.

Kinship ties are forming a primary basis for social relationship. The people reckon their descent patrilineally with respect to kin group membership, rank and property but at the same time with strong matrilateral accentuation. As Firth relates, all Tikopian feel themselves as members of a common body with one language, the same customs and a highly interknit kinship system. Characteristic for the interrelations

between individuals are the many obligations and reciprocities binding them together. For any kind of service or gift fixed equivalents are established and standard returns are known and accepted.

A strongly developed status system divides the Tikopia into chiefly families and commoners. There are four chiefs in Tikopia, each being the head of a clan. Their power is absolute, though they tend to act following common opinion or at least to give the impression of doing so. Their rights for privilege are acknowledged by the commoners and no feeling of being exploited by the chiefly class was related by Firth.

Ritual elders named by the chiefs belong to the political aristocracy as well as the maru, i.e. the executant officers who interfere in the communal life in the name of the chiefs. Differences of rank among the maru are dependent on the closeness of their family links to the chiefs but also on personal skill.

The Tikopia are mainly horticulturists with taro, breadfruit and coconut as staple food together with banana, sago and several other starchy tubers of less importance. Traditionally there were no pigs on the island. As source of protein serve fish from the sea and from interior lakes.

Several methods of food preservation are known, i.e. the preparation of a paste or of flour. As a final reserve for cases of emergency, enormous giant taro is left to grow in the gardens for years.

Firth calls the system of Tikopia economy primitive because traditionally they did not use any kind of money but resorted to barter instead. A specified system of values was elaborated according to which exchange of objects was carried out. Food was excluded from this kind of exchange. It symbolized social status and was used for a complex net of gift giving between chiefs and commoners, relatives, visitors or the poorer members of family of community. To give any objects in order to obtain food was unconceivable for the Tikopia. When money became known on the island, mainly through wage labour on plantations, it was understood in terms of their own cultural pattern as a kind of gift in return for services rendered.

Typhoons are not unknown in Tikopia. They occur occasionally in intervals of about 20 years so that every adult remembers such phenomenon. Famines are more commonly known from the periods between main crops. In March 1952 shortly before the arrival of Firth on the island where he had undertaken extensive studies already in 1929, the island was hit by a strong typhoon. When the first shock of the disaster was overcome and the people started to return to a fairly normal life, a second typhoon struck the island about one year later, not as heavy as the first one but leaving the people in a state of desperation. Whereas after the first typhoon they were able to collect the crops harvested by the storm, and to preserve them according to their modest

abilities, there were no mature fruits now and what was destroyed were the young plants and fruits cultivated after the first disaster. The second typhoon was followed by a severe drought which pushed the next harvest for more than one year in the future.

Natural causes are primarily considered as being responsible for typhoon and drought. There are at the same time religious considerations involved. The Tikopia believe in the existence of links between chiefs, their clan gods and natural phenomena. The latter can be controlled by the chiefs, that means through the favour of gods towards chiefs, but spirit powers without specific intentions may also affect the course of nature. Personal qualities of specific chiefs can be responsible.

Famine is considered as a consequence partly of human failure through lack of foresight, through laziness or theft of immature crops, but also of the inadequacy of chiefs who can be too old to secure fertility or as a consequence of the malevolence of two rivalling chiefs who might destroy food supplies by sorcery. On the whole it appears that an unnatural condition of society is manifest in abnormal conditions of nature, i.e. the natural order is related to social harmony [1, p. 80].

In such extreme situations the strength and the weakness of a social system can best be tested out, as Firth emphasizes, it was not always easy to distinguish between altered behaviour

due to the famine or due to cultural changes as a consequence of influences from outside.

Firth gives a detailed description of the reaction of the Tikopia after they recovered from their first shock immediately after each of the typhoons. The political leaders, aware of their responsibilities, deepened their acknowledged leadership. They organized the people to clean up the debris of the disaster, to repair paths and the water system, children were sent to collect broken branches as firewood. Laziness stigmatized traditionally was looked upon with contempt. People were called to give up their apathy. The formerly strictly religious assembly, the fono, was remodelled as public assembly now regularly held on Sundays, where the damages were assessed and steps to be taken were discussed among chiefs and commoners. New regulations were adopted for the use of the land, whereby fallow land had to be put under cultivation, boundaries of family lands had to be clearly demarcated, the collecting rights on the lands of others were restricted or cut altogether, and cultivation rights on the lands of others had to be newly defined. Even such land was used which was left fallow in preparation for ceremonial use, though not all of it. New crops with emphasis on short-term crops and plants resistent to drought were introduced. Fishery was discouraged in favour of agricultural activities in order to make up for the loss of productive plants. After the typhoon there continued to be enough fish as a supplement but an intensification of fishing

would not have brought additional food because the amount of fish available was just enough for the normal daily needs.

A very serious problem arose under the impact of the famine: people started to steal food, to dig up immature crops. They did not even spare the chiefs and their families. It seemed that the only people wo did not resort to such means were the chiefs themselves and the executant officers, the maru, conscious of the necessity of their stating an example. The stealing was a serious menace to law and order although it was felt by all, even by those who were involved in such acts themselves, that it was a shame to be a thief in times of emergency. As Firth says this feeling for morals was the best guarantee for a quick return to normal standards.

The system of customary law had to be revised regarding the punishment of thieves. One of the traditional methods to send a culprit in a boat off into the rough sea to almost certain death was given up under the influence of government authorities. Instead it became more frequent to insinuate to a person known as a thief to go abroad as a wage labourer, to a kind of exile. The usual procedure of waling over a discovered theft was soon stopped because it became too frequent. The detection of theft became increasingly often a source for violence and public disorder. But since there were no means in the system to find out and to methodically punish a theft, new ways had to be found in order to avoid theft altogether by protecting the crop, by prohibiting fishing in certain

waters where stealing would be easy to undertake, etc.

A marked consequence of the food shortage was the atomization of the kinship group. Whereas before it was one of the most respected obligation to offer food to agnate and also to affinal relatives, this custom could not be maintained any more. It dissipated gradually, first the host and his family did not eat the same quality of food offered to the guest, then under some pretense they did not eat with their guest anymore, giving him the little they had, excusing themselves toward strangers first and relatives later on. They ate secretly in order not to be obliged to share the food they could provide for the household which remained the only unit where obligations remained existent also in times of utmost scarcity. Even the obligations towards chiefs were abandoned but under the common understanding that in the worst case the chief would have to be supported by the commoners, not so much as his personal privilege but acknowledging that the chief is the representive of the community, and that supporting the chief is supporting the community. Food was never pooled by common action, it always remained under the responsibility of the household.

Dancing was an important part of Tikopia recreational activities. During the famine the leaders recognized its value to release tensions and to keep the people moving. Public dances were intensified and later on they even became compulsory so much that mourning periods were shortened to

allow the family members of a deceased person to take part in public dancing soon again.

With respect to Tikopia religion, consequences of the food shortage were unavoidable since food was essential for any kind of ceremony. It followed that in such ceremonies where food as offering played a symbolical part, a small offering was still significant and the food which was offered first could be eaten later on. The situation was different where food exchange on a big scale was an important part of the ceremony, like for a wedding and initiation. It was thus ruled that none of such occasions could take place during the time of the famine. Even funeral ceremonies were reduced and many people were not attending because they were unable to provide the necessary food gifts. Certain types of ceremonial performances merged with others or were simply omitted and at the height of the famine even basic elements were abandoned.

No special ritual appeals seem to have been made for relief except through normal pagan and Christian rites in regular ceremonies, in accordance with their assumption of the famine causation through human failure.

North Alaskan Eskimo

Firth emphasizes in his book on the Tikopia that there are hardly any and only marginal investigations made on people living in a hunger period. As comparison with the Tikopia study, it was necessary to look for a population group in an

equally isolated location and living under economically difficult conditions. The material should be well documented, or course. Spencer's book [3] on the North Alaskan Eskimo proved to offer these prerequisites dealing with two Eskimo groups living under an almost permanent stress due to the harsh environmental conditions of the Arctic.

The area under study is the tundra between Point Barrow and Point Hope in northwestern North America where two groups of aboriginal Eskimo were living, the nomadic caribou hunters of inland regions, called nuunamiut, and the sedentary whalers of the coastal slope, the tareumiut.

Despite differences in social form particularly concerning differences in subsistence and ceremonial life they were more alike than different in their societal organization. They spoke the same language, although with regional variations, their kinship organization was similar.

Both groups acknowledged bilineal descent giving to each individual the membership of two lineages and with it a wide circle of relatives. These were bound together by strong bonds of mutual aid, by reciprocal obligations and responsibilities. Beyond the nuclear family as residence units and smallest economic unit and the extended kin grouping existed a wide range of quasi-kinship and the formalized extensions of cooperative ties to non-kin. Half-relationships were considered as true relatives, a half-brother was a brother, etc. Adoption was extremely frequent, and the adopted child had kin

obligations towards his native and adoptive families, also with respect to the exogamic marriage regulations. An orphan was regarded as a poor person because he had no kin to give him economic security. He had to work for his living if he was not adopted within the extended family or non-related groups.

The institution of wife exchange on a temporary or permanent basis was not so much an expression of granting hospitality or pleasure to a trade partner or joking relationship but much more a strengthening of a partnership or extending of quasi-kinship bonds through the exchange of personal property (wives) thus broadening the range of mutual aid and cooperation which went in such cases to the kin and to all the children of the respective couples, and not only to those who originated from such union.

Wife abduction was common, not necessarily resulting in murder which happened frequently. It could occasionally serve to create new friendships between the two men who shared the wife, and consequently to new bonds of cooperation.

The coastal Eskimo lived off whaling and the hunting of sea mammals. Complex social and religious behaviour was patterned around the whale but also around most other animals which were hunted, like bear, fox, wolf, and especially the seal. The subsistence of the inland groups was gained through caribou hunting which received the same ceremonial attention as whaling by the coastal groups. Caribou hunting

was undertaken by the coastal Eskimo in individual raids after the whaling season but no inland Eskimo was traditionally prepared to go whaling on the coast.

The Eskimo lived mainly on meat, an adult consuming 7 to 8 pounds a day so that tremendous quantities had to be stored in the ice after a whaling or caribou hunt or dried in the manner of the inland Eskimo. Vegetable food was not eaten to any important extent, except the partially digested content from the stomachs of herbivorous animals. The inland Eskimo used a wider range of vegetables than the coastal groups, consisting of certain roots, shoots and grasses and a variety of berries which were also traded to the coast.

Success in hunting depended mainly on the movements of whales and walrus according to the prevalence of the ice or on the unpredictable seasonal ways which the caribou herds took. A change in routes could mean a year of famine which might occur every 6th to 7th year. Food shortage was not necessarily frequent but it was well known and Eskimo society was prepared for it.

For the inland Eskimo, food provision was rather unbalanced varying between times of surplus and acute food shortage, much more than for the people involved in whaling.

The hunting activities of both groups shaped their settlement patterns. On the coast permanent villages served as basis for the hunters, besides they established camps for whaling and duck hunting. The houses were grouped around the dance house,

the communal gathering place mostly of men but also of women, where the socially important recreational activities of dark winter days took place, as well as ceremonial preparations for hunting. The inland Eskimo depended on the unpredictable migrations of the caribou herds. They had to cover wide areas in search of herds or while hunting them in corrals or by driving them into the water. Their settlements were made of tent-like temporary or of semi-permanent houses. The dance house was also a temporary structure. They travelled from winter camps to spring camps and then to their summer settlements.

Eskimo culture granted a great freedom of choice of the economic activity to the individual who could do as he liked, go hunting or stay at home and dedicate his time to other occupations like tool making or trap laying, or he could hunt individually or in groups or go fishing. Only laziness was frowned upon. At the same time a man could choose the place where he liked to settle, either together with relatives or alone. He was not bound by any rules of behaviour with respect to the place of residence. He was also free to choose the relatives he wanted to live and travel with, or the whaling of hunting group respectively.

There was no person, no chief to direct the behaviour, no defined political structure. It was the family which exerted social controls.

The only social distinctions were made according to the wealth of a person. A skillful hunter who was able to gather

surplus food or goods could buy a boat and support those men who went whaling with him in his boat. He had great prestige but his influence did not go beyond his crew members. Anyone who could have surplus food could become a boat owner. This was a position of social and ceremonial importance but without any political significance.

Similar to the boat owner of the coastal Eskimo, the director of the caribou drive was a man of local influence. He was the builder of the stockade who attracted the same men every year for the big caribou hunt. Expression to the wealth concept was given by severely elaborate ceremonies, particularly the "Messenger Feast" at which extensive gift exchange took place suggestive of the potlach of the Northwest Coast. Invitations were given to one crew captain by crew captains from other communities to partake in the feast if his group felt they were able to provide the necessary objects involved for exchange.

A main part in Eskimo society was played by trading. It never took place within the family or community but between villages or districts or the two ecological groups. Long trading journeys were undertaken after the big communal spring hunts making the community break into small bands.

It was possible to buy food within the community but it was looked upon as avowal of one's failure to provide for one's own subsistence.

Most markedly was the interdependence between coastal and interior groups. The inland Eskimo provided mainly caribou

hides for the coastal village dwellers. In return they received whale blubber and oil which was essential for their survival. When new products were introduced from the outside through the establishment of trading stations, and Western textiles were imported, there was no need any more for caribou hides. In search of whale oil the inland Eskimo had to give up their pattern of life in the interior. They settled down in the coastal villages where they were absorbed in the labour force of the Alaskan naval petroleum project. In 1952/53 there were only two bands left who followed the traditional pattern of caribou hunting, resisting school and medical care. They will have ceased to exist in the meantime.

The responsibility which each individual had with respect to any person of his kin was mainly related to blood feuds which were common in the Eskimo culture between extended families and which could last through several generations. If retaliations for minor offenses were involved, it was a personal matter of the individual and the kin grouping was not expected to interfere. Only when killing was involved, the kin group might agree to find a peaceful solution or to meet for war which was not necessarily putting an end to the feud. Reasons for hostilities and killing were often related to sexual involvements, a stolen wife, or rape and adultery, and less because of food or personal property. Food was freely given if asked for. The inviolability of a house was sacred and burglaries practically did not occur.

In opposition to the strong urge for cooperation within the kin group and the formalized extra-kin associations was the marked hostility towards strangers. They were harassed accordingly if they ventured into a strange community so that they were obliged to look for some kind of cooperation possibility within the otherwise hostile community.

The ideal pattern of intersocial behaviour favoured modesty and uniformity. Children were educated to show only limited ambition. The individual should excel in certain abilities or qualities but not at the expense of others. Children were taught not to speak unfriendly about others. They were consciously prevented to hear adult gossip. The ideal attitude was to be "patient" or to "save the face" and not to be too good in a competitive game lest the shaman would take revenge. Industriousness and generosity were well liked. If somebody showed an extreme antisocial behaviour being intolerably quarrelsome he was murdered or driven away to starve.

North Alaskan Eskimo religion held that the animals of the surrounding nature have the ability to talk and to think in the same manner as men do. It was extremely important in order to secure success in individual or communal hunting to show the appropriate behaviour and respect towards animals to be hunted. Any kind of insult would make the animal withdraw and leave the humans to starvation. The behaviour was patterned along this belief with an infinite number of prescriptions, prohibitions, rules, particularly with respect to eating.

The shaman was the principal religious practitioner. Men and women could become shamans. They knew how to cure the sick, how to find lost articles or missing persons, how to provide charms, and speak to the dead, and how to prepare individual taboos, but black magic and eventually murder was ascribed to them. They received their power through the interference of their particular spirit helpers. The shaman was feared by the people because of his partly sinister powers but resorted to when necessary. Very often an individual lacking skill for becoming a successful hunter or the unbalanced or neurotic became shamans. A person usually tried to avoid the call for the office through a particular spirit, but frequently he was not able to escape. Each hunting group had its shaman who was supposed to call the caribou to perform the necessary hunting magic. Their influence did not extend to the political level.

Not only a shaman had supernatural powers, any person was in possession of powers of some kind to achieve a desired end by magical means. Only the shaman had the ability for contact with a particular type of spirit which he used for the good of the community. Everybody could be the owner of a magical song mainly directed to control game or weather but also used in feuds.

In times of stress which might be caused by acute food shortage, the wider circle of kin began to function giving the individual aid as far as the situation allowed. In such

instances bigger family groupings used to break up, but assistance was still expected within the net of kinship and extra-kinship associations and more so from the wealthy boat owners, wealthy in terms of food supplies, and from successful hunters. It could happen that these were left hungry after giving aid to the entire community, kin or non-kin. Old people sacrificed their food for the younger, and also parents went hungry in order to feed their children.

When a family grouping was travelling together under particular conditions of stress, it occasionally happened that a newborn child was left behind to die. This was not practiced when the child was already given a name and thus had been accepted into the community. Newborn children were abandoned with great reluctance and it was always tried first to give the child in adoption before taking such steps. It was not the mother who decided and the baby had to be torn away from her by members of the family group who had carefully considered the action.

Besides newborn children and infirm or sick people, the very old were also abandoned if the situation afforded it. Old people often asked to be left behind to die when they recognized that their presence was an extra burden.

A man who in times of famine saved himself at the expense of others was treated like a criminal and hunted down by the relatives of the abandoned. If it exceptionally happened that somebody took all of another person's food storage he was

considered as a murderer for leaving a family to starvation. He was persecuted as such by the kin group of the victim.

Cases of abandonment were more frequent among the inland people who were constantly travelling under the most difficult circumstances. Loyalty in this respect was preferredly given to blood kin. Consequently in times of famine a wife with her children might join her father whereas the husband would join his brother. When times ameliorated they eventually joined again. But it was not considered to be good if a husband would leave his wife in times of need.

Spencer relates that only one case of cannibalism was known, when a woman had eaten the flesh of her mother and sisters after they had died. It was not stigmatized by the community but just considered to be very sad.

Conclusions

A social system works through the complex interaction of its parts. When one part of the whole is affected the other parts are affected as well. If one componenet is weakened, more strength will be needed by another component to secure survival of the system.

For this mechanism which balances the interrelationship of the components, i.e. the ability of a social system to absorb disturbance, the term resilience as known in ecology [2] could be applied.

At first sight the two described population groups seem to be very different with no common traits visible. Their

subsistence activities are different, kinship organization follows different lines, and their political structure has nothing in common.

A more thorough study shows a number of correspondences which are of minor importance in this context. One characteristic which both groups share is their flexibility in the organization of social life in times of stress.

Stress situations due to unpredictable natural phenomena are known in both cultures but do not occur regularly. Both systems had to deal with them in the past and developed mechanisms for an appropriate behaviour of their members.

Through the particular environmental conditions the economic pursuit is interrupted and famine threatens the survival of the population. The Tikopia face such a situation by strengthening the power of their political leaders, who are able to face the disaster with the collaboration of the commoners. A general breakdown of law and order is reversible under the impact of new regulations and stricter surveillance. The importance of chiefs is shifted from the ceremonial to the political field in the course of the famine.

An egalitarian system like that of the Eskimo has to search for other means. In order to surmount the hardships of the environment, people depend on mutual aid. Since there exists fear from and thus hostility towards strangers a great number of ways are found to include as many people as possible in the kinship and quasi-kinship groups or similar

associations. With kinship or partnership bonds also the obligations of mutual cooperation are extended.

If an individual or individuals are under stress the wider circle of persons bound by mutual obligations will act. But when the whole group is hit by extreme need both social systems allow the kinship groups to split up with regard to food distribution to lessen the responsibility for many and thus to focus it on the nuclear family in the struggle for survival.

A particular form of flexibility is present in the Eskimo social system with its outspoken freedom of choice concerning many aspects of social life thus balancing the limitations of the Arctic environment. On the other hand it is society, i.e. the particular family grouping, which is free to eliminate an individual who is a burden or a danger for their survival.

The extinction of the inland Eskimo as described above is an example of how the resilience factor can be exhausted. They were prepared for temporary famine situations which they could master in the same manner as the coastal Eskimo. Once they were definitely deprived of their main foodstuff their resistence was broken and the ecological conditions did not allow an alternative within the habitual setting.

Recommendations

This study is too short to be representative for every social structure. It can only serve to show that--fortuitously or not--the resilience phenomenon is manifest in both instances in the form of marked flexibility. In order to draw generalizations, research on a far broader scale would be needed in which a variety of societies should be compared as to their economic levels, or political and religious systems for instance. Different stress situations, manmade and environmentally conditioned, should be examined. By an inquiry into the death of cultures it should be found out in what domain the decisive impact for complete destruction can lie.

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