The Cult of the Cave Bear

Prehistoric Rite or Scientific Myth?

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Many of the myths that plague archaeologists come from outside the profession, the product of overly imaginative minds untrained in the scientific study of the past and unfamiliar with the archaeological evidence. There are, however, a few very popular and widely believed myths about the past that come out of the discipline of archaeology itself and that are based on evidence collected and interpreted by professionals.

It is a part of the process of science that ideas arise, are later recognized as mistaken, and are dropped. However, when an idea is so spectacular or so romantic that it escapes from the dry pages of scientific journals and catches the public imagination; when it becomes firmly entrenched there; and when it continues to color people's ideas about the past long after it has been proven groundless — then it begins to take on the aspect of other legends like those of Atlantis or of the peopling of the Americas by the Lost Tribes of Israel.

The Cult of the Cave Bear is such a myth. The idea that Neanderthals (Fig. 1), the predecessors of modern humans in Europe, were engaging regularly in religious rituals involving the sacrifice or the worship of the now extinct cave bear appears to have been suggested separately by at least two excavators of cave bear dens early in the 1920s. By 1975, a detailed analysis debunking all the evidence for such a cult had appeared in print. Yet since that time, best-selling novels, major Hollywood movies, and even college textbooks have portrayed the Cult of the Cave Bear as not only satisfyingly romantic but true as well.

How the myth came into being can easily be understood if we look at the most famous of the sites where ritual remains were thought to have been found. Why the evidence is no longer to be taken as proving the existence of such a cult can be understood by examining the same evidence in the light of new methods and knowledge. Why the notion continues to be popular is harder to understand.

The Dragon's Cave

In the years between 1917 and 1921, in a deep cave high above the Tamina Valley in Switzerland, Dr. Emil Bächler uncovered a series of spectacular finds. The sediments that filled the cave of Drachenloch ("Dragon's Cave") had been laid down during the Ice Ages, when both cave bears and Neanderthals flourished in Europe. What he found led Bächler to conclude that relationships between the two species had been more than casual.

The dirt and rock debris that filled the cave was full of bear bones. This in itself was not surprising, since cave bears used caves for hibernation (hence the scientific name Ursus spelaeus or "cave bear") and, over centuries of such occupation, died in large enough numbers to leave abundant bones to be found by future excavators. But some of the deposits of bear bones found by Bächler's workmen appeared to be far from natural. In two of the interior chambers were low mortarialess stone walls, up to about 10 inches high, located 15 to 25 inches from the bedrock walls of the cave. Such constructions were in themselves remarkable, for elsewhere the only stone structures attributable to Neanderthals are extremely crude, consisting of irregular circles of rocks that were probably used to weight the bases of tents or windbreaks. In Drachenloch, however, not only were there walls, but behind these walls were found accumulations of bear bones — the long bones of the legs and more or less complete skulls. The pattern was very consistent. Where such walls were present, bones were present. Where they were absent, bones were rare along the cave walls.

Other finds at Drachenloch were even more spectacular. Bächler found "about six" carefully made dry masonry chests, or cists, full of bear bones. One of those in particular has become famous. It was about three feet high and covered with a large limestone slab. Inside it were a group of cave bear skulls, all carefully aligned in the same direction. While workmen destroyed the chest before it could be photographed, Bächler published a sketch of it, drawn in cross-section some time after the excavation (Fig. 3). Many of the bones in these
At the time Bächler was excavating, archaeology and paleontology were far different disciplines than they are today. While excavators were aware of the general principle that finds are of use to science only to the extent that their context is known, context was generally studied as a by-product, and a much grosser scale than it is today. Today digging is done by trained excavators, who are generally well-trained and detailed, carefully measured drawings and photographs of even run-of-the-mill finds, and even more detailed excava-
tion spectacular finds such as those reported by Bächler—are part of the compiled evidence of any excavation (see box).

Drachenloch, however, was excavated by Bächler without any such precautions. After the excavations were conducted under his overall direction, Bächler was not at the site continuously; he simply visited it at various times during the work. In fact, he was absent when the skull with the thighbone through the cheekbone was found. While Bächler kept track of the gross changes in the layering of the cave fill and of the general shape of the cavity of the cave, he did not observe or record the drawings of the dry masonry walls, cists, or bone deposits—or, for that matter, anything else.

Bächler had followed modern practices, we would today have careful records of the cave fill. However, each find looked like there would have been photographs and measured drawings detailing the exact shape and position of each stone in the walls and cists, and the exact position of each bone in the deposits. The reader of the report would be able to see for himself what these looks like. In fact, however, all we have are Bächler's descriptions based on his inter-
pretations of the finds. We must accept the chronology of events as not having been constructed because Bächler says they were. We must accept that the leaves on the tree fell because they liked the way that looked toward Bächler. We must, that is, accept Bächler's descriptive judgments, because they put us no way to judge for our-

selfs. As Jequier expressed it (something not only of Bächler but of most of the evidence for cave bear rituals): the facts are not recorded in the "raw state," but already partially interpreted, already masked by

bear worship at a site in Austria, Bächler wrote. One may hope that they will acquire some experience and an ounce of common sense. The article in Natur und Technik is of some interest from the psychological point of view, allowing one to infer a certain collective suggestibility and constituting an interesting contribution to our knowledge concerning the formation of legends. (1951.9)

While such eminent prehistorians as the Frenchman André Leroi-Gourhan argued against the existence of the cave bear cult, it was not until a young paleontologist and archaeologist named Jean-Pierre Jequier produced his detailed case-by-case study of all the reported evidence that it became clear there was evidence sufficient to prove the existence of such a cult. Basically, Jequier pointed out that there were two problems with the arguments and evidence presented in favor of the Bächler interpretation. First, there were a number of ways in which the data were collected and reported. The second was a lack of what had been learned since Bächler's time about the way in which caves are filled, and the amount of material that people might have on materials in the caves. A look at Drachenloch and one or two other cases will show how what Koby called "legends" can arise from within the field of scientific research.

Archaeological Problems

The idea of a cave bear cult had its detractors, however, from the beginning. One such was the French prehistorian Dr. F. E. Koby, whose objections were quite clearly voiced. In fact, one reason his arguments were not more widely accepted has been that they were so strongly stated. Of a scientific group that had reported evidence of cave bear worship at a site in Austria, Bächler wrote. One may hope that they will acquire some experience and an ounce of common sense. The article in Natur und Technik is of some interest from the psychological point of view, allowing one to infer a certain collective suggestibility and constituting an interesting contribution to our knowledge concerning the formation of legends. (1951.9)
were patterned deposits of cave bear bones found in the cave, and they were not the result of deliberate human activities, how can they be explained?

The Nature of Cave Deposits

Bächler's interpretations of the animal bones from Drachenloch were entirely reasonable given what was known about the peculiarities of cave filling at the time. In fact, other scholars have reached the same conclusions based on similar observations at other sites.

The fact is, however, that we now know enough about how certain species are deposited in caves so that we can find natural explanations for what Bächler and Nigg saw.

Caves like Drachenloch are formed when the limestone bedrock is dissolved by water. Once the cave is open, however, other factors come into play, so that caves are often filled with material brought in from large blocks of rock to very fine silts and clays. In caves dating to the Ice Ages, much of this material consists of rocks, varying in size from ones an inch or two across to ones weighing tons or more, that were washed from the cave walls and roof by frost action. Many of these are rather flat in cross-section, but there were large blocks that had been split into larger-like layers by weathering, and that the leaf-like fragments had remained approximately in place, giving the impression of a very carefully contorted dry masonry wall.

When cave bears entered a cave to hibernate, many began by scratching nesting sites into the cave fill. In the process, bones and small rocks were pushed aside, perhaps wedged into crevices among the fallen blocks. This had two effects. First, it helped to accumulate deposits of bones in natural cavities among rocks or among piles of rocks. Second, it protected the bones that did enter such interstices from further trampling and, if they were buried there, from weathering and decay. It is perfectly natural, therefore, that modern excavators should find concentrations of bones in cavities surrounded by rock. Moreover, because further weathering of the cave roof naturally produced a subsequent rock fall, it is perfectly normal that such cavities would be covered by slabs of larger or lesser size.

Because accumulations of rock are not necessarily random, the patterns of rocks and bones can often be striking. Leroi-Gourhan has described how he was fooled into reporting a circle of cave bear skulls at the site of Les Furtins in France:

It was a small chamber with sloping walls, approximately circular and about three meters [ten feet] in diameter. The bears...had dug out their lair, forming, with the complicity of the sloping walls, the most beautiful trap for prehistoricians one could imagine. When the overlying material had been removed, the little chamber was surrounded by a circle of bear skulls, oriented in all directions, but for the most part horizontal and lying in place. The work of the bears and the unconscious elimination of all the little bones had sufficed to produce a structure such that one could hardly doubt the intervention of man. (1964-34)

The walls and cists of Drachenloch, if they were indeed as Bächler described them, could not be explained by such natural processes. But we have seen that Bächler's descriptions reflect interpretation, not the "raw" facts. As described by Nigg, they can indeed be explained by natural causes.

Even the thighbone thrust through the cheek bone has its parallel in nature. Kohler described similar cases where, in deposits of bones dating to long before man's entry into Europe, bones had been interlaced in highly improbable ways. One must remember that many large bear caves such as Drachenloch are filled by thousands of bones. With such large numbers of bones being moved about by human beings, and given the laws of probability, it is almost inevitable that improbable juxtapositions will occur on occasion. Thus, it is not surprising that one should find, as a paleontologist did at the site of Sahnkehöhlen, a cave bear skull with a pebble in the nostril, lying near two bones that happened to be parallel. This find was again taken to be proof of human ritual (Elenberg 1953). It is clear from published photographs that pebbles actually in contact with the skull as evidence of ritual activities. But this was only an example. In fact, I have evaluated not only the material from Drachenloch but virtually all the reported evidence for the cave bear cult. In every case, I made it clear either that the descriptions (like those of Bächler) reported what the excavator believed rather than what he had seen, or else that the phenomena observed were not a matter-of-fact natural explanation. In spite of this, the Cult of the Cave Bear remains firmly entrenched in the public's mind and in popular literature, as well as in textbooks as well. Why should this be the case? What is the source of this phenomenon? One can understand the attitude of those who found bears and skulls on the grounds that they were overly stenuous, but neither Jéquier nor Leroi-Gourhan wrote in a manner that would imply bias. Jéquier's study appeared in a publication that is not widely read by Ice Age prehistorians, but the same is not true of Leroi-Gourhan's discussion.

The idea of a cave bear cult may have flourished in part because it is consonant with other ideas about Neanderthal culture held by many Ice Age experts. Archaeologists have found other, well-documented phenomena (such as intentional burials of Neandertals and certain decorative or unusual objects) that have been interpreted as evidence of a religious or magical-religion. Moreover, many physical anthropologists are convinced that the biological differences between Neanderthals and modern humans are no greater than the differences among modern human populations. They have therefore concluded that Neanderthal lifeways were essentially modern, and probably included spiritual beliefs and ritual behavior. While there are many scholars who disagree with these conclusions, archaeologists not specializing in Ice Age Europe (including writers of textbooks) have had little reason to be surprised or skeptical about the cave bear cult. It is perhaps the specialists in Neanderthal archaeology who are most responsible for the fact that so few people realize how thin the evidence for such a cult really is.

Disciplines like archaeology are of little use if they do not provide society as a whole with a full information about past times, information in which the public has some interest.

The idea of the cave bear rituals was based on observations by trained scientists working according to the methods current at the time, and interpreting the data in terms of the knowledge available to them. Subsequent research has shown that their conclusions were not as soundly based as they thought, but that is the way of science. Although the cult of the cave bear has caught the imagination of both archaeologists and the general public, it seems likely that just as the process of science has undercut its scholarly foundations, so the spread of scientific information will eventually remove it from textbooks and best sellers alike.