

## **The Alleged "Instinct of Territory"**

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### **Chapter 9 of *The Nature of Human Agression***

At least as old as the alleged "instinct of aggression," according to Robert Ardrey, is the "instinct of territory." The "instinct of territory" is defined by Ardrey as "an inherent drive to gain and defend an exclusive territory."

And, according to him, in defense of territory "the instinct of aggression" plays a major role. It is this viewpoint that Mr. Ardrey develops in his book *The Territorial Imperative*, published in 1966, and significantly subtitled *A Personal Inquiry into the Animal Origins of Property and Nations*. Man, Ardrey argues, has an innate compulsion to gain and defend territory, preserve, or property. And since the "sense of trespass" is so evident in the intruder, he wonders whether "there does not exist, more profound than simple learning, some universal recognition of territorial rights." His personal inquiry leads him to the conclusion that such a profound recognition does exist, and that the territorial nature of man is genetic and ineradicable. It is Ardrey's thesis that man is as much a territorial animal as is a mockingbird. We defend the title to our land, the sovereignty of our country, in response to drives no different, no less ineradicable, than those that motivate other animals. The innumerable territorial expressions of man are simply human responses to an imperative lying with equal force on mockingbirds and men. And if this is so, says Ardrey, we must begin to think of a radical revision of our human nature. In fact, says he, so almighty a force is this territorial drive that in power it exceeds even the sexual drive. "How many men have you known in your lifetime," asks Ardrey, "who died for their country? And how many for a woman?" It is a rough test, he admits, but it is clearly to him one that clinches the argument. It is the kind of logic that characterizes most of Ardrey's arguments. A part of our evolutionary nature, and fixed in our genetic endowment because of its survival value, Ardrey tells us, the territorial imperative is no less essential to the continuing existence of contemporary humans than it was to our early protohuman ancestors millions of years ago.

### **Instinct, Again**

Instinct exists, Ardrey insists, and we cannot neglect it simply because we do not know where it lives. It exists and it makes use of learning just as a furnace sucks in air. The scientist is a good example of the workings of the instinct of territory,

we are told, for no matter how humanitarian his motives, in time of war he will have no hesitation in making available the most sophisticated achievements of his discipline for the defense of his country. "All apparent conscience, all cultural instruction and religious teaching concerning the immorality of killing vanish before the higher command to defend his country, and the scientist makes available to the art of murder the most intricate secrets of his trade. In the language of this inquiry we should say that he fills out from the particularity of his learning the generality of that open instinct, the territorial imperative" (p. 28).

Ardrey defines an instinct as "the genetically determined pattern which informs an animal how to act in a given situation" (p. 29). It was the territorial instinct, apparently, that caused the makers of the atom bomb to embark upon its development, even though they were opposed to its ultimate use. He quotes Margaret Mead and myself as exemplars of the opposite view that, as Margaret Mead says, human beings are "dependent neither on instinct nor on genetically transmitted specific capabilities but on learned ways of life that accumulated slowly through endless borrowing, readaptation, and innovation." And he quotes me as saying, in my introduction to *Culture and the Evolution of Man*, "It is principally through cultural pressures that primate nature, in the case of man, has been changed into human nature. It must be emphasized that this change has been brought about not - among other things - by the suppression of primate instinctual drives, but by their gradual supplantation by an adaptively more effective means of meeting the challenges of the environment, namely, by enhancing the development of intelligence. . . In the course of human evolution the power of instinctual drives has gradually withered away, until man has virtually lost all his instincts. If there remain any residues of instincts in man, they are, possibly, the automatic reaction to a sudden loud noise, and in the remaining instance to a sudden withdrawal of support; for the rest, man has no instincts."

The very title of the other book from which Ardrey quotes me, *The Biosocial Nature of Man*, implies that in my view man is a product both of his biology and of his social experience. But apparently I did not make myself clear enough. When I wrote that man must learn everything he comes to know and do as a human being, I meant, and mean, just that. But what that statement has been misinterpreted to mean is that everything man does he has to learn. This is clearly not so, and is not what I wrote nor what I meant. The operative words are *as a human being*. I mean and repeat that those behaviors that distinguish Homo Sapiens as a human being, those behaviors that distinguish him from all other animals, he has to learn from other human beings. This does not for a

moment imply that there do not exist unique biological potentialities in man for such behaviors. What the statement does imply is that man lacks any genetically determined patterns that cause him to exhibit such behaviors. The evidence does not support the view that such genetic determinants exist for either aggressive or territorial behavior.

In the case of aggressive behavior the evidence indicates that there certainly exist biological arrangements in the brain which are capable of being readily organized to function in various forms of aggressive activity, but equally certainly such areas of the brain are not genetically determined to function in the form of aggression unless they are mobilized to do so by external stimulation, normally of quite complex kinds.

### **Capacity, Experience, Learning, and Ability**

*Homo sapiens* learns to speak, and does so because humans have an innate capacity to develop that ability when exposed to the appropriate experiences. But unless they are exposed to the necessary learning experiences they will not speak. Humans do not possess an "instinct" which causes them to break out into the appropriate chopped-up segments of sound upon being spoken to. For the greater part of its first postnatal year the human infant has "no language, but a cry" and the ability to babble. It takes the human infant a considerable amount of time before it begins to utter its first words, and this is usually achieved at about the age of fourteen months. During that period it has already done a considerable amount of learning, and it is upon that learning that its ability to speak depends. An ability is a trained capacity. Apes do not possess the capacity for speech, and therefore cannot be trained to speak. Learning is the increase in the strength of any act as a result of training - that is, through repetition. No matter how often speech is repeated or how long the training, a chimpanzee cannot learn to speak because it simply lacks the biological capacity to do so. It is therefore unequivocally clear that in humans speech is the product of the interaction between two things; one is represented by the biological potentialities genetically inherited by every normal child, and the other the social environment of speech, to which the child is exposed from an early age. The ability to speak is not genetically determined. What is genetically determined is the capacity for speech. Given that capacity the child will learn to speak only if it is exposed to at least one other human being who speaks to it. It is not a matter of the appropriate

stimulus eliciting the proper response, for speech is not preformed in the human brain.

Noam Chomsky has suggested that there is good reason to believe that innate mechanisms exist in the human brain that pre-set the child for the acquisition of knowledge of a language which enables it to acquire the restricted form of grammar involved. But Chomsky nowhere claims that this is an instinct. In this connection he writes: "It is no doubt true that there are innate tendencies in the human psychic constitution that lead to aggressiveness under specific social and cultural conditions. But there is little reason to suppose that these tendencies are so dominant as to leave us forever tottering on the brink of a Hobbesian war of all against all." Chomsky explicitly states that he does not want what he is saying to be confused with the attempts of others to revive a theory of human instinct.

While all animals are capable of aggressive behavior, humans are the only creatures who are capable of speech. It is reasonably clear that the two forms of behavior are of very different evolutionary antiquity and character. Nevertheless, I am devoting so much space to the discussion of the development of speech because it presents a clear illustration of the manner in which a capacity is transformed into an ability, the manner in which a potentiality is developed by the environment. Clearly, the capacity for speech is inherited, but the ability to speak is learned. Similarly, in humans, at least, the capacity for aggression is inherited, but the ability to be aggressive has to be learned. In *Homo sapiens* aggression as such is no more an inherited trait than is speech.

This seeming divagation from the discussion of territoriality has been designed to put in proper perspective Ardrey's claim that territoriality is instinctive in man, an ineradicable imperative. For as Ardrey has correctly stated, "The concept of instinct lies at the centre of the contemporary controversy."

## **Nonterritoriality in Animals**

If neither aggression nor speech is an instinct or an imperative, it would seem even less likely that territorial behavior in man represents such a "force." The truth is that not only territorial behavior in man fail to satisfy Ardrey's own criteria for instinctive behavior, but so does the behavior of many animals in relation to territory fail to do so~ There are many animals that show not the slightest tendency toward territorial behavior. To name but a few among

mammals: the California ground squirrel, adult male long-tailed field mice, she-wolves, the red fox, the Iowan prairie spotted skunk, the northern plains red fox, the zebra, Grant's gazelle, wild dogs, the Bahamian rodent or hutia, cheetahs, mountain goats, deer, wallabies, rhesus monkeys, langur monkeys, baboons, and in the Hominoidea, the superfamily to which man belongs, together with the orang, the chimpanzee, and the gorilla. After surveying the evidence, Professor François Bourliere of the University of Paris concludes: "It would seem that territorial behavior is far from being as important in mammals as in birds, and very often limited to the temporary defense of the nest or of certain parts of the home range." It is not surprising, therefore, that Ardrey draws almost all his examples of territoriality from birds. Since among birds there is a great deal of diversity in territorial behavior, one finds that even among closely related species one may be territorial while the other is not. Apparently Mr. Ardrey fails to recognize also the difference between "territory," "home range," "core area," "area of dominance," and "personal space." A territory is a defended area; the home range is the whole area in which the animal lives - usually shared with other animals. "Core area" refers to an intensively and exclusively occupied area within a home range or territory. "Area of dominance" refers to a dominion from which submissive individuals are not excluded. "Personal space" refers to the "on sight" defensive reaction to another animal. In larger animals the last is a form of behavior more common than territorial behavior, but it is often confused with territoriality. A territory is recognized by the marked change in behavior of its owner at its border: "Within the territory the owner is confident and aggressive, outside it he is timid and aggressive 'towards strangers.'" Ardrey makes no distinction between any of these forms of behavior.

When Mr. Ardrey - with obvious disappointment - has to mention the nonterritoriality of the great apes, it is in reference alone to the chimpanzee that he does so. The orang and gorilla, both nonterritorial animals, receive no mention. "The chimp is the only primate," writes Ardrey, "who has achieved the arcadian existence of primal innocence which we once believed was the paradise that man had somehow lost" (p. 222). To the extent that the life of the chimpanzee in its natural habitat is justly describable as arcadian, to that extent also is that of the gorilla and orang. However that may be, with reference to the chimpanzee Ardrey goes on to say, "I presume, that we must reckon on some degree of innate amity in the primate potential; but as I have indicated, it is a very small candle on a very dark night."

This suggests that most primates are for the most part unamiably, aggressive, and territorial. The fact is so few primate species have been studied that we

really don't know. But from the observations that have been made we have reason to believe that in these traits primates are at least as variable as members of most other orders of mammals. While some may exhibit territorial behavior, when studied at close range under natural conditions it is frequently found that both their alleged territoriality and aggressiveness have been greatly exaggerated. Dr. Brian C. Bates of the University of Oregon has reviewed recent field studies of territorial behavior in primates, and has found that such cases are exceptional, notwithstanding the fact that many investigators have looked for evidence of aggression between primate groups in defense of a geographical boundary. "Even in the exceptional cases," he concludes, "the belligerent groups very rarely go beyond various types of threat or antagonistic display." Overt fighting, as he points out, occurs only in unusual circumstances, as during prolonged and severe water shortages resulting in friction among baboons at water holes, or conflicts among rhesus macaques living in severely overcrowded conditions in Indian cities.

Different groups of primates are kept apart at geographical boundaries, not by overt aggression or fighting but by the daily routine of the group in its own range, by rigid social behavior, and, in others, by loud vocalizations.

The attempt to link aggressive with territorial behavior simply does not wash. The truth is that most primate groups seem to come into contact relatively infrequently. There is great specific and intraspecific variability in the behavior of such groups upon meeting. In general the tendency is either one of mutual avoidance or withdrawal of one from another. Ardrey cites the chimpanzee as "an evolutionary failure" because amiability "offers small promise for chimpanzee survival" The baboon, however, according to Ardrey, is "an outrageous success" because of "baboon tyranny, with its gang of thugs at the top."

Ardrey's prejudicial language distorts the facts. "Gang?" "Thugs?" Does Mr. Ardrey really believe that these are the proper terms which appropriately describe the dominant animals of the baboon group? These animals do not constitute a "gang" nor is their behavior that of "thugs," for by their individual qualities they have established themselves in roles of leadership which they exercise in defense of the group. However, with his loaded language Ardrey wishes to make a point, without due respect for the facts.

Ardrey tells us that the baboon troop "maintains a territory. . . and defends that territory against others of its kind. As a society it demonstrates all those hostile

traits normal to the individual proprietor." But Professors Irven DeVore and K. R. L. Hall, who studied several populations of baboons in Africa, write that although they never saw any indication of defended territories, this does not imply that groups did not move about without reference to fixed boundaries. Nevertheless, even in areas of high population density, different groups were observed to be in close daily contact without displays of intergroup aggression, and this was true not only of different groups of baboons but also of baboons and vervet monkeys at the same waterhole. Similarly, Crook, in his field study of the gelada baboon (*Theropithecus gelada*) of the high mountains of central and northern Ethiopia, found that herds "show no defensive behavior of any kind in relation to other geladas and a male's aggressive behavior occurs in relation to his 'harem' only."

Dr. Geza Teleki, who for a year daily observed the interactive behavior of wild chimpanzees with nonhuman primates living in the Gombe Forest (Gombe National Park) in Tanzania, was greatly impressed with the mutually tolerant coexistence of these creatures. The fundamental tolerance and "consistent[ly] friendly interactions" between anubis baboons (*Papio anubis*) especially, even within the context of repeated killing and eating of young baboons by chimpanzees, and the absence of any really harmful fighting between them over food or anything else, within the common habitat shared by all the animals, are facts which play havoc with innate aggressionist theories.

If baboons are more numerous than apes, and such seems to be the case, it is not because they are more aggressive, but probably because baboon ways of life are conducive to larger social groupings than those of apes.

Dr. Hans Kummer of the University of Zurich, who studied hamadryas baboons (*Papio hamadryas*) in the field, found them to be not altogether unamiable characters, even though they may engage in a good deal of ritual and quite harmless "fighting." Baboons, like most other "wild" animals, have had a bad press. Yet, it is very strange that the man Ardrey admires so much, the late Eugene Marais, in his book *My Friends, the Baboons*, wrote of the chacma baboon (*Papio ursinus*) as a not unamiable, thoroughly unpredictable creature who romped and played with the native children with obvious enjoyment. Ardrey was also responsible for the publication of Marais's *The Soul of the Ape*, in which the author continued his sympathetic account of the chacma baboon.

Another reason why baboons are more numerous than apes may be that some of their habitats have not suffered the misfortune of being invaded by men armed

with lethal weapons. Furthermore, as forest-dwellers, the apes were probably never more numerous than were prehistoric men. In any event, if the nonterritorial baboons are an evolutionary success, so are the apes. If the continued existence of the apes is menaced, it is not because they are evolutionary failures but because they are threatened with extinction by the ruthlessness of misguided men. At any rate, the equating of large numbers with evolutionary success is a fallacy. The measure of evolutionary success is survival, differential fertility, quality, *not* quantity. Thus far the apes have managed to survive for many millions of years in small enclaves, and if humans continue to increase at their present rate, even though the living apes are today numbered only in the hundreds and humans in the billions, they may yet outsurvive man, their most deadly predator and conscienceless enemy. To repeat, the diminishing number of apes is due not to their nonterritoriality, nor to their nonaggressiveness, but to the simple fact that during the last hundred years and more their habitats have been increasingly invaded and they have been mercilessly slaughtered in large numbers by men against whom they have no defense. As recently as 1971 Dian Fossey reported the wholesale slaughter of mountain gorillas just south of her own study area. "The bodies of five animals were found scattered about in an arc of some 75 yards. They had been mauled by dogs, pierced by spears, and battered by stones, apparently just for the excitement of the hunt."

The variability in territorial behavior among animals is, as one would expect, considerable. The "defended areas" concept of territoriality simply has no real counterpart among many animals, who occupy territories which they do not defend. Indeed, the diversity of territorial behavior is so great among animals that the very definition of that behavior is questionable. Even among birds, as Professor John T. Emlen, Jr., has stated, "it is a purely speculative assumption that any particular area carries any special significance to the bird as an object to be defended."

Professor Peter H. Klopfer remarks that discussions of territoriality such as that of Ardrey "rest on abysmal ignorance of the diversity of territoriality in general and the implication of this diversity. . . . In short, there are neither factual nor theoretical bases for assertions regarding the role of ancestral territorial 'impulses' in the structuring (or fracturing) of human social behavior." And as he goes on to say, territoriality "probably represents not a single adaptation but a host of different adaptations serving different purposes for different animals. This fact alone precludes the facile extrapolation to man and a biological justification of property rights."

## Environmental Conditions and Territoriality

To equate the territorial behavior of some animals with the holding of property by humans constitutes yet another example of the fallacy of the unequal equation. As Professor S. A. Barnett has pointed out, territorial behavior in animals depends on systems of signals common to the whole of each species, with responses to these signals standardized. Learning plays a small part in the development of these behaviors. In humans, on the contrary, the rules governing property are culturally determined and are learned; there is no pattern of signals common to the whole species. Hence, the diversity in different societies of such rules, and the variety of conditions encountered in which aggression in defense of property is permitted. Furthermore, territoriality, in those species that display it, seems to insure some sort of regulation of density. In humans it does not.

Even within the same populations alterations in daily life will produce changes in territorial, feeding behavior, and social relations. Indeed, whether territorial behavior shall be exhibited or not depends largely upon environmental conditions." For example, crowded together in zoos, hamadryas baboons become extremely "territorial," but under natural conditions hamadryas baboons are nonterritorial.

Another case in point is the house mouse, which may become territorial under concentrated population pressures but ceases to be so when population drops below a certain level.

Monkeys provide interesting examples of territorial differences under different ecological conditions. In the Amboseli Reserve of Kenya, East Africa, vervet monkeys (*Cercopithecus aethiops johnstoni*) may be aggressively territorial, and in Uganda, where they are crowded on Lolui Island, they are also aggressively territorial. But a few miles away, at Chobe, the same species live peaceably with little or no fighting and no evidence of territoriality. In open country where the home ranges are large, as among most cercopithecine monkeys, these animals are nonterritorial. Forest cercopithecines with small home ranges tend to be territorial. A similar relationship exists between size of home range and territorial behavior in Indian hanuman langurs (*Presbytis entellus*).

Examples could be multiplied, and they would serve to reinforce the fact that far from being an innate fixed behavior pattern, a genetically determined

ineradicable trait, territorial behavior is not a fixed action pattern at all but a form of behavior very much dependent on the context of the situation - that is, on the influences of the environment. Ecological and social factors appear to be the conditions determining whether a population does or does not exhibit territorial behavior. This is the conclusion of most field investigators.

## **The Nature and Function of Aggression in Territorial Behavior**

That there exist genetically structured parts of the brain which can be readily organized to function, in response to the appropriate stimuli, as aggression, there can be not the least doubt; There can, equally, be no doubt that a genetically determined appetite for aggressive behavior does not exist in the higher mammals and humans. Wallace Craig pointed out many years ago that it is aversive behavior rather than appetitive behavior that is observed in many acts of aggression. Such aggressive behavior Craig described as an "aversion." Craig wrote: "Fundamentally among animals fighting is not sought nor valued for its own sake; it is resorted to rather as a means of defending the agent's interest. . . . Even when an animal does fight he aims not to destroy the enemy but only to get rid of his presence and interference." Even the physical appearance of the animal is often useful in securing the desired result without the necessity of fighting. Thus, many animals are made conspicuous by some special characteristics such as a vividly marked or, for the particular occasion, specially enlargeable part of the body, which serves to convey the message to other animals to keep their proper distance. This may also be done by vocal as well as by visual display. As Croak says, "Much of the aggression in territorial defense consists of threatening display or ritualized fighting whereby spacing is achieved with little damage done to the protagonists." Clearly, the purpose of such display or ritualized aggression is not aggression, but, the achievement of the animal's object without physically harmful aggression.

Under different types of competitive conditions, for food, females, space, dominance relationships, and so on, many kinds of territorial responses are exhibited by animals. These responses, however, are not the product of genetically determined influences, but for the most part are the product of socially acquired norms.

While density may in some nonhuman primates in itself constitute a cause of aggressive and territorial behavior, in other populations density in relation to

environmental resources will determine whether there will be either aggressive behavior or territoriality, either one or the other or both. Forest-dwellers and those living in environments where cover and food are abundant are likely to be both nonterritorial and less aggressive than those living outside forests in which cover and food are comparatively poor, although nonterritoriality also occurs in such groups. Clearly a principal adaptive function of aggression in such groups is the control of habitat utilization. Different environmental conditions will call for different forms of aggression or non-aggression in the defense or nondefense of territory.

## **Humans and Territory**

Before intensive research began in the field, it was apparently an easy matter to determine whether a people was territorial. They occupied a specific piece of land which they called their own, and would defend it against all intruders. That proved that they were territorial. But as soon as the subject came under systematic scrutiny it was found that the matter is not quite so simple. Indeed, the more intensive and careful the studies, the more complex the subject of territory has become. Really detailed studies of the territorial behavior of humans are still relatively few, but those we do have show how very oversimplified the earlier anthropological descriptions of territory were.

The tendency to generalize from findings on other primates to humans was also a characteristic of the earlier literature. For example, the pioneer in field studies of the primates, Dr. Clarence R. Carpenter, in his field study of the gibbon, wrote: "It would seem that the possession and defense of territory which is found so widely in the vertebrates, including the subhuman and human primates, may be a fundamental biological need." Even at that time, in 1940, this was a rather surprising statement, coming as it did from a field worker who six years earlier had reported on the fluid territorial behavior of the howler monkey (*Alouatta palliata*). While howler monkeys possess three-dimensional territories, there is considerable overlapping, and the ranges of some groups may also be identical, while the shifting and extension of territorial ranges are constantly occurring in particular groups. No mention was made by Carpenter of any defense of territory as an exclusive preserve. But the idea of territorial defense among animals, and especially among humans, as a well-nigh universal phenomenon was so widespread, it seemed "only natural" that territorial defense should be "a fundamental biological need."

It is also, therefore, not surprising that Mr. Ardrey, who is greatly indebted to Carpenter for much of his thinking about territory, should have come to write about it in similar terms. Ardrey defines territory as follows: "A territory is an area of space, whether of water or earth or air, which an animal or group of animals defends as an exclusive preserve. The word is also used to describe the inward compulsion in animate beings to possess and defend such a space. A territorial species of animals, therefore, is one in which all males, and sometimes females too, bear an inherent drive to gain and defend an exclusive property."

We have already seen that Ardrey considers this inherent drive to be genetic and ineradicable, and we have also seen that there is some evidence which shows that this is certainly not the case in many animals, from fish to nonhuman primates. Ardrey's fundamental errors are two: the first is the assumption that with few exceptions animals are territorial; and the second is that if that is so then therefore, as a consequence of their animal ancestry, humans must also be territorial.

We have also established that territoriality varies greatly among animals, and that it would be inaccurate to attribute either a genetic determinance or ineradicability to such behavior, especially in mammals. In man what we encounter is the full range of variability, from the fierce territoriality of many New Guinea peoples to the complete nonterritoriality of the Eskimo, the Hadza of Tanzania, not to mention the Comanche and Shoshoni Indians of North America. Some peoples are territorial, some only partially so, while others are thoroughly nonterritorial. No evidence is observed of that "spontaneity of instinct" postulated by Lorenz and asserted to be equally innate by such writers as Ardrey, Desmond Morris, Anthony Storr, Eibl-Eibesfeldt, and others. On the contrary, territoriality in many animals, and especially in humans, shows every evidence of being a "socioecologic" response or adaptation to specific environmental conditions, not an instinctive reaction.

Only too often it has been carelessly assumed that "territory," "aggression," and "defense" present a natural linkage. Nothing could be farther from the truth. As Professor Richard Lee has pointed out, culturally defined boundaries do not necessarily imply sanctions against trespass. The same social and ecologic effect can be achieved by rules for accommodating people across boundaries as when there are no boundaries at all. All hunting peoples have institutionalized means for moving from group to group, "so if we find boundaries in a given case, we should not commit the frequent error of assuming that they enclose a defended and exclusive territory." Furthermore, many territorial human groups are not

particularly aggressive or defensive about their territory; such, for example, are the Tungus and Yuok of Siberia, the Kwakiutl of the Pacific Northwest coast of America, the Ituri Pygmies of the Congo, the Western Aranda of Central Australia, the Kiadilt of Bentinck Island, and the Tiwi, both of Northern Australia. The !Kung Bushmen of the Dobe area of Botswana share their range amicably with the Herero and Tswana pastoralists. Boundaries here and in Australia were never so rigid as to make it difficult for members of one tribe to avail themselves of the resources of the others' territory. This was especially true in times of drought or famine, as also in the case of an individual fleeing his own group. The obligation of hospitality seems to have been virtually universal among the Australian aborigines.

Radcliffe-Brown has stated: "Acts of trespass against this exclusive right of a horde to its territory seem to have been very rare in the social life of the aborigines, but it appears to have been generally held that anyone committing such a trespass could justifiably be killed." This statement has been shown to be quite incorrect by the findings of later investigators. The fact is that all fieldworkers who have investigated the matter since 1930 have reported the unrestricted movement of foodseekers over broad regions that included totemic sites and many patrilineal clans (clans in which an individual belongs to the father's clan). Dr. L. R. Hiatt of the Department of Anthropology of the University of Sydney, in summarizing the findings for Australia, concludes: "The evidence is clearly against the existence in aboriginal clansmen of an instinct to occupy and defend territory. But it points to a strong impulse to establish and maintain territorial ownership." This impulse grows principally out of emotional attachment to a land in which the individual is born and lives his or her life. It has nothing whatever to do with instinct.

Indeed, Dr. James N. Anderson of the Department of Anthropology at the University of California at Berkeley, in summarizing the evidence for hunting peoples, concludes that "exclusive territoriality with territorial defense by a mixed group of people is rare at best."

Finally, perhaps our leading authority on the subject, the late Professor Julian Steward of the Department of Anthropology at the University of Illinois, wrote: "There have been many contentions that primitive bands own territories or resources and fight to protect them. Although I cannot assert that this is never the case, it is probably very uncommon. . . . Defense of the territories of patrilineal bands has also been claimed, but this too is open to question."

I have chosen to spend a good deal of time discussing the alleged territorial behavior of foodgathering-hunting peoples because their way of life more closely approximates that of early humans than does that of any other known peoples; their mode of life can therefore suggest what territorial behavior may have been like among our early ancestors. We have seen from the reports surveyed that not only is there no evidence for an instinct of territoriality among gatherer-hunters, but that territorial behavior in the sense of fighting to defend a territory is quite rare among such peoples, and that it is only with the growth of farming and urbanism that we witness the development of territoriality. With the advent of agriculture and the possibility of settling permanently in one place, the earliest village communities came into being, not much more than 12,000 years ago. Agriculture, the control of the reproduction of plants for use as food, necessitates a sedentary settlement, and such a settlement, to which the control of the reproduction of animals is added, leads to the eventual demarcation of the boundaries of the place, which then becomes, identified with its inhabitants, who regard it as their village, their "home." It is from such villages that the first towns grew and developed. Raiding, *not* by "hostile" bands, *not* from "instinctual aggressiveness," but for the purpose of acquiring the products of the target village, and later the goods and valuables of the town attacked, would serve to consolidate the feeling of belonging to a particular place, which one would be ready to protect and defend against all marauders.

The emotional attachment which human beings develop for their "homeland" is customarily reinforced by the institutionalization of private and public allegiances to the "land" of one's birth, loyalty to the community, and the equivalents of such modern institutional devices as flag-waving, pledges of allegiance to the flag, "my country, right or wrong," and all the other shibboleths of patriotism. "Fatherlands," "Motherlands," or "Homelands" become emotional involvements endowed with all the complexity and beliefs that the tribalist zealously brings to the support of such emotions. All such sentiments are identified with a particular territory. It may be a territory as large as the USSR or as small as Monaco, but however extended or circumscribed its boundaries, the attachment to the homeland will remain something woven into the fabric of one's being all the days of one's life. The weaving is done out of the elements of the individual's experience; it is culturally conditioned by the training received from all those social, political, religious, secular, and educational sources that work upon the member of the tribe. These are all cultural forces and have nothing whatever to do with biological imperatives.

Territorialists may, of course, argue that the absence of territoriality in some peoples does not necessarily mean that they lack an instinct, or imperative, or force, or whatever other name the territorialists choose to call it. It may simply be that the instinct is being controlled or overlaid or displaced or sublimated or redirected into other activities. For this would-be argument I can find no support in the available evidence.

Mr. Ardrey's preoccupation with our long hunting past, which, according to him, "placed selective advantage on those who took pleasure in the violent way," is belied by the evidence of ethnology, of prehistory, and the lives of contemporary gatherer-hunter peoples. Human hunters do not hunt because they take pleasure in violence but because, like the Gombe Forest chimpanzees, they take pleasure in eating meat. Teleki points out that the Gombe chimpanzees spend a considerable amount of energy in obtaining fresh meat when other foods are regularly obtainable with much less effort. Furthermore, "the meat is usually eaten and shared in a leisurely manner more suggestive of pleasure than basic hunger alone." The pleasure was not derived from the satisfaction of some innate urge to violence, but quite clearly from the delight these occasional hunters took in eating every part of their prey.

The evidence of ethology relating to the territorial behavior of mammals, and especially nonhuman primates, strongly supports the view that territorial behavior, at least in the "higher" mammals, is learned. It is possible that in some birds such behavior may be instinctive, but there is no continuity between the instinctive territorial behavior of birds, upon which Mr. Ardrey relies for his arguments, and the learned social behavior of humans. Human beings acquire socially conditioned incentives to defend socially defined homelands or territories against socially defined "enemies." The identification with a particular territory may become emotionally so deeply embedded that it results in a motivational complex which can be easily aroused to the highest pitch of enthusiasm, at the sound, for example, of some otherwise banal piece of music like the national anthem or a more rousing song like anyone of those associated with the various services of the armed forces. As the Ukrainian proverb (quoted by Lorenz) has it, "When the banner is unfurled, all reason is in the trumpet." "To the humble seeker of biological truth," Lorenz tells us, "there cannot be the slightest doubt that human militant enthusiasm evolved out of a communal defense response of our prehuman ancestors." Without this "most powerfully motivating instinct," says Lorenz, not art nor science nor any of the great endeavors of man would have come into being. And whether this form of "communal aggression" is made to serve these endeavors, or whether this

powerful "instinct" makes him go to war "in some abject silly cause," depends almost entirely on the conditioning and/or imprinting he has undergone during certain susceptible periods of his life.

So here we have a supposed "instinct" which, according to Lorenz, has evolved out of a communal defense response of our prehuman ancestors. This, according to him, is the most powerful of motivating "instincts," that can drive men to fight in whatever cause they are conditioned or alternatively to the creation of art or the development of science.

And who were these prehuman ancestors? Lorenz doesn't say. Presumably they were the australopithecines or, if not the australopithecines, perhaps some earlier or later prehuman, more humanlike form? But, as we have seen, the evidence is entirely against such ideas. There is every reason to believe that prehuman populations were very small, widely dispersed, and, like the baboons and living great apes, had no more need for communal defense against their own species or in most cases even against neighboring species than do nonhuman primates today.

Ardrey believes that "our attachment to property is of an ancient biological order," and that our failure to recognize this has led to all kinds of social and political derangements. The failures of Geneva, of foreign policies, the Arab-Israeli conflict, Pearl Harbor, the Cuban crisis, and much 'else, are all discussed in terms of territoriality.

The resemblances between animal and human territorial behavior are analogical and superficial. The fact that our nearest relations, the chimpanzee and gorilla, are nonterritorial should serve to render more than questionable any basis for a territorial instinct in humans.

Not only is there no ground for believing that a territorial instinct constitutes the basis or cause of human aggression, but the evidence abundantly indicates that even among other animals there is no necessary connection between territorial behavior and aggression. For example, it has been found that among certain cichlid fish nonterritorial males fight more than territorial males. Some birds are territorial only during the breeding season, some for the purpose of feeding, others during mating, roosting, and so on. Among human societies one cannot help wondering why it is that such countries as Switzerland, Iceland, Ceylon, Costa Rica, the principalities of Monaco and Luxembourg, all of which have distinct territories, are so unaggressive as never to have cast an envious eye upon

the property or territories of other peoples or have had to defend themselves against them, whereas the larger industrial nations have behaved quite otherwise.

Does being a small country or principality do something to the territorial instinct which prevents it from exploding into an attack upon another country or principality? And is it necessary to appeal to a fantasied territorial instinct to account for the fierce competition for foreign markets during the eighteenth and nineteenth centuries and later, which led to the annexation and exploitation of foreign lands by the Great Powers?

To attach an interest in the acquisition of real estate to an instinct is simply to misread the clear evidence of history. Juvenile gangs will fight on our streets for "territory," and so will gangsters. Outraged citizens will "fight" to preserve their right to preserve trees and parklands threatened by developers; conscientious objectors will "fight" to preserve their right not to kill their fellow men, while pacifists will attend peace meetings in order to "fight" for the preservation of peace. Mr. Ardrey, presumably, would nod in agreement and claim that these were merely examples of the "open instinct" of territoriality expressing itself in different forms. "Open instincts" are described by Mr. Ardrey as those which in order to complete their innate patterns must gain information from individual experience. "Closed instincts" are those which dispense with experience. Here Mr. Ardrey confuses us, for in discussing "the territorial imperative" throughout the greater part of his book he does so in terms of the definition offered early in it, namely, as a fixed action pattern, "the genetically determined pattern which informs an animal as to how to act in a given situation" (p. 29) - that is, as a "closed instinct." But when he enters upon the discussion of such matters as patriotism, modern international treaties, war, street fights, and the like, "closed" instincts become "open" ones. So that what we are really left with is a powerful drive ("instinct") which, so the theory has it, is activated by stimuli of every kind relating to territory. The stimulation will then result in protective or aggressive behavior calculated to bring about the desired result. The desired result may range all the way from standing at attention with or without the palm of the hand resting on the chest somewhere in the vicinity of the heart, to firing deadly weapons at an unseen socially designated "enemy," to the writing of plays or the solving of mathematical problems. But this kind of "explanation" is rendered more than dubious since it attributes to "instinct" a generalized plasticity which is wholly opposed to the customarily accepted definition of an instinct as a fixed action pattern which causes the organism to react to a given stimulus with a predetermined behavior.

The fact, of course, is that the appeal to "instinct" as an explanation of territorial behavior in humans is both unparsimonious and wholly gratuitous, since what it offers to explicate is much more efficiently explained by the general educability of the human organism.

Like present-day gatherer-hunter peoples, prehistoric humans were mobile and nomadic, seeking food over extensive areas of land, the low energy foods consumed making it necessary for them to be more or less constantly on the move. Territories, as Klopfer points out, were no more likely to be of use to them than they are to similarly feeding goats and gazelles. And with Klopfer we may conclude: "whatever the origins of defense of property in man they are unlikely to lie in primordial and unalterable habits ordained by selection imposed on his ancestors."