


12-1-1959

Primitive Fear

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Recommended Citation

Hulley, John (1959) "Primitive Fear," *Space Journal*: Vol. 2: No. 2, Article 9.
Available at: <https://louis.uah.edu/space-journal/vol2/iss2/9>

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primitive fear: a first approach to the universe

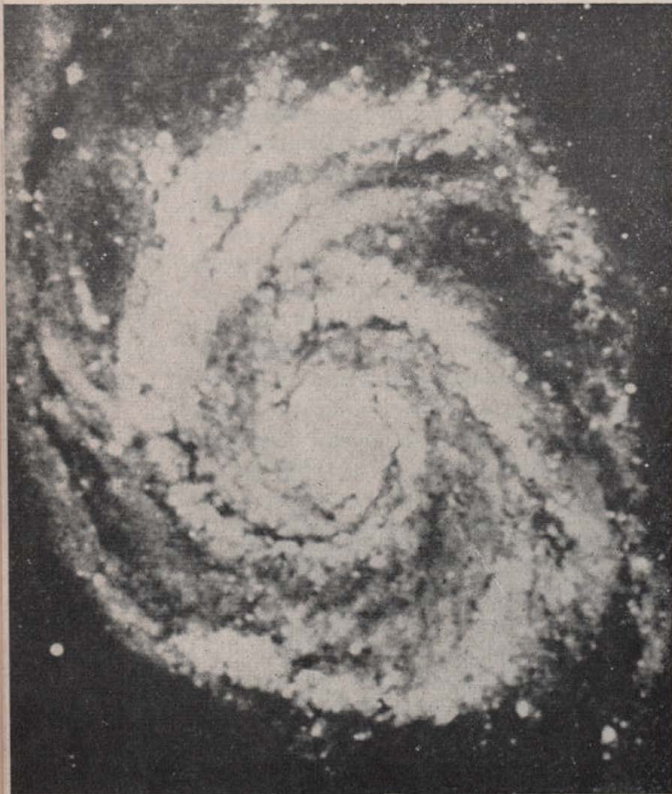
by John Hulley

No one planet is permanently safe. Survival depends upon mobility. If we remain isolated on this world, our species and all other life here will sooner or later be extinguished. If we discover, explore, develop and inhabit other planets, our chances of lasting survival multiply. If our explorations lead beyond this to other solar systems, our future approaches the eternal and our opportunity for expansion approaches the infinite.

TWO PRECEDING ARTICLES (SPACE Journal, summer and winter, 1958) linked the following points:

1. An apparently infinite quantity of planets affords opportunity for the profusion of life wherever radiation, planetary composition and other factors are favorable.
2. While evolution probably proceeds in all favorable opportunities, it may in many cases be interrupted. Changes in radiation, stellar explosions or collisions, cometary, planetary and galactic collisions occur only at long intervals; but the evolution of life is so slow that cosmic events may interrupt or retard it on many planets.
3. The direction of evolution is to fill every possible nook and cranny with increasingly adaptable and mobile organisms—populating the seas, then the land and air of the torrid zones and finally of the cooler zones.
4. To take advantage of all favorable planets, evolution may lead to species capable of carrying life from planet to planet. That may be the ecological purpose of man.

If these propositions are correct, it follows that we are integrally involved in the struggle of life to survive and expand amid the opportunities and dangers of this turbulent Universe. Appearing after millions of years of evolution, man incorporates the results of a long investment process. Upon us depends the survival of the life which has appeared on Earth. And through species such as ours, life may take early advantages of all favorable opportunities among the multitude of planets.





At the apex of the evolutionary pyramid, man need fear no rival terrestrial species. Even in the cave era, stone missiles, axes, spears, knives and fire made our ancestors masters of all other animals. But man is not master of the problems of survival in the Universe. Our complex nervous apparatus permits us to recognize and gradually to understand the elemental challenges of nature in the cosmos. With this recognition comes the need to respond.

The struggle to survive is essential in the life process. To survive, little fish must flee big ones, and rabbits must outrun foxes. Nearly all large species are subject to man. But man has the opportunities and dangers of the Universe to cope with.

Awe of the cosmic environment may be traced back to the earliest historic times and perhaps to the prehistoric period. It is expressed in most of the world's leading religions, and in some of the more profound philosophies. How our ancestors first became aware of the Universe around us, and how they reacted, is the subject of this article.

In the earliest times, our palaeolithic forebears seem to have given limited attention to the larger environment. The undifferentiated forces of nature provided general, un-

predictable sources both of supply and of danger. The only thing men distinguished in detail was the animal prey on which they depended for survival. The hundreds of paintings and other artifacts which have been recovered from that period nearly all depict large mammals—mammoths, bison, giant deer, lions, rhinos and others. They showed no concern with background—no plants, rivers, mountains or skies.

Primary focus on prey may be a natural heritage from earlier forms of life; while the nervous structures of the more complex animals permit them to distinguish the environment in fine detail, these probably apply their powers almost exclusively to the identification of edible things and other immediate interests. The first men seem to have begun with a similarly narrow range of attention.

Even though they were not analyzed in detail, environmental forces certainly provided cause for concern. Storms, floods, hurricanes and tornadoes were presumably as frequent then as they are today. Solar eclipses, comets and other celestial events may have added to the uncertainties. Our forebears lacked precise means to cope with dangers only dimly discerned. However there are indications of a generalized response to these challenges.

Human reactions to vital concerns may be traced in the relics of religious activities. For ecological purposes, they contain the best evidence of the hopes and fears of early communities. Symbolic acts preceded writing by many millennia; indeed, men appear to have practiced rituals before the full development of speech.

The first two rituals centered on human life; they concerned birth and death. Perhaps a hundred millennia ago, Neanderthal men provided their dead with comfortable and warm surroundings, implements and joints of meat. While these men had a cranial capacity similar to our own, the attachments for their tongue muscles indicate that they spoke but haltingly; the rites were probably visual symbols, the meaning of which became more articulate in later times.

Twenty to fifty millennia ago, our Cro-Magnon ancestors began to make figurines of

pregnant women; the few other sketches of human figures also emphasized generative powers.

Rites of birth and of the after-life have been practiced by a majority of societies. While their intensity and elaboration have varied considerably, they are the oldest and commonest in human experience on Earth. To interpret them is to try to understand the ideas our predecessors were acting out.

Anthropologists have theorized that birth and death are extremely disturbing to the continuum of community life and require ritual to ease the adjustment. The problem is then to understand why these processes should be so disturbing. The succession of individuals is nature's method of promoting the growth, evolution, variety and expansion of organic life. Other animal communities adapt to individual births and deaths in the most practical manner.

Extraordinary human reactions may reflect a profound concern with a problem which men could not exactly express and which they earnestly desired to solve. Welcoming birth and denying death may be symbolic ways of saying: At the mercy of forces not now fully understood, we intend to live forever. Births and deaths are the most readily identified processes in the rejuvenation of the community. Attention to them may reveal a mixture of anxiety for survival and hope for future fulfilment.

So far as the evidence goes, these symbols had only the vaguest context. Conceptions of the future were isolated thoughts, simple in form and general in location. As other rites were gradually added, they revealed a widening of human awareness, from the vague beginnings up to the time of a specific and primary concern with the heavens.

Men began to practice hunting rites toward the end of the palaeolithic era, perhaps twenty millennia ago. They drew, painted and carved images of their prey; in them they implanted spears and arrows. These rituals suggest that big game was becoming difficult to find and catch. They apparently expressed human desire to survive, and perplexity as to why the supply of large mammals was giving out.

In the next phase, roughly ten millennia

ago, men worshipped images of small mammals, fish, large birds, and the like. These rites were associated with a conversion to the pursuit of small game, following the extinction of larger species. They suggest that the lesser prey were also becoming scarce in relation to growing human populations.

Scattered tribes have maintained a marginal existence, relying on totemistic rites of small game, until the present day. However, about eight millennia ago, leading groups began to shift to rituals concerning the fertility of land. Men developed farming, and for the first time entered into an operational relationship with some of the more elemental forces of the environment.

They devised intricate rituals concerned with food production. Fledgling farmers recognized that good crops resulted from the interaction of Earth, Sun, rain and rivers with the seed. But they did not understand why these forces were undependable. They compared the seeming vagaries of nature to the caprices of human beings and personalized them. Through imitative ceremonies and with offerings of choice food, drink, homes (shrines), songs and other attentions, they sought to influence the elements.

Another agricultural ritual concerned a deity who died and was resurrected annually. This rite may have reflected recognition that fertility is influenced by some other factor, which men could not easily identify: after repeated plantings of identical seed, the depleted topsoil no longer produced the same rich crops. Rites to cope with such fertility problems are still practiced in many parts of the world today.

At about the same time, our ancestors began to worship male cattle. In developing the husbandry of animals, men probably learned that some species will mate in captivity, while other will not; some live, while others sicken and die. Human dependence on the increase of livestock may account for the worship of the most reliable breeders, especially the bull and the ram.

Farming communities could support priest specialists solely concerned with efforts to bring about favorable conditions. Individual farmers too had idle time to ponder. Thus men began to segregate the conglomerate

(Continued on 46)