

# SOCIAL SCIENCES

Physical Culture and Sports  
in Modern Society  
(to the 22nd Olympic Games  
in Moscow)

Final Battles  
(to the 35th Anniversary  
of the Victory over Fascist Germany)

Science and Culture

"Man-Machine" Systems

Ethics of Biological Research

Typology  
of Developing Countries

Nature and Primitive Society

2

1980

*A quarterly of the Section  
of the Social Sciences,  
USSR Academy of Sciences.  
Founded in 1970.*

*Published in Moscow in English,  
and also in French, Sciences Sociales;  
in German, Gesellschaftswissenschaften;  
in Spanish, Ciencias Sociales;  
and in Portuguese, Ciências Sociais*

---

The journal is published by agreement:

in Bengali,  
*Samaj Bijnan* (Bingsha Shatabdi Publishers,  
Calcutta, India);

in Japanese,  
*Shakai Kagaku* (Shakai Kagaku Co.,  
Tokyo, Japan)

in Greek,  
*Kinonikes epistemes* (Planet Publishers, Athens,  
Greece);

in Arabic,  
*Al Ulum al-Ijtima'iya* (Dar al-Farabi Publishers,  
Beirut, Lebanon);

in Portuguese,  
("Avante!" Publishers, Lisbon, put out  
the edition for circulation in Portugal).

The Spanish edition is reprinted in Colombia  
by Centro de Estudios e  
Investigaciones Sociales (CEIS) Publishers, Bogota.

\*

Since 1976 the Editorial Board has been  
publishing the journal *Obshchestvennie nauki*  
(Social Sciences) in Russian. It appears six times a year.

For subscriptions apply  
to national distributors dealing with  
V/O "Mezhdunarodnaya Kniga"  
that are listed at the end of this issue.

© Social Sciences, 1980

Reprints authorised with written permission from the Editorial Board.

---

*"Social Sciences" Editorial Office, 33/12 Arbat, Moscow 121002, USSR.*

---

Philosophy  
 History  
 Economics  
 Politics  
 Sociology  
 Law  
 Philology  
 Psychology  
 Ethnography  
 Archaeology

# SOCIAL SCIENCES

Vol. XI, No. 2 1980

## CONTENTS

	<i>To the Reader</i>	5
<b>I. Novikov</b>	The World's Most Popular Movement	8
	<b>Sport and Society</b>	
<b>S. Pavlov</b>	Physical Culture and Sports in Socialist Society	12
<b>L. Matveyev</b>	The Formation of the General Theory of Physical Culture	26
<b>V. Stolyarov</b>	The Methodology of Research into Sport as a Social Phenomenon	39
<b>O. Milshtein</b>	Sport as a Factor in Moulding the Personality	47
	* * *	
<b>I. Frolov</b>	The Ethics of Biological Research	60
<b>V. Yartseva</b>	<i>The Languages of the World</i> —a Linguistic Encyclopaedia	78
<b>B. Lomov</b>	Psychological Aspects of Space Flights	91
<b>T. Golubtsova</b>	Historical Museums	103
<b>M. Mamardashvili</b>	Science and Culture	110



## Nature and Primitive Society

VLADIMIR KABO

In modern literature three views on the interrelationship between primitive society and nature prevail.

According to one, primitive people lived—and where society remains on the stage of the primitive communal system, continue to live—in full harmony with nature, introducing no destructive changes to it. In this primitive societies allegedly differ fundamentally from societies of higher development levels.

Actually that is not so. Mankind began to have a destructive impact on nature very early, and as the means of production improved, it became more profound and diverse. In the Upper Palaeolithic, man already contributed to the extermination of a number of large animals, including such giants as the mammoth (the extinction of which is due less to climatic changes than to the organised actions of man as a hunter). The perfection of hunting techniques, intensification of hunting and growth of the population leads to mounting annihilation of game. M. Budyko, for example, describes the Upper Palaeolithic as an age of "ecological crisis".<sup>1</sup>

Studies of ancient societies offer extensive material confirming the role of human activity in the extinction of animals during the late Pleistocene in Eurasia, South and North America, and Australia.

In the view of the English scientist K. Butzer, the final stage of the Pleistocene was the beginning of ever increasing change of the natural environment by man.<sup>2</sup>

The transition from the Palaeolithic to the Mesolithic was accompanied by profound changes in the economy, way of life and social relations in many respects associated with the end of

mass hunting for large herbivorous animals. Man was compelled to seek new means of subsistence. The active search for new ways of mastering the ecological environment was frequently accompanied by attempts to create more favourable conditions of life and hunting. The aborigines of Tasmania, whom the Europeans found at a stage of development corresponding to the Upper Palaeolithic, and who died out by the end of the 19th century, regularly burned vegetation on large areas of the island. The ecological effect of those fires over thousands of years was very great and irreversible: the nature of vegetable growth and the top soil changed on large areas, moist forests were replaced by shrubland and savannas, and the climate changed. Fire removed impassable forests from whole regions, which was a boon for the Tasmanian hunters, but at the same time it destroyed the plant cover and enhanced soil erosion.

The aborigines of Australia, who in the 19th century were on the whole at a Mesolithic stage of development, while some tribes were in the Upper Palaeolithic not only wiped out the large marsupials of a whole continent, but, like the Tasmanians, regularly burned down shrubs and grasses on vast areas. In the view of some scientists, this resulted in the disappearance of forests and other unfavourable consequences.

The adherents of another long-standing view claim that primitive people led a miserable semi-starvation existence in eternal quest for food and confrontation with nature. They are opposed by G. Grey, one of the explorers of Australia. He ridiculed their views as absurd and showed that the reverse was quite true. "In his own district," he wrote, "a native...knows exactly what it produces, the proper time at which the several articles are in season, and the readiest means of procuring them. According to these circumstances he regulates his visits to the different portions of his hunting ground; and I can only state that I have always found the greatest abundance in their huts."<sup>3</sup> Except for two relatively brief periods of the year, the hottest and rainiest, when there is indeed a shortage of food, at other times the aborigines can "obtain, in two or three hours, a sufficient supply of food for the day".<sup>4</sup> Nor is there any need for them to spend more time in search of food, since they know practically nothing about preserving it. What Grey writes fully accords with reports of other 19th-century explorers about aboriginal life in other parts of the continent. The same is true today where native Australians lead their traditional way of life of hunters and gatherers equipped with primitive implements of labour. Thus the adult members of two communities studied in 1948 worked on average only 4 or 5 hours a day. That time was sufficient to provide every member of the group with adequate food.

According to R. Lee, who studied the Kung Bushmen, representatives of the indigenous population of Southern Africa, in 1964, an adult had to work only 2.5 six-hour days a week to provide sufficient food for all members of the group. This is 15 hours a week, or 2 hours 9 minutes a day. The observations were carried out in July and August, that is, a time of the year transitional from more favourable to less favourable conditions, and hence sufficiently representative.<sup>5</sup> It could be recalled that the Bushmen, like the aborigines of Western and Central Australia, live in extreme natural conditions. According to J. Woodburn, the hunters and gatherers of the Hadza tribe in East Africa spend on average not more than two hours a day getting food.<sup>6</sup>

Many hunters and gatherers inhabiting regions with extreme ecological conditions suffer regularly from hunger. However, the picture presented above is on the whole typical of most pre-agricultural societies. The conditions in which Palaeolithic communities lived also varied, but they were, on the whole, more favourable than those in which contemporary hunters and gatherers live. Huge quantities of animal bones have been discovered at some Palaeolithic camps; this is indicative of the large scale of battue hunting and the sufficiently favourable natural conditions in which the primitive hunters lived. They destroyed more animals than they could consume. The purposeless extermination of vast numbers of animals, notes S. Zamyatin, much greater than could be rationally used, was typical for this type of battue.<sup>7</sup>

According to the third widespread view, primitive hunters and gatherers add nothing new to the processes taking place in nature and simply adapt to them passively; they do not enrich the treasure-trove of nature and only use its gifts. Facts refute this notion, too, indicating that hunters and gatherers do not simply parasitise on nature, and their action on it is not only of a destructive character. Attention has long been drawn to the fact that the culture of primitive man displays features which can be regarded as prerequisites of a producer economy. The aborigines of Australia not only know how to tend wild plants but attempt to plant some of them. Even before colonisation societies isolated from the influence of agrarian cultures knew primitive methods of irrigation, built irrigation dams and man-made bodies of water, which prevented drying of the land in arid seasons. This is an example of deliberate, purposeful action on nature. The Semangs and Senois, representatives of the indigenous population of the Malakka Peninsula, occasionally planted wild plants.

Agriculture was not "invented": man began to cultivate plants while still at the stage of food-gathering. The same can be said of the domestication of some types of animals. Earlier we mentioned

fires employed by the Australians and Tasmanians as an example of destructive action on nature. But why did they burn the old grass on their hunting grounds? To obtain pastures with fresh green grass that would attract herds of kangaroos and thus increase their numbers. This is manifestation of deliberate concern of hunters for maintaining the main source of meat at an optimum level. Such spontaneous comprehension of the laws of nature and cause-and-effect links spanning considerable periods of time is remarkable. R. Jones calls it "fire-stick farming".<sup>8</sup> This was not, of course, farming—it could rather be called primitive animal husbandry—but in consequences and effect upon nature it can, to a degree, be compared with farming. A new artificial environment was created by the will and hands of man. That was long before the appearance of agriculture, with which we are used to associate the appearance of anthropogenic, "humanised" landscape. T. Mitchell, one of the first explorers of Australia, wrote that fire, grass, kangaroos and people in Australia, all depended upon one another, and if one disappeared the others could not exist.<sup>9</sup>

Mitchell noted the existence of a kind of ecological equilibrium in which the primitive hunter was the active factor. A part of the ecological system, he was at the same time a force regulating the interactions of other parts in his interests. However, as a consequence of primitive man's regular action on the ecological system, the ecological equilibrium is sooner or later disturbed, and far-reaching changes which he cannot foresee occur in nature. This indicates that even at that early stage of social, economic and cultural development people not only adapt to the environment but seek to influence it actively. And they do this not just by their presence as a part of the ecological system but frequently quite deliberately.

I would call this process active adaptation. Thanks to the universalisation of the mechanisms of active adaptation, human society, unlike communities of other biological species, was able already at the stage of food-gathering to adapt to life in all ecological environments and populate almost the whole planet. This ability of human society is based on socio-cultural adaptation mechanisms. Hence the primitive society's system of active adaptation to environmental conditions should be called *socio-cultural adaptation*. It includes such elements as social organisation, work implements, clothing, food, religious and magic rites, etc.

At early stages of socio-cultural development social institutions occupy a leading place in this system. For, the lower the level of the productive forces and the material and technical equipment of society, the greater the importance of social organisation in the process of adaptation to environmental conditions. Active adaptation is effected primarily through social mechanisms, primarily

those whose importance is determined by their economic function. In primitive society, the structure of social adaptation is the prime element of socio-cultural adaptation as a whole.

Let us examine the structure of social adaptation with the help of a typical example—the organisation of social production by Tasmania's aborigines. We have already mentioned that at the time the Tasmanians came to know Europeans they were at a stage corresponding to the Upper Palaeolithic, which is why Tasmanian ethnography is so important for reconstructing the foundations of social structure in the Palaeolithic.

\* \* \*

Tasmanian social life, like that of other hunters and gatherers, centred around the community, the basic socio-economic unit of primitive society. As the leading productive collective, the community is, accordingly, the society's basic structural unit. It comprises several families and owns a certain territory which is the source of the means of existence. The main features of the Tasmanian community, like any other hunting and gathering community, is relative stability and territoriality, that is, economic links with a definite territory.

Other socio-economic entities are: the economic group, purposive group, and temporary alliance of communities. The economic group is a part of the community comprising several families. In the course of economic development of the territory, at specific seasons (when it is difficult or impossible for the community as a whole to engage in hunting and gathering) the community breaks up into economic groups, economically independent, dynamic, of varying composition and numbers, which occasionally breaks up into individual families. When the conditions for acquiring food change, the community may reunite again. The aggregate of economic groups is the community itself in the process of developing its territory. This is a form of active adaptation of the community to environmental conditions and the requirements of economic activity. Variations in the number of economic groups and the nature of their movement over the territory are dictated by economic interests, which are at this level of development closely dependent on natural conditions. The recurrent cyclic nature of these variations and movements is linked with hunting, gathering or fishing; with changes in nature (increase or decrease of foodstocks, seasonal and vegetation changes, population cycles, animal migrations, etc.). At the same time the size of economic groups depends upon the stability of local natural conditions. In more favourable conditions the groups are larger, in less



favourable ones they are smaller. The economic group is vivid manifestation of the primitive community's being dynamic, flexible and adaptable to changing conditions.

The purposive group is, as a rule, formed according to natural divisions of labour by sex and age for performing a single specific economic or social task (for example, groups of hunters or women gatherers, or sometimes warriors or participants in some ritual). A purposive group may include all the men of the economic group that hunted together for big game, or all its women, often with children, who together gathered plants or molluscs for food or hunted for small animals.

Temporary associations of the communities of one tribe, and sometimes neighbouring tribes, usually concentrated at specific places and seasons for economic or social activities requiring a large number of participants—battue hunting, rituals, etc. These groups also appeared in places where animal or vegetable food abounded at certain seasons of the year.

Depending on local conditions, Tasmanian communities numbered from 30 to 160 members. Economic groups usually consisted of 20 to 50 persons. Purposive groups usually numbered 10, 20 or more, depending upon the size of the economic group. Temporary units of communities numbered from 200 to 600 people.

The break-up of communities of hunters and gatherers into families, and their unification for various purposes are of an episodic character. The same is true of purposive groups. All demographic conditions (population growth, density, etc.) being equal, the size of the community and economic group is, as it were, a function of the natural geographical environment.

The basic cell of the social structure of the Tasmanians, like that of other hunters and gatherers who could be ethnographically observed and studied directly, was and remains the family, comprising parents and children, and sometimes other next of kin. At the other pole of the social structure is the tribe as a stable association of several communities sharing a common language. Like the community, the tribe is associated with a definite territory, but it is a comparatively loose, amorphous entity as a consequence of which its economic functions are negligible, a community, as mentioned before, being the basic economic unit of the society.

The organisational and structural system of social production, while remaining basically the same, varied in different geographical areas of Tasmania in accordance with the type of economic activity. The inhabitants of Eastern Tasmania led a nomad life over extensive tribal territories, which made it possible for them to conduct a balanced economy based on seasonal camps on the coast

or in the interior. The aborigines of Western Tasmania led a semi-sedentary life oriented mainly on fishing. Their tribal territories extended along the coast (unfavourable geographical conditions depriving them of the possibility of economic activity in the interior). In spite of that, the structure of social adaptation outlined before remained basically similar all over the large island. The same is true of other communities of hunters and gatherers, whatever the natural geographic zones of the globe they inhabit. Thanks to its flexibility, formed over thousands of years, the structure of social adaptation, while remaining essentially the same, enabled and enables communities of hunters and gatherers to survive in the most diverse natural conditions. This was as it were a firm foundation created by evolving society, which enabled it to populate and develop virtually the whole planet and survive in the most difficult conditions. The model suggested here basically reflects the primary, universal structure of social adaptation on which primitive society has relied probably from remotest antiquity.

The principles of the organisation of primitive social structures are remarkably similar and of a universal character. All that varies is their architectonics, the relationship between individual structural elements, but not the structure itself. Everywhere at the basis we find the community as the basic socio-economic collective of primitive society with its flexibility, dynamism, ability to adapt to varying conditions and periodically break up into economic or purposive groups, with its territoriality and relative stability. The secret of the universal character of this system lies in a combination of the community's stability, flexibility and adaptability.

Thus, the way of life of the aborigines who late in the 18th century inhabited the area of what is now Sydney (Southeast Australia), was of a definitely seasonal nature, with the community as a means of social adaptation to changing conditions. In spring and early summer, when large schools of fish appeared, the aborigines got together in communities. In winter when fish grew scarce, the communities scattered along the coast and many men went off hunting in the interior.

Ethnographers observing the aborigines of Northern Australia note that their way of life and occupation vary completely with the seasons of the year. For several months the men hunt land animals and wander in small economic groups; the rest of the time they live in communities in seasonal camps on the coast, fishing and hunting for marine animals. Their economic activity, and accordingly the succession of periods of concentration (communal life) and deconcentration (life in economic groups or separate families), is determined by the succession of the rainy and dry seasons.

The same principles of social adaptation can be found in South and North America, Africa, Southeast and South Asia, in the Arctic. Material on this is so extensive that a simple list of sources could fill a whole volume of bibliography. I shall cite but a few examples relating to different geographical areas. N. Gubser writes that the Nunamiut Eskimo community is a plastic, changeable alliance of individual households operating in the locality offering the best conditions for caribu hunting. In autumn and spring the households join in communities in anticipation of caribu migration.<sup>10</sup> The rest of the year they go out in search for food individually. Other groups of Eskimos live in other ecological conditions, and their economic activities are different, but the system of social adaptation is the same. Seal hunting, writes D. Damas, is the only reliable source of subsistence in wintertime and the reason for unification of the central Eskimos in large winter collectives. At other periods of the annual cycle these collectives break-up into small groups better adapted for hunting other animals.<sup>11</sup>

In conditions of the damp tropical forests of the Andaman Islands, Onge hunters and gatherers like Australians and Eskimos, move in small groups over their hunting and gathering grounds, availing themselves of the sources of vegetable or animal food offered by nature throughout the annual cycle. But during the rainy season the communities rejoin and settle in large communal homes.<sup>12</sup>

In the absence of contacts with more developed societies, the basic unit of the social organisation of the Bushmen inhabiting the deserts of Southern Africa is the stable community, the existence, structure and dynamics of which wholly depends upon ecological factors and the needs of production. The community is the basis for the formation of mobile economic groups the size and composition of which varies constantly.<sup>13</sup>

In South America, tribes totally unfamiliar with agriculture are very rare. In most cases we find rudimentary forms of agriculture which, however, have not wholly superceded food-gathering. One such tribe is the Nambikwara in Brazil. Depending upon the season of the year, the Nambikwara engage mainly in either gathering or hunting or farming. In the rainy season, they live a sedentary life in communities along river banks and cultivate the land. In the dry season, they, like typical hunters and gatherers, roam in small economic groups comprising several families and engage exclusively in gathering and hunting. The Nambikwara are essentially semi-sedentary hunters and gatherers for whom primitive agriculture is a temporary occupation.<sup>14</sup>

Seasonal changes significantly influence the economic activity, way of life and regular succession of periods of concentration and

deconcentration of hunter-gatherer communities in most natural-climatic zones of the world.

The sources of a producer-type economy are rooted in food-gathering. The prerequisites for a producer economy are: relative stability of the primitive social structure alongside with an inherent ability to develop; collective ownership of land, the basic means of production; economic links of the community with a specific territory; correct succession of economic activity according to the natural cycle. These and other fundamental properties of the hunter-gatherer society constitute the socio-economic base for the formation of a producer economy. The main motive force of the transformation of food-gathering to the producer economy is the system of socio-economic relations itself.

Thus, the dependence of a primitive hunter-and-gatherer society on natural conditions is probably no greater than of a society based on a producer economy. The specific features of the former are that, being technically inferior, it relies mainly on mechanisms of social adaptation evolved over thousands of years to oppose the pressure of the natural-geographic environment. In the words of Karl Marx, the primitive community with its typical natural unity with objective, naturally formed conditions of production was the "first great productive force".<sup>15</sup> The community itself mediates the relationship of primitive men to nature.

There are two aspects to the relationship of primitive society to nature: the objective economic and the subjective ideological. The former finds expression in the community's ownership of a definite territory (its source of existence) and the economic development of that territory. The second aspect is a reflection of the economic attitude towards the land in ideological form. Thus, the subjective ideological attitude of the Australian aborigines to the land is expressed in the links of the tribe with totemic sanctuaries on the community's land.

At the same time, primitive man's attitude to nature also includes the epistemological sphere, the vast domain of man's cognition of the surrounding world, the earth and the Universe. This system of notions organises social experience and brings order into the chaos of phenomena, thus helping the society to master the world in practice. Man began to accumulate systematic knowledge about the vegetable and animal world back in the Palaeolithic: 15,000 years ago, if not earlier, primitive man was familiar with the cyclic character of life in nature, he observed the phases of the Moon and knew how to record all this, having knowledge of the rudiments of writing and counting.<sup>16</sup> Ethnography also testifies to primitive man's knowledge of certain laws of nature, as indicated in the foregoing discourse.

It is impossible to imagine the advance of primitive society and culture as something lacking a conscious attitude towards nature and the processes in it, towards the eternal cycle of life. Man started the producer economy already equipped with a system of knowledge of the surrounding world, reflecting thousands of years of observation, experience and practice.

#### NOTES

- <sup>1</sup> M. I. Budyko, *Global Ecology*, Moscow, 1977, pp. 239-254 (in Russian).
- <sup>2</sup> K. W. Butzer, *Environment and Archaeology. An Ecological Approach to Prehistory*, London, 1972, p. 484.
- <sup>3</sup> G. Grey, *Journals of Two Expeditions of Discovery in North-West and Western Australia*, London, 1841, Vol. 2, pp. 262-263.
- <sup>4</sup> Ibidem.
- <sup>5</sup> R. B. Lee, "What Hunters Do for a Living", *Man the Hunter*, Chicago, 1969; "Kung Bushman Subsistence: an Input-Output Analysis", *Environment and Cultural Behaviour*, New York, 1969.
- <sup>6</sup> J. Woodburn, "An Introduction to Hadza Ecology", *Man the Hunter*, Chicago, 1969, p. 54.
- <sup>7</sup> S. N. Zamyatnin, "Some Questions of Studying the Economy in the Palaeolithic", *Proceedings of the Institute of Ethnography*, IV, Moscow-Leningrad, 1969 (in Russian).
- <sup>8</sup> R. Jones, "Fire-Stick Farming", *Australian Natural History*, 1969, Vol. 16.
- <sup>9</sup> T. L. Mitchell, *Journal of an Expedition into the Interior of Tropical Australia*, London, 1848, pp. 306, 412-413.
- <sup>10</sup> N. J. Gubser, *The Nunamiut Eskimos*, New Haven, 1965, p. 61.
- <sup>11</sup> D. Damas, "Environment, History and Central Eskimo Society", *National Museum of Canada, Bulletin No. 230*, 1969, pp. 283-284.
- <sup>12</sup> Randhir Kumar De, "The Onge of Little Andaman", *Vanyajati*, 1957, Vol. 5, No. 1, pp. 14-17.
- <sup>13</sup> *Kalahari Hunter-Gatherers: Studies of the Kung San and Their Neighbors*, Cambridge, 1976; E. Marshall, *The Kung of Nyae*, Cambridge, 1977.
- <sup>14</sup> C. Lévi-Strauss, *Structural Anthropology*, New York, 1963, pp. 109-110, 113; L. Boglar, "The Nambikwara—a Marginal Group in Brazil", *Sovietskaya etnografiya*, No. 3, 1972.
- <sup>15</sup> K. Marx and F. Engels, *Works*, Vol. 46, Part I, p. 485 (in Russian).
- <sup>16</sup> A. Marshack, *The Roots of Civilisation*, New York, 1972; B. A. Frolov, *Numbers in Palaeolithic Graphics*, Novosibirsk, 1974 (in Russian); B. A. Frolov, "The Sources of Primitive Astronomy", *Priroda*, No. 8, 1977.