ETHNOLOGY

People Without Magic

Only Group in the World Free From Superstition Is Found Not in Civilized Lands But Among "Savages"

By EMILY C. DAVIS

EVEN men in the highest of silk hats and women wearing long-handled lorgnettes can't afford to look down on benighted savages, thinking them "so ridiculous" because they make magic to get what they want.

For the fact is, scientists can find magic the world over, except—

Except where? Well, they don't say "except in American cities," not with all the appeals to Lady Luck, and pet superstitions and mascots that they can observe on Main Street and Broadway. Certainly those are magic, say the scientists.

Forcing Nature

Trying to force nature to make your wishes come true, that's magic; and there is a feeling of awe that seems to be an essential part of magic, because it deals with forces that are outside the pale of good sound common sense. So, choosing a particular, lucky number for your automobile tag is magic, just the same as the charm that the islander mumbles in the cheery hope that it will remove an enemy from his path.

If you want to get away from magic, you have to get entirely away from civilization. Take ship for the Philippine Islands, and ask for the pygmy Negritos up in the mountain province of the island of Luzon. These little chocolate brown people are wild and backward. Live in houses scarcely bigger than dog tents. Eat what they can find hunting and fishing. And work no charms to get ahead of nature.

Dr. John M. Cooper, anthropologist of the Catholic University of America, believes this pygmy people to be unique. The discovery that any human beings alive let nature alone and do not try to get the upper hand by magic trickery is surprising to scientists no less than laymen.

The discovery, Dr. Cooper explains, was told him by Father Morice Vanoverbergh, scientist and missionary from the Philippines. This man had been living 30 years among Philippine natives who would jump even if a leaf blew down the floor, fearing that it boded some evil mystery. From these magic-fearing people, he went to visit among the mountain pygmies. Knowing that the pygmies were a step farther down the scale of civilization, he was prepared to find them conjuring about everything.

But no; a leaf rolling along the floor is just a leaf to these little savages. Sickness? Nothing mysterious about that. You get sick, that is all. The whole world to these simple people is as matter-of-fact as that.

Luck? Fairies? Magic? Their talk and their doings hold not a trace of it.

Thus anthropologists, who study Man with a capital M and impartially compare Philippine pygmies with college bred Americans, are overturning popular notions about magic. Civilized men, not to mention their wives and children, make magic. Some of the most backward humans alive do not.

The matter-of-fact pygmies may give the modern world a clearer glimpse into the long-ago world of the Stone Age cave men, it is believed. Valuable clues to a cave man's thoughts can sometimes be found by probing the minds of the most primitive living races. After all, some of them are still living in the Old Stone Age, whatever the calendar says.

Caveman's Art

Finding a tribe without magic, and a very simple tribe at that, strengthens Dr. Cooper's theory that the cave man's famous art may not have been produced as savage magic.

Popular opinion has been rather unfair to the cave man on more than one count, Dr. Cooper fears. The cave man is notorious as a creature who was rough with his women folk, and who painted excellent animal pictures for the silly idea that they would help him kill real beasts in the forest.

Explaining the cave man's art on this uncomplimentary ground is quite customary. The spirited wild horses and mammoths painted on cavern walls in France and Spain are ordinarily pointed out as the "sympathetic magic" of 30,000 years ago. It is supposed that the cave artist would paint the animal, draw a dart through it, or gouge holes to represent wounds, and then perhaps with a few words of hocus pocus he would conjure the picture into reality for the next day's hunting. So the pictures are accounted for, because natives today perform sympathetic magic very similar. Hex doctors in America put faith in the same sort of magic, using wax images and pins, for instance, to imitate the hoped-for destruction of an unwanted person.

But about the cave man's motives, both in love and art, Dr. Cooper has remained very, very skeptical. He questions whether magic had been invented by our ancestors in cave man days. And finding that the simple pygmies have no thought of it, is the first good evidence that magic is not universal.

If cave men wanted to paint the world's first pictures, they may have been doing nothing more mysterious than the small boy when he idly draws houses, cats, and school teachers on the back fence. Art for art's sake, by this view of the past, would be far older than has been supposed.

30,000 Years Ago

Cave men may not have begun to play with the dangerous fire of magic. But they did have science, practical applied science, 30,000 years ago.

There is evidence for this, Dr. Cooper points out, in the stone tools and hunting weapons which they worked on and improved. That was workaday, laboratory science based on observation and reasoning.

The general view that modern science has sprung up out of the roots of magic is not shared by this anthropologist. It is all wrong to think of ancient astrology's weird star lore turning into the exact science of astronomy. Nor did the trickery of medieval alchemists presently sober down into modern chemistry.

On the contrary, science began as science, says Dr. Cooper. The simplest savages had some knowledge of science, and have it today. Magic simply chiseled in, became a parasitic growth on real scientific knowledge.

The civilized world, with its superiority complex, has never given savages credit for their scientific knowledge. But anthropologists who get to know them report that primitive men and women possess some working knowledge of every major science, from botany to zoology. Not all of primitive science is valid, of course. The jungle anatomist makes mistakes and gets wrong ideas. But not all the science of the most complex modern laboratories is valid either, so far as that goes.

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To show what the so-called savages achieve in science, Dr. Cooper cites the case of a Zulu girl in South Africa who brought in botanical specimens to a visiting white botanist. This girl, about fifteen years old, collected nearly 900 specimens of plants and she knew the names and uses of practically all of them. And there was no magic about this, no awe of mysterious properties of plants. Just matter-of-fact observation.

An Indian of the Hudson Bay region explained to Dr. Cooper in considerable detail how the caribou's four stomachs are used. He described the processes of digestion in this rather intricate animal, and Dr. Cooper remembered and looked it up when he returned home. Not being an anatomist or a Canadian woods Indian, he wondered how much truth there was in the Indian's explanation, but it turned out to be scientifically correct.

Storm Waving

Not so successful is the science of the African tribe which tries to wave a storm away by violent arm motions. Cattle can be driven off by this sort of arm waving, so why not a storm? This seems to be the reasoning of the Africans. It is poor science, but not fair to call it magic, says the anthropologist.

Superficial travelers, and their public back home, have rather enjoyed shuddering over the dreadful magic-ridden lives of the uncivilized. That is why magic has loomed so big and important in tales of jungles, woods, and tropic isles. Think of putting your trust in witch doctors, swallowing potions brewed of awful ingredients, and being alert every second to invisible, mysterious danger. A terrible life, surely, filled with fears and superstitions, but fascinating to consider.

"Primitive man magic-ridden?" says Dr. Cooper with a thoughtful smile. "I am not so sure of that, so far as *very* primitive man goes."

"Travelers and explorers tend to emphasize the stupidities and superficialities of savage life," he explains. "It is these stupidities and superstitions that have usually most news value. But in reality these things are a small part of thought or activity in a primitive camp or village. In their affairs of hunting, eating, caring for the children and their homes, the savages are apt to be as matter-of-fact as Main Street itself, and, more commonly than not, show considerably more intelligence than is shown on that much-advertised thoroughfare."

Magic is just about as important in a modern city as in a savage community, Dr. Cooper finds from living with neighbors of both kinds, primitive and civilized.

The town grocer or banker will tell you he does not really put any faith in superstitions. But he will, perhaps, smilingly admit carrying a lucky piece in his pocket—had it for years, he will say. Or he will mention wearing a certain blue necktie when he sets out for an important golf match. And his face will take on a slightly startled look when he finds himself with twelve other people drawing up to a luncheon table.

"Oh, just a joke," says the civilized man, laughing heartily, if such attitudes are mentioned.

Well, says the anthropologist, primitive men are just joking about their superstitions, too, many a time when they tell foreigners about them. Many observers have made the error of writing down primitive humor under the sober heading "native beliefs." The joke seems to have been on the civilized investigators, not on the simple savages who are supposed to believe such ridiculous things.

In the Canadian woods around Hudson Bay, where Dr. Cooper spends his summers, he finds magic taken in all degrees of seriousness, just as it is back home in Washington, D. C.

An Indian will tell him, with a straight face, a long story of how the bear lost its long tail. It seems a fox tricked the bear into fishing through the ice with its tail, got the tail frozen in the ice, and so the bear lost it.

NOT SUPERSTITIOUS

Negrito woman, "four feet plus," and not afraid of spirits. This pygmy tribe is believed unique in the world, since magic has been found everywhere else, high and low. This photograph is from the collection of the U. S. National Museum.

Watching the Indian closely, the anthropologist can catch a twinkle in his eye, and knows that he is hearing a funny story. No bear and fox ever talked each other into any such situation, and the Indian knows it as well as you do.

When an Indian remarks that his mouth is twitching and he is "going to eat fat," he is half-jesting about it. It is a sign, and there is no harm hoping for a good dinner. And that matches up with the civilized man's saying "My ear is burning; somebody is certainly talking about me."

Grease Gazing

From such jokes and half-jokes, magic can be found grading on up to highly serious matters. Indians of this same Canadian forest do a sort of crystal gazing, using the shiny surface of otter grease in a pan for a crystal. If the gazer looks in and sees his face with the eyes seeming closed, it is a terrible sign, so bad that the gazer will not talk about it. Premonitions are taken just as seriously in much more cultured circles by some people, as everyone knows.

So far as anthropologists can make out, magic is just a side line in the everyday life of a savage of the simpler sort. It is just a side line with civilized man. Savage and civilized humans both live about ninety per cent. on the work-a-day level, with common sense telling them what to do. It is more among the middle-grade people, the semi-civilized tribes, that magic is a pervading influence. There magic has chiseled in with a vengeance.

The idea that natives almost everywhere are perpetually in awe of the supernatural and always busy conjuring to defeat it, got abroad in part as a result of Australian discoveries, it is now realized. Australian natives were among the first to show the world what primitive customs were like. And the scientific studies there revealed a good deal of picturesque magic. But far from being typical simple savages, the Australian natives are becoming more and more recognized as having a complex and advanced native culture. They have one of the most complicated marriage systems in the world; instruct their boys in elaborate dramatic ceremonies; and are ruled by a powerful council of elders.

These black men of central Australia are magic ridden if any people are. Any man who dies, except in battle, may be thought killed off by magic arts. Then the enemy responsible has to be sought, by more magic. Magic is used to bring an eloping wife back to her lonely husband. Magic has power to bring rain, and to cause animals to appear.

But understanding the Australians is no neat guide to understanding native life. It now appears that explorers who reasoned that all natives act like Australians have been as wrong in their science as the Africans who earnestly try to apply cattle-handling devices to control thunderstorms.

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AGRICULTURE-ENGINEERING

Invention Still Has Task Of Freeing Small Fingers

GRAIN harvesting machinery is whirring on a million farms, and when the fields have been cleared tractors will pull plowshares through the soil, preparing it for fall sowing. Machinery has lifted much of the load that used to wear out men's backs and arms on the farm, just as machinery in factory and on the city street has liberated urban workers—though often at the cost of a period of distressful "technological unemployment."

But there still exists a great need for further invention that will liberate the fingers of children, bound to such slave-labor tasks as hand-weeding onion fields, thinning sugarbeet rows, picking cranberries in the bogs. Ordinary farm chores may be no great hardship on children; they may even reminisce about them in later years, as Herbert Hoover did not long ago about his exploits as a youthful potato-bugger. But gang labor by children, on corporation-owned industrialized plantations, is quite another story. There can be sweated work in the fields as well as in the factories.

Yet if we would do away with this nasty remnant of slavery, we must fairly face the growers' dilemma. The public demands cheap onions, cheap sugar, cheap berries. All these crops, and others, require much nimble finger-work. The grower must either exploit children or raise prices—and face a buyers' strike that may force him out of business.

The alternative is liberating invention, analogous to the invention of nail-making and chain-making machinery, which released thousands of child-slaves who once sweated and starved in the light ironware trade of England.

Admittedly, machinery for finer manipulations is hard to invent. A gang-plow that will rip up soil by the ton is easier to think up than a device that will pick raspberries and pass by the leaves and twigs, or a machine to pluck up tiny weeds and spare the young onions. But if we are to ease our social conscience of our present economically dictated sins against childhood and yet redeem certain businesses which we insist on retaining, such devices will have to be produced.

There may, of course, be non-mechanical solutions for some of the problems. Conceivably, there might be some soil treatment, by heat or chemicals, that would destroy all weed seeds before a crop is planted, doing away with the need for hand weeding. Greenhouse and nursery-bed soils are now heat-treated, to kill disease-fungi before tobacco and tree seeds are planted. But if such methods are attempted, they must be made much cheaper than they are now. Furthermore, harm must not be done to the soil itself, and to the useful microorganisms that live in it. The children must be emancipated, but we must be careful lest we set them free into a breadless house.

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ANTHROPOLOGY

Bones of First Americans Are Still Missing

SEEKING the first inhabitants of America, whose skeletal remains have not yet been discovered, Edgar B. Howard of Philadelphia is now on his way to Russia.

The hunt for information regarding these earliest Americans is being extended to Siberia, whence they came, following five years of extensive exploration by Mr. Howard which have failed to show any of the secret burying places in this country.

"Folsom Men," as the oldest people of the American wilderness are scientifically termed, are known to have existed, from the trail of their stone weapons and bones of extinct animals they hunted and ate. Mr. Howard's explorations, which are conducted for the Academy of Natural Sciences of Philadelphia and the University Museum, have furnished evidence that these hunting people were in America long before the Basket Makers—oldest known Indian culture, which dates from about 2000 B. C.

Not satisfied, however, with his conclusion that man lived in America at least 10,000 years ago, Mr. Howard has urged that "what is most needed is to find Folsom Man himself."

In Russia the American archaeologist expects to examine fossil finds that have been made in Siberia, and possibly to enlist the active interest of Soviet scientists in further work along these lines.

If Folsom Man continues to prove personally elusive in America, it is hoped that his physical type and other important facts about him can be detected among remains in his old home land in Siberia.

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ENTOMOLOGY-PHARMACY

Preferences of Drug Store Beetles Subject of Study

"DRUG store beetles" are replacing "drug store cowboys" as the principal pests and annoyances of the corner druggist. That is one way of putting the conclusions of the Department of Entomology of the Oregon State Agricultural Experiment Station, after making an extensive study of beetles and bugs found in pharmacies. Particular attention was paid by the entomologists to determining the drugs preferred by the marauding insects for their repasts.

The investigators were unable to say whether two particularly greedy species, the drug store beetle and the square-necked grain beetle, nibbled on sleeping powders after a night of "whoopee" on sarsaparilla and ginger roots. They did find that both preferred crude drugs containing an abundance of sugar in their rhizomes or roots. The taste of the drug seemed to make little difference in most cases, although a few of the tasteless drugs rather seemed to be favorites.

The two species differed in their likings. Out of the twenty-two drugs which were found infested, the drug store beetle seemed to prefer, among other less common drugs, the roots and rhizomes of the sarsaparilla, the male fern, meadow saffron, burdock and licorice. The square-necked grain beetle found rhubarb rhizomes and ginger roots more to its liking, while they both seemed to fancy the iris rhizomes and the bark of the burning bush. Other well-known drugs were tabulated in the report, such as chicory, caraway seed, parsley root, linseed and ginseng.

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