organization. While the elicited responses offer clues to the nature of institutions, conformity between attitude and actual social structure is far from perfect. Thus, one should not assume that even a sizeable liberal or secularly sensitive minority presupposes a corresponding modification of the institutional order. Doubtless, some liberalized responses (particularly among Thunnalai upper classes) do not reflect potential action so much as awareness that "undemocratic" views have become unrespectable. Although ideological analysis is no substitute for study of community organization, it may provide one fruitful approach to the study of social change. Having used both approaches in the same communities, the writer concludes that attitude analysis reveals far less traditionalism in thinking than would have been inferred from purely structural institutional analysis. Outside the remote jungle localities, the newer ideology is modifying speech reactions more rapidly than changes occur in the community organization.

SUBSISTENCE AND INSTITUTIONAL SYSTEM IN A NORWEGIAN MOUNTAIN VALLEY*

by Fredrik Barth†

ABSTRACT

This article is an attempt to describe the culture of a small Norwegian mountain community as a system of institutions adaptive to a local ecology. It was found that these institutions show consistent adaptive traits, and may profitably be described in such terms.

A population of 160 individuals is distributed on 41 farms, each inhabited by an approximation to an elementary family. A wide variety of activities are independently performed on each of these farms, making extensive use of the biotic resources, with special emphasis on the milk cow. Each farm is an independent productive unit, containing within itself the required labor, land, and capital. A very simple, segmented social structure gives a maximum of social independence, and makes for considerable internal loyalty in the farm family group. This makes for a very flexible system, able to exploit the local resources quite completely, and adaptable to new economic innovations.

A major part of any culture is concerned with ways and means of exploiting the natural environment. These ways and means are specific, in that they can not, without modification, be applied to other phenomena than those for which they were designed. They are thus geographically limited to the area where those phenomena occur—i.e., to an ecologic area. Serious modification of them will result in change in other parts of an integrated culture. Thus, any culture may be analysed as an adaptation to a local ecology.

In the following study, an attempt will be made to show how the culture of a small Norwegian mountain community represents an integrated adaptation to the local environment. Based primarily on domesticated animals, but

*Based on field work done February-May, 1950, by means of a grant from the Nansen Fund of Det Norske Videnskaps-Akademii i Oslo.
†Etnografisk Museum, University of Oslo.
making wide use of the biotic resources, the economy has been successfully adjusted to the world market. The community selected is a moderately prosperous, growing one, and essentially similar to other mountain valleys of eastern Norway.

As an orientation, some important historical and geographical facts concerning the general area should be pointed out. Agriculture was introduced into eastern Norway approximately 3500 B.C.¹, and the main cultural periods reflect the European development, but with full local cultural continuity. By Migration Times, some 600 A.D., a type of agriculture based on the independent farm was established, and this continued, with little change in tools and traditions, up to the 19th century in the more inaccessible valleys. Medieval European social and economic institutions had no great impact upon the area. Feudal land ownership patterns never became established, and, during the centuries of Danish rule, the old local laws, codified in the 9th and 10th centuries, prevailed. The pattern of individual land ownership by free farmers is thus unbroken. Pietism never became important, as it did in western Norway; the state church was formerly a central social institution, but revival movements and sectarianism never swayed the population. There is a distinct tradition of formalism in interpersonal behavior, and a strong premium on self-control and independence.

The area studied, Sollia (Fig. 1), consists of two parallel valleys, together making up a county in the local administration. The valley bottom lies from 600-800 meters² above sea level, with a treeless mountain plateau at 1000-1200 meters³ on both sides, and some pinnacles and mountain complexes attaining more than 2000 meters⁴. The valley has a heavy coniferous forest cover; the timber line runs at 900-1000 meters⁵. The latitude is 62° N. Mountains to the east, cutting off the Atlantic winds, produce a moderately continental climate. Snow covers the ground from October till May, but the summers are moderately warm. The local farmer can, however, count on only one and a half frost-free months.

Sollia had been depopulated during a climatic recession; it was uninhabited in 1680, when people started resettling it. These were partly squatters, partly lawful settlers; all of them were recruited from essentially similar, neighboring valleys. In Sollia they continued their old way of life in somewhat greater isolation, progressively developing a local subculture. Today the people of Sollia are distinct in the detail of their habits and customs, and speak their own local dialect. In 1949, the total population of the county was 450 persons.

The present study centered around the northern branch of the valley, and the following discussion will mainly be concerned with it. It has a sedentary population of 160-170 persons distributed on 41 farms, and includes also a schoolhouse and a combined general store and post office. Much of the settlement centers around a large lake, and may be divided into three main areas, where the valley bottom makes farming feasible.

SUBSISTENCE AND ECONOMY

Essentially, Sollia is a dairy farming district, where the milk cow is of the greatest importance. This implies a complicated set of activities, ranging from the gathering of winter fodder to the preparation of milk products.

The plowed land is primarily used for raising hay, mainly timothy, and

² Approximately 2000-2600 ft.
³ Approximately 3300-4000 ft.
⁴ Approximately 6500 ft.
⁵ Approximately 3000-3300 ft.
silo fodder for the cattle. Due to the high altitude and consequent short frostless season, grain is not grown, and even potatoes are not raised in sufficient amounts to satisfy local needs. The total cultivated land of the area, inhabited by more than 160 persons, is but 266 acres. Obviously, this alone can not support the population, and the production of the unplowed land must be equally important in the economy.
There is a seasonal occupation of the mountain ecologic area, during which period the livestock shift for themselves, grazing the valleyside and the mountains. Many herds are moved up to “seters”—small huts and barns, situated high above the timber line and close to the richer mountain pastures. From June 1 to September 15, three and a half months, the livestock—and therefore the people—rely entirely on uncultivated land for subsistence.

During the remaining eight and a half months of the year the livestock must be kept inside the barn and fed, but hay from the plowed fields constitutes only a part of the fodder. It is augmented by hay from natural fields lying at a distance from the farm. Twigs and leaves of deciduous trees are cut and dried, and fed to the animals. The main addition to the raised crop is reindeer lichen, collected in the fall in the mountains. This is boiled and served hot to the cattle, and is rich and nourishing. It is said to constitute as much as 30 per cent of the total winter fodder.

The other “crop” of great importance to the valley’s economy is the timber. Some of it is privately owned by local farmers or townspeople; some is county-owned and primarily for domestic use. Saw mills, one private and two county-owned, cut some of this, and the planks are transported by truck to the railroad. Most of the timber is floated down the river and sold as logs. The timbering is not very much mechanized, but moderately efficient.

The main producers in the ecologic food chains that concern man are thus various species of wild grass, mosses and reindeer lichen, timothy in the plowed fields, and conifers. The primary consumers are man’s domestic animals: sheep, some goats, and especially cattle, which are also the most important in terms of prestige. Lately the fresh cow’s milk has been sold directly; the valley is serviced by a milk truck, which carries the fresh milk to a private dairy more than 30 miles from the north end of the community. Due to the present price subsidies, the milk sold fresh gives the producer a better price than the butter he could churn from it; consequently this old practice of home butter-making is going out of use. The skimmed milk is bought back and given to the cattle, often boiled with reindeer lichen. Goat cheese is produced locally, since no cheese factory is within reasonable reach.

Hunting and fishing is of varying importance—during the depression it was a major occupation, and it is invariably a major pastime. Reindeer, moose, fox, hare, grouse, and ptarmigan are hunted, and trout is the main fish caught. Berries of various kinds are collected and jam and juice made from them.

During the building and expansion of Sollia’s federally supported through road, many men sought temporary employment on it. Another source of income, of considerable importance, is the tourist trade, for which Sollia is very well suited. Within the area there is only one small hotel; most visitors board at the various farms. Thus, no special mechanism is necessary to take care of their needs; a small number of guests take part in the family meals and are given some space in the house.

The traditional diet is adjusted so as to make the area as self-sufficient as possible: meat, trout, porridge, fried bread, butter, and cheese are the staples. Potatoes, traditionally unimportant, are now used to some extent, but do not play the role they do in the lowland Norwegian diet. The main household needs that can not be satisfied from local production are thus flour, coffee, sugar, and, to a certain extent, potatoes. Clothing and shoes, formerly locally produced, are now bought in
the store. The other main imports are corn and herring meal for the livestock, kitchen utensils, implements, and machinery.

The total pattern is characterised by the great variety of activities, placing man at the end of practically every food chain. For the purpose of clarification, the ecologic concept of a food web—the patterns of the feeding relations of a self-sufficient ecologic community—a may be used. In the present connection, it has been modified to include human use other than a direct feeding relationship; coniferous forest, by way of the market, becomes sugar, coffee, and flour for the Sollia farmer, so that relationship can, in a certain sense, be included in the food web (Fig. 2).

FARM AND FAMILY

To organize this variety of activities, an institutional system has been built up with the independent farm as the main building block. Practically all productive activity and prestige center around the farm; it is the independent productive unit.

The modal farm has six or seven acres of cultivated land, pasturing rights, and rights of use of the county-owned forests to cover domestic needs for wood. In addition to this, a large minority also have private timber. Most farms have a "seter" and traditional pasturing rights. The average livestock consists of 1 horse, 4-5 cows, 10 sheep, a pig, and some hens. A certain number of farmers also keep goats. The houses are small but numerous and well built, providing very ample space for living and domestic activities. Many farmers had gotten into debt during the Depression, but during the last war, inflation and high food prices made the great majority able to pay off these debts. Today the average farmer has no creditors, and has sufficient capital to operate his farm successfully.

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Ideally, the farm is owned and administered by the elementary family, a couple and their unmarried offspring. It is conceived of as a socially and economically autonomous unit with no great obligations to any outside person or larger institution. It is at once the smallest and largest definite unit in the economic and social structure.

Inheritance is from father to son; although primogeniture is important in official Norwegian law, it receives no great attention here. Quite often it is the youngest son who takes over the farm. This is tied up with the stress that is laid on the elementary family as the proper owners of a farm. A married son should not stay and work with his father; he is expected to break new ground or find another occupation. There is thus a tendency for the older brothers to go off and start for themselves, whereas the youngest one stays at home longest, cares for the aging parents, and eventually takes over after them. A certain amount of conflict will arise in that the father usually keeps control of the farm till he is definitely physically incapable of working it any more. Once the parents give up the farm they are guaranteed a certain part of the farm income, have certain appropriately small household duties, and take care of the grandchildren; then the parent-son relationship becomes less strained.

The family group is nowadays generally quite small; modern birth control by contraceptives seems to be practiced by most couples. Formerly the sibling groups were larger, but a greater proportion of unmarried kept the rate of population growth fairly low. The average number of children today runs about three per family.

The wider family ties are kept track of and carry a certain importance. Except for some recent immigrants, everybody in Sollia is actually related to everybody else, and for weddings and similar events the closer kin are invited. But these ties have no economic importance, and they do not seem to regulate marriage (cousin marriage is permissible, though preferably not practiced) or determine membership in any formal or informal social group. Except for the feeling of continuity between parent and child, and the frequent strong affection between siblings, the Sollia people are not much concerned with kinship, and it does not regulate their behavior to any great extent.

The marriage tie between spouses is, on the other hand, very strong, and looms implicitly in much social behavior. Only one instance of divorce is known from the area, where a woman married a man in a neighboring valley, only later to obtain a divorce, return home, and remarry. Before marriage, there is much sexual license, with the old custom of “Saturday night proposals” in the lady’s bedroom (following Friday night sweatbaths) surviving and functioning. These relations sooner or later result in informal engagements, and as soon as feasible (or necessary) the couple marries. Of the last five weddings in the valley, four were decided on after pregnancy. This fact is generally recognized and not frowned upon. In some cases, a child results from an otherwise unsuccessful combination; especially when one of the parties is from outside the valley, marriage does not necessarily result, and the explanation offered is that they did not suit each other. No serious stigma is attached to the parents or the illegitimate child itself; in one case, the farmer on one of the largest farms, still unmarried, adopted his own illegitimate son, and will soon pass the farm on to him.

With marriage this freedom ceases, and there seem to be few cases of infidelity. The complete tie of loyalty between spouses is always assumed; in matters of economy, in social relations, and in voting, spouses almost in-
variably have the same opinions. Presumably, the spouses have, through their period of premarital experimentation, found an agreeable and suitable partner.

SOCIAL CLASS AND DIVISION OF LABOR

On the farm there is a systematic division of labor along sex lines, in which the male and female roles are clearly defined. No strict rules or taboos are connected with this; the reasons given are those of efficacy. Where the woman is weak or there are only sons, the men often assist with the milking and tending of the cattle, normally woman's work. Where there is a deficiency of male help, on the other hand, male labor is usually hired, since logging, plowing, and heavy work is thought to be too hard for the women. Almost all such outside help is bought for cash payment; there is no community labor and little exchange of favors and help. Formerly, when the valley was not so closely tied to the world market and money was less used, the exchange of help was practiced from common necessity. As soon as cash became generally distributed, direct hiring was preferred, so as to reduce, as much as possible, the system of reciprocal obligations between farms. Today, voluntary help is extended only in the occasional situation when special knowledge and skill is needed, as when the neighbor's cow is calving, when machinery breaks down, etc. More extensive help has lately been given only for patriotic reasons, such as harvesting for the family of imprisoned members of the community during the Nazi occupation.

There is one additional economic activity: trade and transportation. All communication is by road, mainly by means of two busses, several transport trucks, and the milk truck. There is a taxi in the valley, serving also as a school bus. These activities mostly give temporary employment to men in the area. Being the only local alternative to farming, offering responsibility and freedom from the father's farm, in addition to a fair cash income, truck driving has considerable prestige as an occupation for younger men. It often serves to make the son economically independent of the parents and thus able to marry. After a while the novelty of driving wears off, and the discomforts of a long truck line with bad equipment on a narrow road become apparent. When the old man retires from the farm, the opportunity to return to farm work is usually taken advantage of. On the other hand, truck driving provides a route of urban mobility, and may thus relieve the area of some population excess.

The only alternative to farm work, truck driving, thus tends to be in the hands of a fraction of the males of the age group 20-35, and offers opportunity for early marriage to men not interested in developing new farms. The group performing these functions has no special social position, the occupation being essentially temporary.

The only retail trade outlet is a general store, owned by one married man. The storekeeper, rather than having a defined special status, may be regarded as marginal to the local social system. Similarly, the school teacher usually changes every year or two, and is not integrated into the local society, though he has considerable prestige.

Essentially, we have a classless society consisting of small farmers. A small, closely knit family performs the work on the farm. The farm is economically an independent unit, containing within itself the means and mechanisms of production, the capital, labor, and land. Similarly, the farm is a socially independent unit, inhabited by a group of people with their main loyalties to each other, and with few obligations extending outward. Due to the uniformity of activities, there is no class division of society.
Let us investigate to what extent these farm family blocks are tied together in a more complex social structure through other types of social relations, regulated through membership in formalized or informal social groups.

FORMAL AND INFORMAL GROUPS

A certain number of formal groups exist, organized on the pattern of such groups in lowland Norway. Of these, there are two types: the various county committees with predominantly male membership, and four clubs with all-woman membership. The county committees have express governmental functions, and very little social interaction goes on before or after the meetings. Although the members are generally unable to agree on anything, the meetings give an impression as impersonal and businesslike as an urban city-hall debate. No latent social functions seem to be important, which is indicated by the fact that most members of the community find the responsibility and the work very ungratifying, and seriously try to avoid nomination. Thus persons not present at the meeting are usually nominated and elected for office.

In the women's clubs, on the other hand, a recreational function is present and can hardly be called latent, although each organization is avowedly for some practical purpose. The rotating meetings also provide a setting for conspicuous waste and similar social competition. The clubs decided to check this tendency, setting three kinds of cookies as the maximum to be served at meetings. This decision is being sabotaged.

The clubs are mostly recent introductions, and copied from similar clubs in lowland Norway. They differ from their lowland models mostly in their reduced formality, lack of program, etc., and the self-consciousness of the chairman. A sports club existed for a while; but, since numerous attempts at introducing team sports have all been unsuccessful, the club never became very popular.

Informal groups, on the other hand, flourish, and provide a framework for the many aggressions that seem to build up so easily in a small community. Although both sexes participate in these groups, the women are by far the most active. These cliques work in an ever-changing net of friendship, involving visits from one farm to another. The visits are between women around lunch time, when morning chores are done, and before dinner is to be prepared—or else after the evening's work in the barn is over, at which time they are usually joint husband-wife expeditions. They seldom involve more than two persons, subsidiarily two couples. The uniting ties are most frequently a common dislike of a person; thus they change constantly according to the latest grudges. As a commentary on the kinship feeling, it is interesting to note that a person is committed to his spouse's grudges, but children visit freely on the farms where their parents would not think of appearing.

However, a large proportion of the couples do not take part in any of these feuding cliques, and do not thereby lose any social prestige. Since conflicts in general are frowned upon, the more passive would rather be thought of as wiser, and gain in prestige from not participating. One farmer, quite well thought of, has literally no interaction with people, other than for economic reasons. The couple never visits anybody, and it was specifically remembered that they had been to a funeral more than a year before. Thus, even the informal cliques, although intricate and very important to some people, do not seem to complicate the basic social structure to any great extent. The system retains its segmented character, with each farm as a
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semi-independent economic and social unit.

RECREATION AND RELIGION

The church was formerly an important recreational institution, where all church festivals, births, weddings, and deaths were celebrated. With the progressive secularization that has taken place in rural Norway, a big dance hall and meeting house has taken over the recreational functions, and the church is now infrequently visited. Although the people supposedly subscribe to the pan-Norwegian Lutheran ideas and dogmas, religion seems to be quite without interest to the great majority of them—a Durkheimian commentary to the considerable segmentation of the society itself, the lack of community cooperation and integration. There is no local supernatural tradition, and the occasional ghost stories receive, in general, little attention.

The dance hall is an interesting example of a specialized recreational institution, providing for a major part of the social recreation that the Sollia male needs. He frequents no clubs, is often not active in any clique, and the semi-monthly dance is the main occasion when he has non-economic interaction with persons outside the elementary family. Couples temporarily involved in personal feuds tend to stay away from these occasions; any sign of personal conflict is here very bad taste. Interestingly enough, the very few fights that occur are between father and grown son. In this friendly atmosphere, a great amount of more or less distilled denatured alcohol—as well as some good liquor—is consumed, and everybody dances all night, the party usually lasting until four or six o’clock in the morning.

The other male recreational activities are shooting—in infrequent competitions, and hunting. Hunting is mostly done quite alone, and may involve as much as a two- to three-day trip. It is now done in the appropriate season, the importance of game conservation largely having been understood.

ADAPTIVE ASPECTS

These local cultural patterns have some outstanding features that may be seen to be highly adaptive in the local ecological setting. Economically, they are characterised by the extensive use that is made of the natural resources. This is made possible by the great variety of activities performed, the lack of occupational specialization, and the small size of the productive unit. The natural resources are not very great; there are no minerals in the rock or sources of power for industry. Local subsistence must be based on biotic resources, of which almost complete use is made. The various activities connected with these are mostly strictly seasonal; thus no specialization in occupation is feasible—the labor expended on haying in July must be transferred to collecting lichen in September and floating timber in May. The small size of the productive unit, in effect one adult male, the head of the elementary family, also makes more complete exploitation possible. Small fields may be worked, which is very important where the local topography breaks up the best farm land in very small sections. A pattern of very scattered land use can thus be established. Where a great number of activities should be performed, small units also add to the flexibility of the system. Labor can better be divided according to the immediate and local needs; for example, the possibilities offered by a passing fox or a local shower can better be taken advantage of. The small size of the individual farms and their social and economic independence of each other is thus clearly economically functional, and this segmentation of society must have been even more important before,
when transportation was more difficult and population even more scattered.

Directly connected with the social separateness of farms is a relatively greater emphasis on the element of continuity in the parent-child relationship. This becomes important to the social system also in an indirect way. The elementary family being socially and economically isolated, most of the child's contacts are with parents and siblings. And the learning process, preparing the child for the specific activities of the adult, is a comfortable one of copying, working alongside the parent, and receiving praise for every advance. Parenthood receives much cultural attention: children should be loved and well cared for. Home is a very secure place.

At the age of seven the child starts school; up till 1949, this meant attending a boarding school on a two-week-there—two-week-home basis. This is the child's first meeting with the larger society, and it is thoroughly ungratifying. The school yard for the first three classes presents a picture of ten to twelve unsocialized little beings, not used to—and therefore unable to play with—each other, with their attention centered on the teacher as a substitute parent and source of affection. The slower children, who also find the actual school work very difficult, often experience a completely rebellious fear reaction to school, and may run away. The old people, talking of their childhood, will volunteer stories about leaving mother to go the long way to school, and how they sat down and cried when they had turned the first bend in the road, where mother could not see them. Farm work and home life, on the other hand, continue to be more gratifying. No great amount of labor is required of the child till the age of eighteen or twenty, when he is expected either to find other work or start in full time on the home farm. The resulting attitude toward larger groups and institutions, as contrasted to the comfortable feeling about home life, is strikingly harmonious with the segmented social structure. And the great stress on loyalty between spouses, together with the period of premarital experimentation assuring a fairly successful match, becomes clearly functional in this framework. One thus finds the attitudes and general personality structure in very close harmony with the institutional framework, and the people very well satisfied with the latter. The daily routine is to the local individual simple and natural, and each activity performed is at once a part of productive, recreational, and family patterns; on the farm, the various parts of culture make up a tangled bundle, in which also traits of nature belong as equivalent phenomena. And the activities give both satisfaction and results—so much so that the author's host, a very competent and intelligent farmer from a low-lying, much richer agricultural region, felt so satisfied, during a period as a temporary caretaker on a farm here, that he decided to settle down in this much less productive area.

**CULTURAL CHANGE**

The segmented nature of the local society and the simplicity of the cultural institutions and their interrelations has a further, incidental, adaptive value: ability to survive changes, to adjust to new activities without remodelling any intricate institutional system. Sollia has become a part of the world economic system within the memory of old people, and the whole economy, together with some aspects of the social structure, has been strongly modified, without any general cultural breakdown resulting. These changes had not yet progressed very far in 1880, when the following situation seems to have prevailed:

The economic activities were even more varied than they are today. All
trade was conducted in a market center 30 miles distant—over roadless mountains; and the individual farmer had to make horse-and-sled expeditions, preferably in early winter, to that far-off market. There, butter was sold to city buyers. Grain and flour were procured by barter with the local farmers there, mostly in exchange for tar. A certain quantity of logs were floated down the river; but most of the forest's production was actually transported across the mountains in the form of tar, burned locally in Sollia. Local iron-smelting from bog iron had been discontinued some 100 years earlier; so all iron had to be imported. But other utensils, clothing, shoes, and other leather work were all produced locally by a class of craftsmen. The latter ran small farms on the side, and had their defined rights and privileges in the community. No machinery was used in farming and methods were in general less efficient than now, so that the need for labor was greater. To satisfy this need, there was a landless class—generally of recent immigrants—who worked on other peoples' land on a sharecropper basis. They had very little prestige, and generally sought as quickly as possible to clear their own land and start their own farms. There was a constantly rising population, resulting from large numbers of children and from immigration from other valleys where population pressure was even greater. Local population pressure was relieved by the clearing of new farm land, and by emigration, mostly to the towns; earlier some of the emigrants had gone to northern Norway.

Around 1880, an economic revolution started that lasted up to the First World War and reshaped the society, though not the local culture. It was made possible by a fad-like large-scale emigration to America, involving as many as 30 persons of a total population of 450 in the peak year of 1883. In this period, also, the road down the valley was built, heavy transportation became possible, marketing possibilities and resultant cash increased, the general standard of living was raised, local handicraft became unnecessary, and new agricultural techniques and machinery were introduced—all at the same time the population was being reduced by emigration. Socially, what happened was the elimination of the landless class, the partial elimination of the craftsman class, and the survival of only the landowning-farmer segment of society. The landless class became unnecessary in the economy, following the introduction of machinery and rationalization of techniques. Its members either went to America, married the only child on a farm, or started their own farms. The services of the craftsman class were no longer vital to the community; they mostly cleared more land and added on to their old farms, making them full size. Many of them, and also many an only son on a big farm, left for America. The result of these changes was the modern Sollia community, representing actually only a segment—the largest and most important segment—of the old society. This segment is now dependent on the larger Norwegian society outside the valley, rather than a local class, for certain aspects of its livelihood. The main behavior patterns, the main parts of the culture, still survive and function in the new context, as indicated also by the old peoples' satisfaction with the general state of affairs. Together, they make up an integrated system of behavior, well adapted to the local area, and closely tied to the larger society outside.