

Rational Mastery by Man of His Surroundings

Bronislaw Malinowski

Rare is the anthropology course that sometime during the semester is not directed to the thought and writings of Bronislaw Malinowski (1884-1942). This world-famous Polish anthropologist was trained in mathematics, but shifted his interests to anthropology after reading Sir James Frazer's The Golden Bough. Malinowski's field work in the Trobriand Islands of Melanesia influenced the direction of anthropology as an academic discipline. He is recognized as the founder of functionalism, an anthropological approach to the study of culture that believes each institution in a society fulfills a definite function in the maintenance of human needs. His major works include Crime and Customs in Savage Society (1926), The Sexual Life of Savages (1929), and Coral Gardens and Their Magic (1935). Malinowski was professor of anthropology at the University of London from 1927 until his death in 1942. In this classic article Malinowski asks two important questions: do pre-literate people have any rational mastery of their surroundings; and can primitive knowledge be regarded as a beginning or rudimentary type of science, or is it merely a crude hodgepodge devoid of logic and accuracy?

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THE PROBLEM OF PRIMITIVE KNOWLEDGE HAS BEEN singularly neglected by anthropology. Studies on savage psychology were exclusively confined to early religion, magic, and mythology. Only recently the work of several English, German, and French writers, notably the daring and brilliant speculations of Professor Lévy-Bruhl, gave an impetus to the student's interest in what the savage does in his more sober moods. The results were startling indeed: Professor Lévy-Bruhl tells us, to put it in a nutshell, that primitive man has no sober moods at all, that he is hopelessly and completely immersed in a mystical frame of mind. Incapable of dispassionate and consistent observation, devoid of the power of abstraction, hampered by "a decided aversion towards reasoning," he is unable to draw any benefit from experience, to construct or comprehend even the most elementary laws of nature. "For minds thus orientated there is no fact purely physical." Nor can there exist for them any clear idea of substance and attribute, cause and effect, identity and contradiction. Their outlook is that of confused superstition, "pre-logical," made of mystic "participations" and "exclusions." I have here summarized a body of opinion, of which the brilliant French sociologist is the most decided and competent spokesman, but which numbers besides, many anthropologists and philosophers of renown.

But there are dissenting voices. When a scholar and anthropologist of the measure of Professor J. L. Myres entitles an article in *Notes and Queries* "Natural Science," and when we read there that the savage's "knowledge based on observation is distinct and accurate," we must surely pause before accepting primitive man's irrationality as a dogma. Another highly competent writer, Dr. A. A. Goldenweiser, speaking about primitive "discoveries, inventions and

improvements"—which could hardly be attributed to any pre-empirical or pre-logical mind—affirms that "it would be unwise to ascribe to the primitive mechanic merely a passive part in the origination of inventions. Many a happy thought must have crossed his mind, nor was he wholly unfamiliar with the thrill that comes from an idea effective in action." Here we see the savage endowed with an attitude of mind wholly akin to that of a modern man of science!

To bridge over the wide gap between the two extreme opinions current on the subject of primitive man's reason, it will be best to resolve the problem into two questions.

First, has the savage any rational outlook, any rational mastery of his surroundings, or is he, as M. Lévy-Bruhl and his school maintain, entirely "mystical"? The answer will be that every primitive community is in possession of a considerable store of knowledge, based on experience and fashioned by reason.

The second question then opens: Can this primitive knowledge be regarded as a rudimentary form of science or is it, on the contrary, radically different, a crude empiry, a body of practical and technical abilities, rules of thumb and rules of art having no theoretical value? This second question, epistemological rather than belonging to the study of man, will be barely touched upon at the end of this section and a tentative answer only will be given.

In dealing with the first question, we shall have to examine the "profane" side of life, the arts, crafts and economic pursuits, and we shall attempt to disentangle in it a type of behavior, clearly marked off from magic and religion, based on empirical knowledge and on the confidence in logic. We shall try to find whether the lines of such behavior are defined by traditional rules, known, perhaps even discussed sometimes, and tested. We shall have to inquire whether the sociological setting of the rational and empirical behavior differs from that of ritual and cult. Above all we shall ask, do the natives distinguish the two domains and keep them apart, or is the field of knowledge constantly swamped by superstition, ritualism, magic or religion?

Since in the matter under discussion there is an appalling lack of relevant and reliable observations, I shall have largely to draw upon my own material, most unpublished, collected during a few years'

field work among the Melanesian and Papuo-Melanesian tribes of Eastern New Guinea and the surrounding archipelagoes. As the Melanesians are reputed, however, to be specially magic-ridden, they will furnish an acid test of the existence of empirical and rational knowledge among savages living in the age of polished stone.

These natives, and I am speaking mainly of the Melanesians who inhabit the coral atolls to the N.E. of the main island, the Trobriand Archipelago and the adjoining groups, are expert fishermen, industrious manufacturers and traders, but they rely mainly on gardening for their subsistence. With the most rudimentary implements, a pointed digging-stick and a small axe, they are able to raise crops sufficient to maintain a dense population and even yielding a surplus, which in olden days was allowed to rot unconsumed, and which at present is exported to feed plantation hands. The success in their agriculture depends—besides the excellent natural conditions with which they are favored—upon their extensive knowledge of the classes of the soil, of the various cultivated plants, of the mutual adaptation of these two factors, and, last not least, upon their knowledge of the importance of accurate and hard work. They have to select the soil and the seedlings, they have appropriately to fix the times for clearing and burning the scrub, for planting and weeding, for training the vines of the yam plants. In all this they are guided by a clear knowledge of weather and seasons, plants and pests, soil and tubers, and by a conviction that this knowledge is true and reliable, that it can be counted upon and must be scrupulously obeyed.

Yet mixed with all their activities there is to be found magic, a series of rites performed every year over the gardens in rigorous sequence and order. Since the leadership in garden work is in the hands of the magician, and since ritual and practical work are intimately associated, a superficial observer might be led to assume that the mystic and the rational behavior are mixed up, that their effects are not distinguished by the natives and not distinguishable in scientific analysis. Is this so really?

Magic is undoubtedly regarded by the natives as absolutely indispensable to the welfare of the gardens. What would happen without it no one can exactly tell, for no native garden has ever been made without its ritual, in spite of some thirty years of European rule and missionary influence and well

over a century's contact with white traders. But certainly various kinds of disaster, blight, unseasonable droughts, rains, bush-pigs and locusts would destroy the unhallowed garden made without magic.

Does this mean, however, that the natives attribute all the good results to magic? Certainly not. If you were to suggest to a native that he should make his garden mainly by magic and scamp his work, he would simply smile on your simplicity. He knows as well as you do that there are natural conditions and causes, and by his observations he knows also that he is able to control these natural forces by mental and physical effort. His knowledge is limited, no doubt, but as far as it goes it is sound and proof against mysticism. If the fences are broken down, if the seed is destroyed or has been dried or washed away, he will have recourse not to magic, but to work, guided by knowledge and reason. His experience has taught him also, on the other hand, that in spite of all his forethought and beyond all his efforts there are agencies and forces which one year bestow unwonted and unearned benefits of fertility, making everything run smooth and well, rain and sun appear at the right moment, noxious insects remain in abeyance, the harvest yields a superabundant crop; and another year again the same agencies bring ill luck and bad chance, pursue him from beginning till end and thwart all his most strenuous efforts and his best-founded knowledge. To control these influences and these only he employs magic.

Thus there is a clear-cut division: there is first the well-known set of conditions, the natural course of growth, as well as the ordinary pests and dangers to be warded off by fencing and weeding. On the other hand there is the domain of the unaccountable and adverse influences, as well as the great unearned increment of fortunate coincidence. The first conditions are coped with by knowledge and work, the second by magic.

This line of division can also be traced in the social setting of work and ritual respectively. Though the garden magician is, as a rule, also the leader in practical activities, these two functions are kept strictly apart. Every magical ceremony has its distinctive name, its appropriate time and its place in the scheme of work, and it stands out of the ordinary course of activities completely. Some of them are ceremonial and have to be attended by the

whole community, all are public in that it is known when they are going to happen and anyone can attend them. They are performed on selected plots within the gardens and on a special corner of this plot. Work is always tabooed on such occasions, sometimes only while the ceremony lasts, sometimes for a day or two. In his lay character the leader and magician directs the work, fixes the dates for starting, harangues and exhorts slack or careless gardeners. But the two roles never overlap or interfere: they are always clear, and any native will inform you without hesitation whether the man acts as magician or as leader in garden work.

What has been said about gardens can be paralleled from any one of the many other activities in which work and magic run side by side without ever mixing. Thus in canoe building empirical knowledge of material, of technology, and of certain principles of stability and hydrodynamics, function in company and close association with magic, each yet uncontaminated by the other.

For example, they understand perfectly well that the wider the span of the outrigger the greater the stability yet the smaller the resistance against strain. They can clearly explain why they have to give this span a certain traditional width, measured in fractions of the length of the dugout. They can also explain, in rudimentary but clearly mechanical terms, how they have to behave in a sudden gale, why the outrigger must be always on the weather side, why the one type of canoe can and the other cannot beat. They have, in fact, a whole system of principles of sailing, embodied in a complex and rich terminology, traditionally handed on and obeyed as rationally and consistently as is modern science by modern sailors. How could they sail otherwise under eminently dangerous conditions in their frail primitive craft?

But even with all their systematic knowledge, methodically applied, they are still at the mercy of powerful and incalculable tides, sudden gales during the monsoon season and unknown reefs. And here comes in their magic, performed over the canoe during its construction, carried out at the beginning and in the course of expeditions and resorted to in moments of real danger. If the modern seaman, entrenched in science and reason, provided with all sorts of safety appliances, sailing on steel-built steamers, if even he has a singular tendency to superstition—which does not rob him

of his knowledge or reason, nor make him altogether prelogical—can we wonder that his savage colleague, under much more precarious conditions, holds fast to the safety and comfort of magic?

An interesting and crucial test is provided by fishing in the Trobriand Islands and its magic. While in the villages on the inner lagoon fishing is done in an easy and absolutely reliable manner by the method of poisoning, yielding abundant results without danger and uncertainty, there are on the shores of the open sea dangerous modes of fishing and also certain types in which the yield greatly varies according to whether shoals of fish appear beforehand or not. It is most significant that in the lagoon fishing, where man can rely completely upon his knowledge and skill, magic does not exist, while in the open-sea fishing, full of danger and uncertainty, there is extensive magical ritual to secure safety and good results.

Again, in warfare the natives know that strength, courage, and agility play a decisive part. Yet here also they practice magic to master the elements of chance and luck.

Nowhere is the duality of natural and supernatural causes divided by a line so thin and intricate, yet, if carefully followed up, so well marked, decisive, and instructive, as in the two most fateful forces of human destiny: health and death. Health to the Melanesians is a natural state of affairs and, unless tampered with, the human body will remain in perfect order. But the natives know perfectly well that there are natural means which can affect health and even destroy the body. Poisons, wounds, burns, falls, are known to cause disablement or death in a natural way. And this is not a matter of private opinion of this or that individual, but it is laid down in traditional lore and even in belief, for there are considered to be different ways to the nether world for those who died by sorcery and those who met "natural" death. Again, it is recognized that cold, heat, overstrain, too much sun, overeating, can all cause minor ailments, which are treated by natural remedies such as massage, steaming, warming at a fire and certain potions. Old age is known to lead to bodily decay and the explanation is given by the natives that very old people grow weak, their oesophagus closes up, and therefore they must die.

But besides these natural causes there is the enormous domain of sorcery and by far the most

cases of illness and death are ascribed to this. The line of distinction between sorcery and the other causes is clear in theory and in most cases of practice, but it must be realized that it is subject to what could be called the personal perspective. That is, the more closely a case has to do with the person who considers it, the less will it be "natural," the more "magical." Thus a very old man, whose pending death will be considered natural by the other members of the community, will be afraid only of sorcery and never think of his natural fate. A fairly sick person will diagnose sorcery in his own case, while all the others might speak of too much betel nut or overeating or some other indulgence.

But who of us really believes that his own bodily infirmities and the approaching death is a purely natural occurrence, just an insignificant event in the infinite chain of causes? To the most rational civilized men health, disease, the threat of death, float in a hazy emotional mist, which seems to become denser and more impenetrable as the fateful forms approach. It is indeed astonishing that "savages" can achieve such a sober, dispassionate outlook in these matters as they actually do.

Thus in his relation to nature and destiny, whether he tries to exploit the first or to dodge the second, primitive man recognizes both the natural and the supernatural forces and agencies, and he tries to use them both for his benefit. Whenever he has been taught by experience that effort guided by knowledge is of some avail, he never spares the one or ignores the other. He knows that a plant cannot grow by magic alone, or a canoe sail or float without being properly constructed and managed, or a fight be won without skill and daring. He never relies on magic alone, while, on the contrary, he sometimes dispenses with it completely, as in fire-making and in a number of crafts and pursuits. But he clings to it, whenever he has to recognize the impotence of his knowledge and of his rational technique.

I have given my reasons why in this argument I had to rely principally on the material collected in the classical land of magic, Melanesia. But the facts discussed are so fundamental, the conclusions drawn of such a general nature, that it will be easy to check them on any modern detailed ethnographic record. Comparing agricultural work and magic, the building of canoes, the art of healing by

magic and by natural remedies, the ideas about the causes of death in other regions, the universal validity of what has been established here could easily be proved. Only, since no observations have methodically been made with reference to the problem of primitive knowledge, the data from other writers could be gleaned only piecemeal and their testimony though clear would be indirect.

I have chosen to face the question of primitive man's rational knowledge directly: watching him at his principal occupations, seeing him pass from work to magic and back again, entering into his mind, listening to his opinions. The whole problem might have been approached through the avenue of language, but this would have led us too far into questions of logic, semasiology, and theory of primitive languages. Words which serve to express general ideas such as *existence*, *substance*, and *attribute*, *cause* and *effect*, the *fundamental* and the *secondary*; words and expressions used in complicated pursuits like sailing, construction, measuring and checking; numerals and quantitative descriptions, correct and detailed classifications of natural phenomena, plants and animals—all this would lead us exactly to the same conclusion: that primitive man can observe and think, and that he possesses, embodied in his language, systems of methodical though rudimentary knowledge.

Similar conclusions could be drawn from an examination of those mental schemes and physical contrivances which could be described as diagrams or formulas. Methods of indicating the main points of the compass, arrangements of stars into constellations, co-ordination of these with the seasons, naming of moons in the year, of quarters in the moon—all these accomplishments are known to the simplest savages. Also they are all able to draw diagrammatic maps in the sand or dust, indicate arrangements by placing small stones, shells, or sticks on the ground, plan expeditions or raids on such rudimentary charts. By co-ordinating space and time they are able to arrange big tribal gatherings and to combine vast tribal movements over extensive areas. The use of leaves, notched sticks, and similar aids to memory is well known and seems to be almost universal. All such "diagrams" are means of reducing a complex and unwieldy bit of reality to a simple and handy form. They give man a relatively easy mental control over it. As such are they not—in a very rudimentary form no

doubt—fundamentally akin to developed scientific formulas and "models," which are also simple and handy paraphrases of a complex or abstract reality, giving the civilized physicist mental control over it?

This brings us to the second question: Can we regard primitive knowledge, which, as we found, is both empirical and rational, as a rudimentary stage of science, or is it not at all related to it? If by science be understood a body of rules and conceptions, based on experience and derived from it by logical inference, embodied in material achievements and in a fixed form of tradition and carried on by some sort of social organization—then there is no doubt that even the lowest savage communities have the beginnings of science, however rudimentary.

Most epistemologists would not, however, be satisfied with such a "minimum definition" of science, for it might apply to the rules of an art or craft as well. They would maintain that the rules of science must be laid down explicitly, open to control by experiment and critique by reason. They must not only be rules of practical behavior, but theoretical laws of knowledge. Even accepting this stricture, however, there is hardly any doubt that many of the principles of savage knowledge are scientific in this sense. The native shipwright knows not only practically of buoyancy, leverage, equilibrium, he has to obey these laws not only on water, but while making the canoe he must have the principles in his mind. He instructs his helpers in them. He gives them the traditional rules, and in a crude and simple manner, using his hands, pieces of wood, and a limited technical vocabulary, he explains some general laws of hydrodynamics and equilibrium. Science is not detached from the craft, that is certainly true, it is only a means to an end, it is crude, rudimentary, and inchoate, but with all that it is the matrix from which the higher developments must have sprung.

If we applied another criterion yet, that of the really scientific attitude, the disinterested search for knowledge and for the understanding of causes and reasons, the answer would certainly not be in a direct negative. There is, of course, no widespread thirst for knowledge in a savage community, new things such as European topics bore them frankly and their whole interest is largely encompassed by the traditional world of their culture. But within this there is both the antiquarian mind passionately

interested in myths, stories, details of customs, pedigrees, and ancient happenings, and there is also to be found the naturalist, patient and painstaking in his observations, capable of generalization and of connecting long chains of events in the life of animals, and in the marine world or in the jungle. It is enough to realize how much European naturalists have often learned from their savage colleagues to appreciate this interest found in the native for nature. There is finally among the primi-

tives, as every field worker well knows, the sociologist, the ideal informant, capable with marvelous accuracy and insight to give the *raison d'être*, the function and the organization of many a simpler institution in his tribe.

Science, of course, does not exist in any uncivilized community as a driving power, criticizing, renewing, constructing. Science is never consciously made. But on this criterion, neither is there law, nor religion, nor government among savages.